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Verbal number suppletion in nominalizations

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Number-sensitive suppletion of verbs is possible in a variety of languages: the verb has two distinct stems depending on the number value (e.g. singular vs. plural) of one of its arguments (e.g. Durie 1986, Veselinova 2006, Toosarvandani 2016, Bobaljik & Harley 2017). The phenomenon has attracted significant attention in the literature, since the (non-)existence of true suppletion of lexical roots is a matter of debate in theories like Distributed Morphology (Halle & Marantz 1993). In this talk, we focus on a previously neglected aspect of the phenomenon: the distribution of suppletive stems in nominalizations of those verbs that exhibit suppletion for number. Our starting point is suppletion in Kipsigis (Nilotic; Kenya), where three intransitive verbs have suppletive stems in the presence of a plural subject: interestingly, the agent nominalizations of these verbs display the same suppletive pattern when pluralized. We discuss the implications of this pattern for recent theories of verbal suppletion, and we present preliminary data on the behavior of suppletion in nominalizations in other languages that have been shown to display suppletion conditioned by number (e.g. Northern Paiute).

Impoverished Exponence is too much Agree: Evidence from Ngemba (Grassfields Bantu)

I investigate patterns of DP-internal agreement in Ngemba (Cameroon, Grassfields Bantu) with special focus on what, on the surface, looks like animacy-only agreement, in contexts where one would expect class feature agreement, hence noun class exponence. I show that the Ngemba gender system and the way it interacts with the syntax of DP-internal agreement does not allow for animacy-only agreement. I account for the observed pattern by assuming a system with ‘too much’ Agree (Coon & Keine, 2021) in the syntax, followed by a repair mechanism that assumes number-conditioned impoverishment in the morphology. I make the following claims:

Claims. (1) Although the surface form of demonstrative pronouns in DEM-N order suggests a system where there is agreement with animacy features-only in the syntax, I show that a closer look at the Ngemba gender system and the way it interacts with Agree begs for an analysis that assumes ‘too much’ Agree in the syntax. (2) This scenario (also known as Feature Gluttony; Coon & Keine 2021) creates a conflict in the morphology, as there is no vocabulary item that can spell out all the features on the terminal node made available to the morphology by syntax (Morphological Ineffability; Coon & Keine 2021). (3) I show that the Subset Principle (Harley & Noyer, 1999; Keine & Gereon, 2020) does not straightforwardly solve the problem as it will predict that noun class be expounded throughout. I therefore adopt a repair mechanism that assumes number-sensitive impoverishment. That number can condition Impoverishment in marked contexts (Nevins, 2011; Keine & Müller, 2015) is empirically motivated, both by other data from Ngemba and from related languages.

Data and puzzle. In Ngemba, demonstrative pronouns agree in noun class with the head noun, as (1-2) below show.

- | | | | | |
|-----|----|-------------------------------------------------------------------|----|------------------------------------------------|
| (1) | a. | \emptyset -kwòʔ \emptyset -è
1-chair 1-DEM
‘that chair’ | b. | mə-kwòʔ m-è
6-chair 6-DEM
‘those chairs’ |
| (2) | a. | \emptyset -məmɔ́ \emptyset -è
1-dog 1-DEM
‘that dog’ | b. | mə-məmɔ́ m-è
6-dog 6-DEM
‘those dogs’ |

In (1), for example, the demonstrative pronoun è ‘that’ agrees in noun class with the head noun kwòʔ ‘chair’, and this is reflected by the use of class 1 ‘ \emptyset ’ in the singular, and class 6 ‘mə’- in the plural. Interestingly, if the demonstrative pronoun is focused¹, full agreement is maintained with plural head nouns (3b-4b), but replaced by the glides *j*- (3-a; inanimate head noun) or *w*-- (4-a; animate head noun) with singulars².

¹This has, amongst other things, the syntactic effect of moving the demonstrative to a position where it linearly precedes the head noun. This is consistent with the Grassfields Bantu literature (see, for example, Nkemnji 1995; Tamanji 2006). Also pay attention to the tone changes that I do not discuss here.

²The choice of which glide to use here depends on the animacy of the head noun. It is therefore plausible to assume that they realise animacy features.

- (3) a. **j-ě** ø-kwòʔ
 INA-DEM 1-chair
 ‘that chair, not this one’
- b. m-ě mə-kwòʔ
 6-DEM 6-chair
 ‘those chairs, not these ones’
- (4) a. **w-ě** ø-məmvó
 AN-DEM 1-dog
 ‘that dog, not this one’
- b. m-ě mə-məmvó
 6-DEM 6-dogs
 ‘those dogs, not these ones’

Theoretical Background. I propose a model of grammar that assumes a Minimalist Syntax and Distributed Morphology (Halle & Marantz, 1993). I also adopt a Feature Geometry (Harley & Ritter, 2002) for noun class exponence in Ngemba and couple it with two recent theories of Agree, namely Interaction and Satisfaction (Deal, 2020) and Feature Gluttony (Coon & Keine, 2021).

Analysis. 1. *The locus of gender features within the Ngemba DP.* I adopt the view from Bantu that noun class exponence is gender and number agreement, and that there is no noun class without semantic information (Carstens, 1991; Fuchs & van der Wal, 2021). The behaviour of noun classes in Ngemba suggests that gender features cannot be decomposed such that we be able to refer to its individual semantic contents. This, I show, suggests that the animacy features that are exponed in DEM-N are different from those that are inherently part of class features. I show that they are directly inherent to the noun and hence are on n. Class features are on Num, I propose. **2. *The workings of Agree.*** Agreement with class features first³ satisfies the probe and it halts its search (Deal, 2020). Agreement with animacy features first does not satisfy the probe and, as such, it keeps probing until it is satisfied or until there are no other features to agree with. Agreement ‘must’ take place whenever it can (Preminger, 2014) under c-command. In N-DEM order, the probe agrees with class features first because they are closer and halts its search⁴. nP movement to Spec,DP for word order does not affect agreement. In DEM-N order, the probe agrees with animacy features first⁵ and is not satisfied. It probes further and agrees with class features. This results in a gluttonous probe (Coon & Keine, 2021) with animacy features twice and with no VI that can spell out both of them (morphological ineffability). After Agree, the probe looks like (5).

- (5) Probe = {[animacy], [class features]} with the reading {[animacy], [animacy]}⁶.

One instance of it has to go away. Either ‘class features’ go away or ‘animacy’ goes away. I show, with empirical data that in the presence of number, animacy will go away (rule 1). In its absence (singular, for number is privative in my system), class features will go away (rule 2). These rules are extrinsically ordered such that rule 1 applies before rule 2.

Consequences. The analysis I propose for the facts in (3-a) and (4-a) makes interesting predictions about the nature of Impoverishment rules. It predicts that they are not just conditioned by stated environments (features, for example), but also can be driven by the desire to repair a structure (Nevins, 2011). This line of reasoning calls for Optimality Theoretic markedness constraints (Keine & Müller, 2015). The analysis also suggests that a view of Agree as involving Interaction and Satisfaction (Deal, 2020) might be on the right track, and that Feature Gluttony (Coon & Keine, 2021) can account for other agreement phenomena that have nothing to do with PCC effects.

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³They contain animacy features by default

⁴Class features contain animacy features by default and, as such, are more specific under Deal (2020).

⁵They are now higher than class features in the structure because of nP movement for word order

⁶One is inherent to class features

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Abstract: Unmarked Gender in Animal Nouns

In many languages with masculine, feminine and neuter gender, masculine seems to be the unmarked gender among human nouns. This can be shown by markedness tests, as for example the test called *ambiguity of the unmarked term* by Greenberg (2005) as shown in (1a), and other semantic and morphological markedness-tests as described for example by Greenberg (2005). Surprisingly, sex-differentiated animal nouns don't seem to follow this pattern in several languages. By the same diagnostics feminine or even neuter noun can be shown to be unmarked, as observed by Spathas & Sudo (2020). In (1) this asymmetry can be observed for two German nouns.

- (1) a. Peter hat ein-en Chef. Ein-en Chef oder ein-e Chef-in?
Peter has one-M boss.M one-M boss.M or one-F boss-F
'Peter has a boss. A male boss or a female boss?'
- b. Peter hat ein-e Katze. Ein-e Katze oder ein-en Kat-er?
Peter has one-F cat.F one-F cat.F or one-M cat-M
'Peter has a cat. A female cat or a male cat?'

Applying the criterion of *Ambiguity of the unmarked term* (Greenberg 2005), (1a) shows that for German human nouns, masculine nouns like *Chef_M* can refer both to the generic category reading and the specific male interpretation. In contrast to that, in (1b) a feminine noun is able to do the same, referring to both the generic category reading and the specific female interpretation. Following from this the masculine form can be considered the unmarked one out of the pair *Chef_M / Chef_F* (as expected), but the noun *Katze_F* 'cat' is the unmarked form out of the pair *Kater_M / Katze_F*. To my knowledge, Spathas & Sudo (2020) is the only theoretical work addressing the observable asymmetry between animal and human nouns, by providing a detailed investigation of gender in animal nouns in Greek. In this talk, I extend the empirical knowledge about the phenomena at hand by providing data from 12 languages of two language families. This data shows that the asymmetry between human and animal nouns can be shown to exist for several Indo-European and Afro-Asiatic languages, otherwise consistently showing masculine to be the unmarked gender. On the theoretical side, I show that the theory provided by Spathas & Sudo (2020), although working for Greek, makes the wrong predictions for patterns observed in other languages, which I illustrate with novel data from Spanish.

Following previous work (eg. Merchant (2014), Bobaljik & Zocca (2011)) Spathas & Sudo (2020) assume that interpretable gender can either be presupposed, asserted (and presupposed) or interpreted because of blocking effects. For Spathas & Sudo (2020) gender is either specified at or close to the root (in which case gender is asserted) or by different flavours of little *n* (similar to Kramer (2015)), in which case the gender is asserted and presupposed or only presupposed. The main difference to animal nouns for them is the assumption that presupposed gender can only be assigned to roots that either involve a gender assertion (at root level) or have a humanness entailment. Therefore, cases of unmarked feminine (or neuter) forms involve not interpretable but uninterpretable gender, while the specific readings of these nouns involve another root with asserted and additionally presupposed gender. Therefore, specific (im)possible

combinations for human and animal nouns are derived by Spathas & Sudo (2020): a) generally no animal noun should presuppose but not assert gender; b) common gender nouns can only exist among human nouns but not among animal nouns as they involve only presupposed but not asserted gender; c) blocking effects are expected only for human but not animal nouns as gender-neutral roots can derive a specific interpretation on the basis of a competing more specific form with presupposed gender.

For Spanish and three other languages (Amharic, Beja, Waziri Pashto) it can be shown that common gender nouns denoting animals (pattern b) exist, as for example *el / la simio* ‘the male/female monkey’. Also Spanish animal nouns having a feminine form derived from the masculine one, can be shown to not involve asserted gender, by applying the focus-construction test. For both (2a) and (2b) the gender inference would (contrary to fact) be expected to remain under focus, if gender were asserted and not only presupposed. Examples like (2b) therefore show pattern a) can be found in Spanish. (In contrast to that, Spanish human nouns seem to behave exactly as Greek human nouns with respect to this test.)

- | | | | | |
|-----|----|-------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------|
| (2) | a. | Solo Anna es un-a simio.
only Anna is one-F monkey
‘Only Anna is a monkey’
⇒ Peter is not a monkey | b. | Solo Anna es un-a burr-a.
only Anna is one-F donkey-F
‘Only Anna is a donkey.’
⇒ Peter is not a donkey |
|-----|----|-------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------|

Building on the insights of Spathas & Sudo (2020) I am going to propose a refined, morphologically more explicit analysis of the phenomena in both Greek and Spanish. Under this approach the similarities of Spanish, Greek and all the other languages are due to a constraint (3), while there is a constraint (4), which applies only to Greek but not to Spanish.

- (3) Uninterpretable flavours of little *n* that are not *n u* [-FEM] can only be merged with roots that have a feature [-human].
- (4) The specific flavour *n i* [+FEM] can only merge with roots or *n*Ps that have a feature [+human].

The combination of both constraints allows for nouns having only presupposed but not asserted gender in only Spanish, but not Greek.

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SPLIT CONTROL OF THE GERUND *PRO* IN ITALIAN PASSIVE SENTENCES: DATA FROM A FORCED CHOICE TEST

In Italian active sentences, the gerund *PRO* corefers with the matrix subject (Rizzi 1982:163) with a few exceptions (e.g. clausal control, see Egerland 2009; 2018). On the contrary, in passive sentences the gerund may yield ambiguous co-indexing. For example, in sentence (1), the gerund (underlined) can be controlled by either the patient ₁ (the derived subject) or by the agent ₂ (the by-phrase):

- (1) ₁*Lucia è interrotta da* ₂*Anna* _{1/2}*urlando al telefono*
Lucia is interrupted by Anna yelling at the phone

The phenomenon has been traditionally dealt with under the theory of Control, a module of universal grammar. Lonzi (1998) proposed that, depending on configurational (Argument-related) and/or on thematic factors, control may be agentive (bearing no overt argument), argumental (syntactic) or clausal/arbitrary. Other accounts suggested that the choice of the controller of *PRO* can be influenced by an economy principle (e.g. the Minimal Link Condition or the Minimal Distance Principle, which favors the object vs subject control, Chomsky 1986), by a processing principle (e.g. Minimal Attachment), by the kind of event structure (symmetry of predicates, Lonzi et al 1994; Winter 2018) and finally by discourse (continuity/discontinuity of the Aboutness-topic, Frascarelli 2007; Giandoso 2014). In this experiment, we investigated the factors that may affect the choice of either agent or patient control of *PRO* by Italian native speakers' (NS).

One-hundred-twenty adult (range 18-69) Italian NSs – all with typical language development and various educational backgrounds – participated in an untimed, forced choice experiment. Participants read 20 passive sentences (plus 15 fillers), all displaying animate, feminine agent and patient NPs, such as (2):

- (2) *Anna è sorpresa da Lucia rientrando dalle vacanze*
Anna is surprised by Lucia coming back from the holidays

Participants were asked to choose the controller of *PRO* (e.g. 'who is coming back from the holidays?') between *Anna* or *Lucia* in an untimed, paper and pencil task. Sentences were pseudorandomized across different sets, so that each participant encountered a lexical entry only once and in one condition.

Sentences were balanced across the following experimental conditions: (A) ‘position’ (whether the gerund preceded or followed the matrix clause); (B) ‘event’ (whether the event is symmetric such as in *giocare* ‘play’ or asymmetric such as in *notare* ‘notice’) and (C) ‘gerund type’ (causal, temporal, modal value). The absolute frequency of predicates in different spoken and written corpora of contemporary Italian was controlled with SketchEngine tool. Non-parametric statistics (Kruskal-Wallis) and significance of independency tests (Chi-square, log-likelihood and Fisher exact) showed that: (1) a significant percentage (almost 23%) of participants chose the agent as the controller of PRO instead of the derived subject; (B) the vicinity of the gerund (after the matrix clause) significantly predicted the choice of agent control, but not the choice of patient control; (C) the presence of multiple values of the gerund strongly predicted agent control, whereas the unique (temporal) value of the gerund predicted the choice of the patient; (D) the presence of a symmetric predicate strongly predicted agent control; (E) the frequency of predicates was not a factor. These results question whether antecedent access to PRO pertains only to the computational (syntactic) system (Lonzi et al 1994, 34) and suggest that (i) the order of NPs (the former/latter mentioned NP in linearization) might be relevant for control; (ii) A-topic (dis)continuity is unlikely a factor and (iii) the temporal value of the gerund promotes the association between PRO and the derived subject.

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Investigating Overt Subjects in Topic Continuity: An Online Study on the Effects of Language Dominance and Length of L2 Residence in Late L1 Attrition

This study investigates the use of null (NS) and overt pronominal subjects (OS) in topic-continuity (TC) contexts in 20 late L1-attriters of Bulgarian, speaking German as their L2.

Bulgarian is a consistent null-subject language, in which the alternation of OS and NS is dependent on grammatical and discourse conditions (Genevska-Hanke 2019). NS are typically used in topic-continuity contexts (TC), while OS are associated with topic-shift or focus (Sorace 2005), despite microvariation as to the scope of overt pronouns among consistent null-subject languages (Di Domenico&Baroncini 2018). These conditions are well-studied in different populations and found to be vulnerable in bilinguals, even in the absence of cross-linguistic difference (Di Domenico&Baroncini 2018). In German (a semi-null-subject and topic-drop language, see Hamann 1996, Roberts&Holmberg 2010), OS are used in both contexts.

Previous research has shown that speakers of consistent null-subject languages with attrition induced by non-null subject languages overproduce OS in TC (Sorace&Filiaci 2006). However, this pattern is temporary and dependent on re-exposure (Chamorro, Sorace&Sturt 2016, Genevska-Hanke 2017). Accordingly, in late L1-attrition L1-knowledge seems intact but processing affected and language dominance (LD) is expected to impact the realization of OS/NS in attriters (Köpke&Genevska-Hanke 2018). With regard to the impact of length of residence (LoR), conflicting results exist, see Köpke (2018). Testing Bulgarian-dominant and German-dominant bilinguals with varying LoR (short and long in each group) aims to uncover which of the two factors, dominance or LoR, is a better predictor with regard to the overproduction of OS in TC.

20 bilinguals and 10 monolinguals (BGM) did a self-paced reading task consisting of 42 items (20 test items), in which either NS (N=10) or OS (N=10) were implemented in TC contexts (see example 1 for NS/2 for OS). In addition, timed acceptability judgments were taken. The bilinguals were late attriters with LoR of 5-20 years in Germany, Bulgarian-dominant (BGD/N=10) and German-dominant (GED/N=10), where LD was calculated experientially on the basis of patterns of language use (questionnaire data).

The results show that BGM and BGD groups are slower than the GED group after OS in TC (RTs measured at three points, figure 1a,b,c). Statistical analyses yielded significant effects of condition and the interaction of condition/group ($p < 0.05$). This underscores the impact of LD. Similarly, the acceptability judgment data was indicative of different preferences toward the use of OS in TC (figure 2). These different preferences are indicative of the impact of bilingualism (bilingual processing) and L2-influence – in comparison to the BGM group, the difference in preferences in the GED group is smaller, while that of the BGD group greater. The pattern of the BGD group can be attributed to the need of these speakers to sufficiently differentiate between their dominant L1 and the majority language, dominating their environment. See Di Domenico&Baroncini (2018) for a similar idea regarding the performance of Italian-Greek bilinguals. In contrast, the GED group uses the L1 less, performing more L2-like. Finally, LoR did not yield significant differences. Accordingly, LD seems to be a better predictor of relevant late L1-attrition effects than LoR. (500 words)

Examples: (BUT sentences)

- (1) Mara ne e stignala daleč, a vechje e **pro** dala vsičkite si pari na vjata. Mara not is got far, but already is given all her money to wind-the 'Mara hasn't got far, but has already spent all her money for nothing.'

(2) Tim e hodil čak do Yaponiya, a **toj** e izharčil mnogo malko za pätuvaneto.
 Tim is gone far to Japan, but he is spent too little for trip-the
 ‘Tim has gone as far as Japan, spending extremely little for the trip.’

Figure 1a. RTs for OS and NS (BGM group)

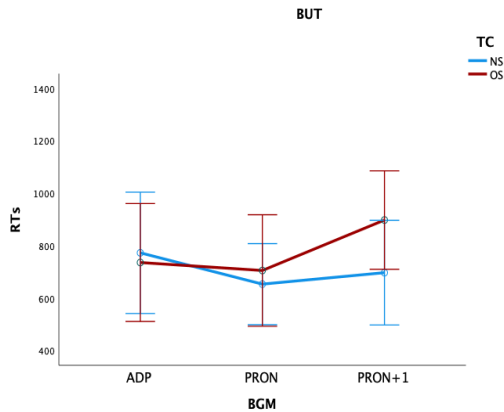


Figure 1b. RTs for OS and NS (BGD group)

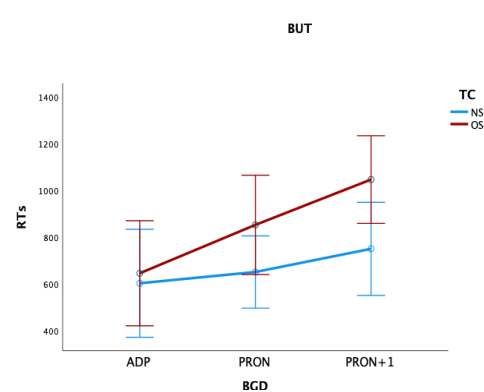


Figure 1c. RTs for OS and NS (GED group)

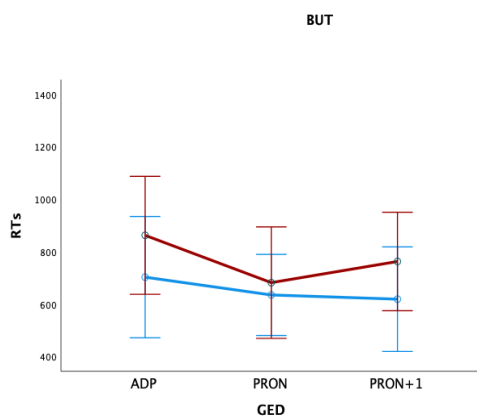
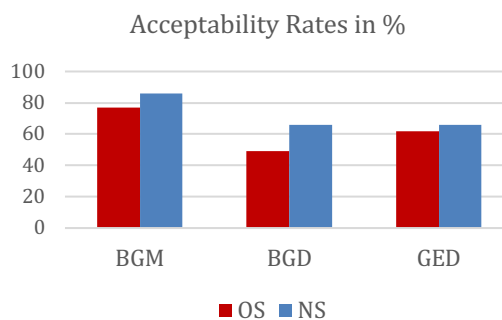


Figure 2. Acceptability rates of OS and NS in TC



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Can analyses of V2 transgression in West Flemish and German be applied to Swiss German?

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Swiss German is a typical Verb Second (V2) language, in which one and only one constituent precedes the finite verb in a main clause. However, violations of the V2 constraint (V2 transgression, V3 order) have been noted in many Germanic V2 languages, and can also be found in a corpus of spoken Swiss German, illustrated in (1) and (2):

- (1) Han i gsait: "Wenn s äü gliich isch, i chumm nòmel drüü Taag."
have I said if it you same is I come again three days
 'I said: "If you don't mind I'll come for another three days."
 (2) Aso won ii Chind gsi bi, me sind mòl uf Itaalie ggange.
Mod. Part. when I child been be we are once to Italy gone
 'When I was a child we holidayed once or twice in Italy.'
 (Schönenberger & Haeberli: 2021)

Haegeman & Greco (2018) and Greco & Haegeman (2020) propose an analysis of V2 transgression for West Flemish and Dutch, in which these 'peripheral' constituents are considered as not syntactically integrated into the clause. Their merging with the root CP is seen as a discourse structuring ('framing') operation, which gives rise to a discourse entity ('FrameP'). Frey (2016, 2018, 2020) develops an analysis for German in which such clausal constituents are considered subsidiary speech acts (ActPs) that are licensed by being adjoined to the root clause, which itself is an ActP. In our talk we will evaluate these two analyses with respect to the Swiss-German data.

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**How do we link theory to practice?
An analysis of verb production deficits in Italian Broca's aphasia**

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Recent years have witnessed a growing interest in linguistic research on clinical language disorders such as aphasia. From the perspective of theoretical linguistics, language data from aphasics are especially interesting since they may provide the necessary empirical backdrop for testing the usefulness of different approaches to the organization of grammar. The speech output of speakers with agrammatic Broca's aphasia is of particular relevance as it is characterized by deficits involving morphology and syntax such as the omission or substitution of (free and bound) grammatical morphemes, the omission or nominalization of verbs and problems with word order. In the verbal domain, factors such as finiteness, tense, person/number, (ir)regularity, conjugation and verb movement as well as intrinsic verb properties such as Aktionsart have been cross-linguistically identified as potentially triggering verb omissions and substitutions of verb inflections (e.g., Friedmann & Grodzinsky 1997; Penke et al. 1998; Thompson et al. 2002; Bastiaanse et al. 2004; Faroqi-Shah & Thompson 2007).

For Italian, prior studies have reported a high degree of speaker variation in several respects such as the omission and substitution of grammatical morphemes, difficulties in producing phraseological auxiliaries, impoverished use of modal and reflexive verbs and the extent of the deficit regarding complex verb-argument structures (cf. Miceli et al. 1983; Miceli et al. 1989; Miceli & Mazzucchi 1989; De Bleser et al. 1996; Rossi & Bastiaanse 2008). Some factors such as frequency, (ir)regularity and syllable length, in turn, have not yet been given sufficient consideration. This is surprising since Romance languages such as Italian represent an especially interesting area of research due to their relatively complex inflectional verb morphology.

This study will investigate how the hypotheses and operational tools of current syntactic approaches to morphology such as Distributed Morphology (Halle & Marantz 1993, 1994) and Nanosyntax (Caha 2009; Starke 2011) can contribute to a better interpretation of Italian agrammatic data in the verbal domain. Novel empirical data, in turn, will be used to further optimize the theoretical assumptions put forward in these frameworks, ideally giving rise to more empirically driven theories of grammar.

In combining empirical evidence with linguistic theorizing, the study aims to demonstrate how basic theoretical assumptions such as the separation of grammatical features from their phonological realization, lexical underspecification and the process of vocabulary insertion may account for the morphosyntactic deficits in Italian aphasic speech production.

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How many negations are there?

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Cécile Meier

Larry Horn discusses the longstanding question how many types of negation there are from a semantic and pragmatic point of view in several places in his seminal work. And quite some researchers subscribe to the hypothesis that there is more to negation than its function in classical logic, i.e., truth value reversal or complementation. In this talk, I discuss two problems for the classical view that were used to show that negation is non-binary and no truth-functional operator. I show that the arguments for non-binary negation are not compelling, though. The problems concern constructions with gradable adjectives and a suitable analysis for gradable adjectives (containing quantifiers) explains the problems discussed: Strong negation (contrary negation) and weak negation (contradictory negation) are shown to be names for a type of scope interaction of classical logical negation with the so-called positive operator (in the version of von Stechow) and double negation does not cancel out because the positive operator intervenes between the two occurrences of classical negation. The two types of negation are scope effects in the domain of degree semantics. And the complementation hypothesis (put forward by Joachim Jacobs) remains valid.

Auxiliary selection in Italian restructuring: into the size of the clause

Overview Restructuring configurations are complex sentences where a modal, aspectual or motion verb selects for a lexical predicate (Rizzi 1976, Wurmbrand 2003, Cinque 2004). In Italian, in the perfect tense the auxiliary associated with the modal verb can be either HAVE, or the “faithful” auxiliary, i.e. the one corresponding to the lexical verb (BE/HAVE). The choice seems optional, although it correlates with the presence of clitic climbing. In this project, I argue that there is no true optionality in the choice of the auxiliary, but rather it is the possibility of selecting complements of different sizes that determines different auxiliaries. Assuming that auxiliary selection is a form of π -Agree, different complement determines different Agree configurations. The “unfaithful” auxiliary arises with a TP complement, while the “faithful” one results from a ν P complement.

Auxiliary selection In Italian, auxiliary selection depends on the argument structure: the perfect auxiliary is realized as HAVE with transitive/unergative verbs, and as BE with unaccusative, reflexive and impersonal predicates (*Teresa ha mangiato la torta* ‘Teresa has(HAVE.PRS.3SG) eaten the cake’, *Paolo è andato al mare* ‘Paolo has(BE.PRS.3SG) gone to the beach). In restructuring, a modal verb selects for a lexical predicate. The perfect auxiliary of the modal verb can either be HAVE (1a-b), or it can (optionally) be realized as the form that the embedded verb would select, leading to BE if the embedded verb is unaccusative, reflexive or impersonal (1c). The emergence of the “faithful” auxiliary is traditionally called *auxiliary switch*.

- (1) a. Paolo ha/*è voluto [mangiare la torta].
 Paolo have.PRS.3SG/be.PRS.3SG want.PRTC eat.INF the cake
 ‘Paolo wanted to eat the cake.’
- b. Paolo ha voluto [andare al mare].
 Paolo have.PRS.3SG want.PRTC go.INF to.the beach
 ‘Paolo wanted to go to the beach.’ (no auxiliary switch: “unfaithful aux”)
- c. Paolo è voluto [andare al mare].
 Paolo be.PRS.3SG want.PRTC go.INF to.the beach
 ‘Paolo wanted to go to the beach.’ (auxiliary switch: “faithful aux”)

Auxiliary switch seems optional: speakers freely produce (1b-c). However, it becomes obligatory in the context of clitic climbing. In addition, auxiliary switch does not correlate with any semantic distinctions: the diagnostics for control vs. raising are not sensitive to the form of auxiliary.

Background: auxiliary selection is π -Agree I adopt an Agree-based theory of auxiliary selection. Under the assumption that transitive ν contains a π -probe, while unaccusative ν is defective (Chomsky 2001), and that Perf bears a probe for person, the dependency between the perfect auxiliary and the argument structure is achieved via Agree between Perf and ν , in (2).

- (2) Perf[u π :_] ν [π : α] ...
 \checkmark π -Agree }
- (3) a. / $\sqrt{\text{HAVE}}$ / \leftrightarrow Perf[π : α]
 b. / $\sqrt{\text{BE}}$ / \leftrightarrow Perf elsewhere

If Perf successfully copies a person value, as in the case of transitive and unergative predicates, then the more specific auxiliary HAVE is chosen at Spell-out, given the vocabulary entries in (3) for Italian. In contrast, if Agree fails because there is either a functional head with no person feature (unaccusative ν), or a defective argument (reflexive or impersonal DPs) that cannot value the π -probe, then the elsewhere form BE is inserted, as (3) shows.

Proposal: TP vs. vP I assume that restructuring configurations are monoclausal raising structures (Wurmbrand 2003, Cinque 2004, Grano 2015). I propose that the modal verb is associated with a v head called v_{restr} that exhibits particular properties. This head determines the morphological properties of the embedded verb (an infinitive) and creates the raising configuration. In structures containing v_{restr} , the Perf head cannot access the person feature of the embedded v head directly as in (2) (due to the *Phase Impenetrability Condition*). Instead, the Agree-relation in (2) has to be mediated by v_{restr} . This is possible if v_{restr} also bears a person feature. The resulting *cyclic Agree* configuration (Legate 2005) is shown in (4).

$$(4) \quad \text{Perf}[u\pi: _] \dots v_{\text{restr}}[\# \pi: \alpha] \dots \left[\overline{\text{vP}} \right] v[\# \pi: \alpha]]$$

$\underbrace{\hspace{10em}}_{\pi\text{-Agree}} \quad \underbrace{\hspace{10em}}_{\pi\text{-Agree}} \quad \underbrace{\hspace{10em}}_{\pi\text{-Agree}}$

In (4), the information about the argument structure of the embedded infinitive can be transferred to the matrix sentence, where it determines auxiliary selection faithfully to the embedded predicate. This explains cases where the perfect auxiliary of the modal verb matches the auxiliary of the lexical verb (1c). Auxiliary switch (i.e., emergence of BE) arises with a vP complement as in (4), but when the lower v does not bear any valued person feature.

In order to derive the unfaithful case (1b), I propose that v_{restr} can embed either a vP or a TP. If a vP is embedded, the derivation is as in (4). If a TP is embedded, then v_{restr} will always end up finding a valued person feature, assuming that the relevant infinitival T-head bears ϕ -features (despite its non-finiteness), which are valued by the argument that raises to the subject position of the matrix clause. If person on v_{restr} is valued, then person on Perf will be valued, too, resulting in HAVE. In other words, a TP complement involves more structure and determines more possibilities for Agree. This is shown in (5).

$$(5) \quad \text{Perf}[u\pi: _] \dots v_{\text{restr}}[\# \pi: \beta] \dots \left[\overline{\text{TP}} \right] T[\# \pi: \beta] + v \dots]$$

$\underbrace{\hspace{10em}}_{\pi\text{-Agree}} \quad \underbrace{\hspace{10em}}_{\pi\text{-Agree}} \quad \underbrace{\hspace{10em}}_{\pi\text{-Agree}}$

Evidence for different sizes of the complement comes from the fact that clauses with clitic climbing and/or auxiliary switch cannot undergo some further syntactic operations (for instance, Merge of a perfect projection, passivization, ellipsis, clefting, relativization, topicalization, and Merge of clausal negation). These diagnostics indicate that there is a difference in size between the clauses with and without auxiliary switch. An example of impossible auxiliary switch in the context of an embedded perfect projection is given in (6).

(6) Paolo avrebbe / *sarebbe voluto [essere già andato a casa].
 Paolo have.COND.3SG/be.COND.3SG want.PRTC be.INF already go.PRTC-SG.F at home
 ‘Paolo would have wanted to have gone home.’

Summary Auxiliary selection in restructuring is the same phenomenon as in root clauses. The optionality in the size of the complement determines the optionality in auxiliary switch (and clitic climbing). In particular, raising out of vP causes auxiliary switch (if applicable); raising out of TP prevents auxiliary switch from taking place. To the best of my knowledge, this is the first formal account of auxiliary selection in restructuring.

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of the value of its number feature. That is, DESID will be exponed by -A in the environment of both 3SG and 3PL. The expected form would be (6) under this analysis.

- | | | | |
|-----|-----------------------------------|-----|---------------------------------|
| (5) | gid-esi-leri
go-DESID-3PL.POSS | (6) | gid-e-leri
go-DESID-3PL.POSS |
|-----|-----------------------------------|-----|---------------------------------|

We observed that while some speakers prefer (5) to (6), some others prefer (6) to (6). This observation points to different parses for different speakers in the face of third singular desideratives.

Conclusion

While both analyses seem viable in isolation, it appears that speakers are reluctant to settle on an analysis in the absence of decisive data, creating the reported uncertainty judgment, i.e. the paradigm gap. We are planning to formulate the different decompositions of DESID.3SG.POSS in the framework of Distributed Morphology and account for the gap in 3PL desideratives by employing allomorphy and competition between lexical items for insertion (Embick 2010, Halle & Marantz 1993).

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Marking changes. Affectedness at the morphosyntax-semantics interface

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This talk is concerned with the semantic and morphosyntactic representation of the notion of affectedness in transitive predicates. The focus lies on the question of how an event participant which is affected, i.e., undergoes change, is realized differently from one that does not undergo change. In order to do so, Differential Object Marking in Turkish provides a test case. Turkish is a language which allows for optional case marking of certain indefinite direct objects via the accusative suffix *-(y)ı*. The talk examines how affectedness shapes different morphological realizations of direct objects, i.e., how the change-related properties of undergoing a change, functioning as a path to change, and resultativity determine the presence or absence of morphological accusative case. It shows that the property of undergoing change is the crucial event semantic predictor that systematically enhances morphological accusative marking on the direct object. On a theoretical level, this relation is modelled in a semantically motivated structural account of affectedness which builds on the lexical syntactic structure developed by Ramchand (2008). The proposal can be seen as a first formal approximation of the event semantic notion of affectedness with differential morphological realization of direct objects.

How do we know in German

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In this talk, we discuss various properties of elements in German that have been argued to encode evidential meaning, i.e. meaning related to information source, such as the discourse particle *wohl* and modals *sollen/wollen*. Starting with the discourse particle *wohl*, various authors (Modicom, 2012; Göbel, 2018; Eckardt and Beltrama, 2019) argue that it serves as inferential evidential, suggesting that the source of the information expressed is based on reasoning from one's knowledge.

- ✓ You're asked where your keys are. You hear the noise of keys inside your bag.
- ✗ You're asked where your keys are. You usually leave them in your bag but you can't quite remember if you did this time.

- (1) *Sie sind wohl in meiner Tasche.*
 they are WOHL in my bag
 'They're in my bag (I infer).'

Second, the modals *sollen* and *wollen* can serve as reportative evidentials, expressing the information source as being based on a report, in addition to their uses as deontic or bouletic modals, respectively (Schenner, 2010). In addition to the reportative meaning, *wollen* also indicates that the report originated from the subject of the clause.

- (2) a. *Peter soll in Berlin sein.* b. *Peter will in Berlin sein.*
 Peter SOLL in Berlin be Peter WOLL in Berlin be
 'Reportedly, Peter is in Berlin.' 'Peter claims to be in Berlin.'
 'Peter should be in Berlin' 'Peter wants to be in Berlin'

In the first part of the talk, we will argue that these evidentials in German contribute their evidential meaning on different levels of the clause. While *wohl* serves as a speech act operator, *sollen/wollen* show clear properties of being epistemic modals. This suggests that it is impossible to fully reduce all evidentials either to speech act operators (Faller 2002, *et seq.*) or to epistemic modals (Matthewson et al. 2007, *et seq.*), even in a language without a fully grammaticalized system of evidentials like German (Tan and Mursell, 2018).

In the second part, we turn to combinations of the two evidentials. In particular, we are interested in two properties of these combinations. The first is the interactions of the evidential contributions, which can be rather complex.

- (3) *Peter soll wohl in Berlin sein.*
 Peter SOLL WOHL in Berlin be
 'The speaker infers that, based on the report that Peter is in Berlin, he actually might be in Berlin.'

The second property of special interest to us is the ambiguity of sentences like (2). Due to their alternate uses, sentences containing the modals *sollen* and *wollen* can also be understood as deontic (2-a) or bouletic (2-b). Various means can be used to disambiguate the meanings. For example, using the present perfect leads to a strong preference for the evidential reading (4).

- (4) a. *Peter soll in Berlin gewesen sein.* b. *Peter will in Berlin gewesen sein.*
 Peter SOLL in Berlin been be Peter WOLL in Berlin been be
 'Reportedly, Peter was in Berlin.' 'Peter claims to have been in Berlin.'

Furthermore, combining the modals with the discourse particle *wohl* as in (3) immediately excludes the non-evidential reading. We will try to account for this based on the fact that *wohl* as a speech act operator always takes scope over the modal.

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Introduction *General Prohibitives* (GPs) in English are constructions that feature gerunds as well as ordinary, non-deverbal, nominals with an imperative flavor. Unlike regular imperatives, these constructions are licensed only under certain operators, such as negation (1a,b) and *only* (1c,d). Across languages, GPs also feature infinitives (Iatridou 2021; Portner et al. forth.).

- (1) a. No littering on the beach! / #Littering on the beach!
 b. No motorized vehicles beyond this point! / #Motorized vehicles beyond this point!
 c. Walking only in this area.
 d. Authorized personnel only!

GPs have been argued to be a type of non-canonical imperative: a construction that, despite having a non-standard syntactic packaging, has the same illocutionary force as imperative utterances. Thus, Iatridou (2021) argues that GPs always function as commands, just like root infinitives in languages like German (Gärtner 2014) or Russian. Donovan (2020) goes as far as claiming that GPs are vanilla imperatives semantically and can perform a range of directive speech acts. We present a series of arguments against the imperative view and propose instead that GPs are assertions that refer to a pre-existing rule (cf. intuition expressed by Portner et al. (forth) for Italian and Korean). Like other statements with normative expressions (e.g., deontic modals), GPs as such are not inherently performative but can be interpreted this way. We also discuss the impersonal flavor of GPs.

Empirical landscape Imperatives across languages are well-known to exhibit functional heterogeneity (Kaufmann 2012; Schmerling 1982) and perform a range of mostly directive speech acts: commands, permissions, suggestions, advice, and even wishes. Donovan (2020), who advocates an imperative analysis of GPs, argues that they have the same functional heterogeneity. In line with Iatridou (2021), we argue that the performative effect of GPs is limited to command uses. (2) illustrates that only a negative imperative, but not a GP, is allowed in a suggestion scenario.

- (2) A. I have to swim, run and cycle when training for a triathlon. But since my time is limited on weekends, do you have any suggestion which of these I could drop?
 B. Maybe don't swim. / #Maybe no swimming.

We depart from Iatridou (2021) in arguing that GPs are not inherently performative. We show that—unlike even non-canonical imperatives—GPs are truth-evaluable, do not require speaker's endorsement and are not always used to issue new commands. Illocutionary force of an utterance is usually not evaluable for truth (Roberts 2018), as (3) illustrates for negative imperatives. GPs, on the other hand, can be targeted by anaphors such as *That's not true* (4), which shows that their contribution is descriptive. Non-canonical imperatives, such as German root infinitives, pattern like regular imperatives and are always performative, which is precisely the behavior Iatridou (2021) incorrectly predicts for GPs.

- (3) A. Don't smoke in this bar!
 B. #That's not true. (Intended: 'There is no such rule here.')

- (4) A. No smoking in this bar!
 B. That's not true. (I see no sign saying that, plus there are ashtrays on the tables.)

Another argument against the imperative view is the lack of speaker's endorsement. Ordinary imperatives commit the speaker to a preference for the prejacent being actualized (Condoravdi and Lauer 2017; Harris 2021). Although imperatives may have acquiescence uses (von Stechow and Iatridou 2017), the felicity conditions of commands require that the speaker endorse the sentence radical (5a). GPs, on the other hand, are compatible with the speaker explicitly disavowing the rule (5b).

- (5) a. Don't smoke in this bar. #But I don't care if you do. / #But I wish it were otherwise.
 b. No smoking in this bar. But I don't care if you do. / But I wish it were otherwise.

Finally, while imperatives can be used in any context where the speaker issues a one-off request (6a), GPs typically refer to a rule that is already in place prior to conversation (6b). (6b) is only felicitous if this was previously agreed upon.

- (6) *A is watching B making a salad and says:*
 a. Don't put yoghurt, I hate it.
 b. #No putting yoghurt in the salad, I hate it.

GPs can be used to issue commands when the speaker has relevant authority (7b), but even in that case, unlike with imperatives (7a), the command becomes a rule that has to be followed from now on:

- (7) *Bar owner to a guest:*
 a. Don't smoke here. [can be a one-time order]
 b. No smoking here. [describes a new rule]

Proposal We propose that GPs encode a covert deontic operator O , which states that the prejacent follows from the objective rules relevant in the context. More formally, we assume the semantics below, where $Deon_{w,c}$ stands for the set of worlds compatible with the objective rules in w that are relevant in c .

- (8) $\llbracket O \rrbracket^{w,c}(p) = 1$ iff for all $w' \in Deon_{w,c} : p(w') = 1$

As for the internal structure of GPs, we adopt the existential construction analysis of [Donovan \(2020\)](#). According to this analysis, a GP has the structure as exemplified in (9):

- (9) A. $[ModPO [TP \text{there is no smoking here}]]$
 B. $[ModPO [TP \text{there is authorized personnel only}]]$

Evidence for this analysis comes from tags, where presumably the tag copies the subject and the auxiliary of its antecedent.

- (10) No smoking here! Actually, is there? / *are you? / *is it? (cf. [Donovan 2020:20](#))

The rule-like behavior of GPs is supported by the fact that these constructions can answer a QUD about rules, just like sentences with overt deontics (11).

- (11) A. What are the rules in this park?
 B. No littering, no barbecuing on the grass, no dog poop, ... [GPs]
 B'. You are not allowed to litter, you are not allowed to barbecue on the grass, you are not allowed to leave dog poop, ... [deontic modals]

In cases of assumed authority (cf. 7b), GPs can get a non-truth-evaluable performative reading (12).

- (12) *Bar owner to a guest:*
 A. You are not allowed to smoke in here. / No smoking in this bar.
 B. #That's not true.

Crucially, just like overt deontics and unlike imperatives (cf. also discussion in [Condoravdi and Lauer 2017](#)), GPs are not inherently performative, a fact reflected in our modal semantics.

Conclusion We have shown that GPs differ from imperatives and are more akin to overt deontic statements. Nevertheless, we also observe that unlike the case of overt deontics, GPs seem to be restricted (syntactically, semantically) to gerunds and generic DPs. This restriction receives an explanation on our proposal: since GPs express rules, only embedded predicates that make a generic interpretation available are compatible with GPs. As exemplified in (11) above, GPs answer a QUD about what a rule says in a particular context. But since they are not performative (unless the speaker has authority, cf. 7 and 12), the utterance of GPs is interpreted as answering a QUD about a rule, in which case it is informative, or it can be accommodated as such, in which case it serves as a reminder for the addressee (13):

- (13) No smoking in this bar, remember?

Importantly, as per our semantics in (8), the rule is merely described and the addressee is understood to be generally bound by it. Like other generic statements ([Greenberg 2007](#)), it allows exceptions, for example, if licensed by the speaker's authority (14):

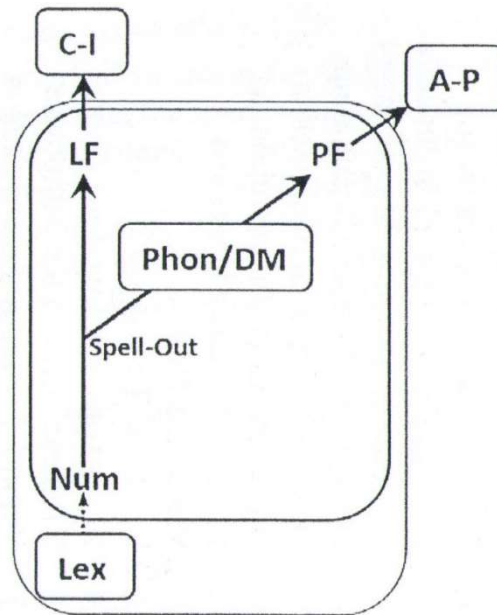
- (14) Hey, no smoking here! But if you're on your way out, then OK. Just be quick.

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General background

This work is going to fit in the larger set of works within the generative approach to language (for which the *locus classicus* is (Chomsky, 2000)); in particular, both the general idea of Universal Grammar (language ability of humans distinct from their general mental capabilities, also known as **competence**, for whose existence Specific Language Disorders, on which see (Pinker, 2003), inter alia, are a glaring proof) and Chomskyan Y-model of competence illustrated below by Pic. 1 (rather than, say, parallel architecture of (Culicover & Jackendoff, 2005)) are accepted. Note that competence is distinct from semantic or pragmatic plausibility (an idea heralded since at least (Chomsky, 1957, p. 15)).



Pic. 1. Y-model (by (Chomsky, 2000))

This entails that the theory will be strictly synchronic rather than historical (for the distinction, see, e.g., (Saussure, 2011)): such works are meant to model a part of a language learner's mind, and a language learner has no access to the previous stages of the language. (Historical models *informed* by synchronic analyses can and should exist, but not vice versa; this work builds up the synchronic part which can then be used for building historical theories, which, however.) That said, there will often be similarities between synchronic analysis and actual history of the language, because said history leaves traces in the state of the language (in particular, many – although not all! – phonological rules are synchronic restatements of language change: Russian and German have final devoicing of obstruents while Ukrainian and English do not because in the former two, a sound change which devoiced obstruents happened, while the latter two did not undergo such a historical process).

More specifically, this work concerns itself with describing the mechanisms of **externalization** (the rightwards arrow on Pic. 1) – process that happens after syntax sends pieces of its structure to its interface with articulatory-phonetic systems, but before said systems are actually reached. There are several parts of this process:

1. relating syntactic structure to an (underlying) sequence of phonological entities – the relevant study is usually called **morphology**, and the assumed processes are widely differing in specific morphological theories;
2. applying a number of changes (usually, but with a major exception of Optimality Theory (Prince & Smolensky, 1993), represented as **rules**) to those underlying phonological entities and filtering the results through inviolable **constraints** (these are not the same as standard Optimality Theory constraints, which are violable, but see (Orgun & Sprouse, 1999) for a similar distinction within OT) – this is the traditional domain of

phonology (and, in some models, morphophonology, see (Itkin, 2007), inter alia; this work will not assume a principled distinction between the two, following (Chomsky & Halle, 1968), although readjustment rules, if they exist, play a similar, albeit limited, role);

3. translating the surface phonological entities into articulatory instructions (and, possibly, phonetic – or, for sign languages, visual – cues); this is the work for **phonology-phonetics interface**, which is expected to enjoy relatively little attention in this work. Maintaining the distinction between phonology and this interface presumes that phonology is **substance-free** (see (Hale & Reiss, 2008) and (Iosad, 2017), inter alia): that is, that there is no direct employment of physical properties of sounds in processes of phonology proper, only of abstract phonological features whose relation to physical properties is not necessarily direct.

A major assumption in many works is that most of the non-lexical variation between languages happens in externalization, while their syntax (and semantics, though I have little to say about that) is very similar. That said, the variation is not free, and the relevant processes are strongly constrained by Universal Grammar; these limits, the forms that these processes can take and the information that is available to them, are the main object of study in this work.

Below, the two main areas of interest for this work are discussed in more detail.

Morphology

There are several main points of difference between the various morphological theories assumed within generative framework:

1. Are the minimal elements of externalization description words (**amorphous** theories, often also called **lexicalist**, but cf. (Mendivil-Giró, 2019)) or morphemes (**morphemic** theories)? (There are further distinctions within amorphous theories, but they will not be discussed in more details, as this work builds a morphemic theory for reasons outlined below. Nanosyntax (see below) is also morphemic: while its *syntactic structure* is built of individual features rather than morphemes, exponents matched to pieces of said structure are essentially morphs with no further subdivision. Lexical Phonology (Kiparsky, 1985) and its Optimality Theory modifications such as (Kiparsky, 2000), on the other hand, are firmly amorphous.)
2. Are said elements extracted from lexicon already endowed with their phonological properties (**early realization**), or do they only acquire said properties after syntactic structure is built (**late realization**)?
3. Are objects that are matched to phonological exponents terminal nodes of syntactic structure (**head spell-out**) or – in the general case – some combinations thereof, such as spans or subtrees (**phrasal spell-out**)? (Phrasal spell-out obviously excludes early realization, as objects are only first combined in syntax.)
4. Are any **postsyntactic operations** before insertion of phonological exponents needed (obviously, if they are not needed, by Occam’s razor they are to be excluded)?
5. Is said insertion conditioned on properties of the context (that is, things other than the objects the exponent replaces; same Occam’s razor comment applies)?

Amorphous theories, mostly making extensive use of the notion of syntactic word (see (Aronoff, 1985)), can be considered to have essentially lost the battle for the following two reasons:

1. They require a separate – crucially and unavoidably **productive** – mechanism building new objects in the lexicon (so-called “derivation”, opposed to “inflection” which changes the form of those objects). Not only does this run counter to the assumption of Minimalism that the only structure-building mechanism in Universal Grammar is syntax

(Chomsky, 1993), it also runs into problems because this purportedly pre-syntactic process turns out to be sensitive to syntactic structure (Marantz, 1997).

2. The very notion of word turns out to resist consistent definition: phonological word is very much distinct from semantic word (the smallest non-compositionally interpreted object, also known as “idiom” (Marantz, 1995)), and neither corresponds to the syntactic word (whose existence is assumed by so-called “lexicalist hypothesis”) impenetrable for syntactic operations due to said syntactic word simply not existing: the closest notion is “maximal projection”, see (Bruening, 2018), and it doesn’t correspond to either phonological or semantic word. Amorphous version of Nanosyntax (Mendívil-Giró, 2019) avoids this by matching (phonological) words to subtrees after they are built – however, synchronic word-internal structure is explicitly rejected, taken to only be a historical reflex, which seems unbelievable (in other words, this is an extremely bad take on the first issue above).

The table 1 below shows the subdivision of the various morphemic generative theories:

realization	early	late	
spell-out		head	phrasal
no postsyntactic operations or context-sensitive insertion	(Collins & Kayne, 2020)	–	Nanosyntax (Starke, 2009)
postsyntactic operations and/or context-sensitive insertion present	(none known to the author)	standard DM (Halle & Marantz, 1993)	DM with spans (Merchant, 2015)

Table 1. Different morphemic theories (DM stands for Distributed Morphology)

Late-realization head spell-out theory without postsyntactic operations is known to be untenable because it cannot reflect allomorph choice to be correlated with syntactic movement, whereas such situations are known to exist (Fábregas, 2009).

Likewise, there is a number of important arguments against early realization. First of all, no syntactic operations are known to be sensitive to phonological classes (that is, there is no rule or constraint such as “move/merge an allomorph whose first segment is labial” in syntax), which requires additional stipulations to avoid if phonological features are already present during syntactic derivation. Moreover, early realization requires additional rules to avoid pronunciation of “extra” morphemes (Collins & Kayne, 2020, p. 9). Thus, late realization will be assumed.

Choice between Distributed Morphology and phrasal spell-out theories is a more difficult one as measures they employ are often equivalent or quasi-equivalent; in particular, phrasal spell-out is partially emulated by combination of Amalgamation (combination of Lowering and traditional “head movement”, see (Harizanov & Gribanova, 2018)) and Fusion (although predictions for intervening specifiers differ, see (Embick & Marantz, 2008)), whereas zero allomorphs in phrasal spell-out allow for effects akin to Distributed Morphology’s Impoverishment (Caha, 2009, p. 260). However, the “purest” version of Nanosyntax lacking context-sensitive insertion is untenable, as Finnish shows: its illative case suffix has a number of allomorphs (*Vn*, *hVn*, *seen* and, in plural, *siin*) which together point to an underlying form of *-s-hVn* (see (Zelenskii, 2018)), where *-s-* is localization IN, while allative is *-l-le^x* (from underlying *l-nney*, cf. *tä-nne^x* (this-lative) ‘(to) here’); the localizations are further illustrated by elative *-s-tA* and ablative *-l-tA*. As assigning different syntactic structures to IN and AD would be ad hoc, this means lative allomorph choice is conditioned by what localization the heads responsible for lative (presumably Place and Path/Goal, see (Caha, 2009, pp. 87–88)) adjoin to.

Because of that, I intend to try and build a version of Distributed Morphology; there will be a number of postsyntactic operations, including linearization (conversion of syntactic structure into string), the aforementioned Amalgamation and postsyntactic agreement (on which see (Wurmbrand, 2016); its properties suggest it follows linearization and is thus non-equivalent to syntactic Agree). The operations are going to be ordered with respect to one another, an idea based

on (Arregi & Nevins, 2012); Impoverishment, however, is going to follow postsyntactic agreement and thus linearization as it never distinguishes between results of Agree and results of postsyntactic agreement, unlike in the work cited above where it precedes linearization. Determining the exact set, order, and possible formulae of postsyntactic operations is one of the two major goals of this work; most of the specific operations, except linearization, are going to be language-specific (or, in some cases, triggered by language-specific features on the nodes involved, as per Borer-Chomsky conjecture), yet the set, order, and formulae are expected to be universal.

Vocabulary Insertion of the exponents is subject to elsewhere condition (if several rules are applicable, the most specific is chosen) and expected to be locally sensitive; the exact measures of locality are inferred, *inter alia*, from (Bobaljik, 2000) (and subsequent works by the same author) and are going to be a secondary goal.

Lastly, it must be mentioned that roots are indexed (as per (Harley, 2014) and *contra* the initial assumptions of Distributed Morphology, which, looking back, made little sense in view of the Y-model as a link between phonology and semantics, observable in roots (e. g., [i:l] meaning ‘eel’ not ‘cat’), clearly presupposes their identifiability in both branches) and are likely to carry other features (as allomorphy by internal object’s number in some languages suggests). That said, indices may well be syntactically inert.

Phonology

The main postulates inherited from the half-a-century framework of generative phonology are as follows:

1. Phonology is an interface interpreting the output of syntax (with possible mediation of morphology) to assign its articulation to it;
2. Segments are bundles of distinctive articulatory features that can have positive or negative value or lack value (the latter situation is designated as 0); cf. Kiparsky (1982) arguing against the difference between negative values and lacking values (i.e. against archiphonemes; see (Zelenskii, 2018) for a rebuttal); cf. (Steriade, 2000) arguing against differentiating between distinctive and phonetic features, which runs counter to the idea of substance-free phonology mentioned above;
3. Changes of segments (other than metatheses, originally represented by transformational rules) are totally ordered (this is often regarded as a downside, but cf. (Itkin, 2007, p. 50)) and not necessarily natural – cf. (Vaux, 2008) – rules of the format $A \rightarrow B / X_Y$ ($A \neq B$; if $A = \emptyset$ X and/or Y is non-empty);
4. Boundaries of morphemes and larger elements are unpronounced segments in the string marked by [-seg] (unlike usual segments marked [+seg]) of the universal set {+,=#};
5. Morphemes can be marked to indicate that a rule is not applied to them or in their context; a subcase is marking for belonging to a certain class (such as SPE’s native and *latinate*);
6. Phonological word is merely a string of segments between ## and ## not containing ##.

Rules in Standard Generative Phonology could be cyclic or postcyclic (or, originally, “word-level”). Cyclic ones are applied once per derivational cycle; when a new cycle begins was originally defined quite arbitrarily (see especially (Lightner, 1972)). That led to creating many theories trying to deduce cycles directly from syntax (so notably in Lexical Phonology, cf. (Kiparsky, 1985)). Postcyclic ones are applied once, after all cycles (originally – after words were built but potentially before other, syntactic cycles).

The original statement was unfit for modeling suprasegmental phenomena, and soon its modification was created for that purpose, autosegmental phonology (Goldsmith, 1976), introducing several levels (**tiers**) with links between them. While those are most certainly going to be part of the proposed theory, their existence is not directly relevant for the discussion below.

There have been several alternative theories, notably including Optimality Theory which, while formally being a theory of grammar as a whole (Prince & Smolensky, 1993, pp. 3, 25, 209),

has mostly been influential in phonology. Due to space considerations, I cannot properly justify its rejection, see (Vaux, 2008) for empirical arguments against it (ineffability, opacity effects – pace (Smolensky, 2002) – and what was traditionally described as “crazy rules” are all problematic for Optimality Theory) and (Zelenskii, 2019) for a cognitive argument (additionally reinforced rather than undermined by Riggle’s (2009) calculations).

Attempts to maximally simplify phonology led to another phonological theory, Government Phonology, limiting phonology to mapping several privative features (Gussmann, 2007, p. 25) known as elements (initial insistence of its authors in (Kaye, Lowenstamm, & Vergnaud, 1985) on elements not being features and being describable via features notwithstanding) to a skeleton. However, they find themselves ill-equipped to describe a number of processes, trying to relegate them to phonetics or lexicon, which excludes ordering of melodic processes (whose existence is acknowledged, see (Scheer, 2008)). A modification thereof is CVCV, or “strict CV” theory, for which the locus classicus is (Scheer, 2004).

Both theories struggle to an extent to reflect opacity effects (except possibly Stratal OT, but, being inherently lexicalist, it struggles with its own problems, see *Morphology*); traditional rule ordering, on the other hand, does so without any serious problems and is thus kept.

Articulatory Phonology (Browman & Goldstein, 1986), suggesting using gestures instead of segments or features, both runs counter to the idea of substance-free phonology and, under standard assumptions, is incapable of reflecting a number of processes common in languages (see (Vaux & Miller, 2015 (on-line)/to appear)); it is thus best relegated to a possible theory of phonology-phonetics interface rather than phonology proper.

The main contribution of this work, however, is going to be the reason why the proposed theory is called “**postcyclic** generative phonology”. The information of syntactic structure (constituency) is obviously used twice: once in boundaries and once in derivational cycles. The fact was quickly noticed, yet of the two possible solutions most linguists chose abandoning boundaries rather than cycles. Beside aforementioned Lexical Phonology, the proposal is found in Rotenberg’s (1978) dissertation and many other works. In particular, so-called Strict Cyclicity limitation, requiring some rules to only apply in derived context, is expressible via boundary segments (contra (Rotenberg, 1978, p. 18) as the rule listed there obviously counts syllables), not requiring, however, all such rules to go before all the rules not obeying the limitation; such an ordering is indeed not found (Zelenskii, 2018).

Standard Generative Phonology, Lexical Phonology, and Rotenberg all assumed that constituency is directly available for phonology. Steriade (1982, p. 13) explicitly mentions that boundaries are to be superseded by constituency. In view of the suggested framework (and Y-model in general, see (Scheer, 2008)), however, the assumption is deeply problematic, and even more so if Wurmbrand’s (2016) postsyntactic agreement – clear evidence of constituency being unavailable even before Vocabulary Insertion – is accepted.

As spell-out happens phase-by-phase (see (Chomsky, 2001), (Bošković, 2003)), one could expect that phases would correspond not only to Chomsky’s (1986) barriers but also to SPE’s derivational cycles in Minimalism. However, the original proposal on phases of Chomsky (2000) implied they were much bigger (CP, vP, DP) than the usually assumed derivational cycles; phases size is hotly debated but generally there seems to be no match between islandhood (aka syntactic phasehood) and traditionally assumed derivational cycles (D’Alessandro & Scheer, 2015).

Therefore, the cycles are to be abolished on theoretical grounds (and all rules are to be considered postcyclic). Since phonological processes are, in fact, sensitive to structure, boundaries can be re-introduced. However, an additional question arises: where do the boundaries come from?

The original source of (#) boundaries in SPE, introducing them around every lexical category and then deleting some, is obviously untenable even if syntactic structure were available, as Rotenberg (1978, p. 8) correctly notes.

I suggest a different solution: all # and = (with a single exception, see this paragraph's last sentence) and possibly some + boundaries are in the lexicon as part of the exponent; if an edge of a morpheme has neither, + is automatically added. Thus most roots in languages like Finnish (lacking prefixes overall) and Russian (having special phonological treatment of prefixes, cf. *otygrat'* < *ot#igr+a+t'* and *kotik* < *kot+ik*) will have an # in their beginning. Other languages such as (probably) Athabaskan, violating Baker's (1985) Mirror Principle, and Bantu are not like this; the latter will have # in their agreement prefixes instead. Additionally, every phase inserts # before and after itself after (or during) VI.

A question arises: why are boundaries usually found on the edges of exponents? I tentatively assume that it is merely an acquisition bias (not unlike homonymy bias, also known to be violated) and that, in fact, boundaries can be found inside exponents (so in Russian *s'+owo#dn'a vel sim.* 'today'); my additional research will hopefully determine whether this is true.

Providing a fully formalized and consistent theory of possible exponents, rules, constraints and segments given these assumptions is going to be the other major goal of this work. Note, however, that the assumption of substance-free phonology suggests specific set of phonological features is irrelevant and they may well be emergent (cf. (Iosad, 2021 (online)/to appear)), thus listing a set like this is not going to be an important goal; instead, for each language discussed it can and will be assumed independently by phonological behavior of the segments (albeit not without justification and speculations on possible realizations by phonology-phonetics interface).

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