

Gerund imperatives

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I argue that prescriptive infinitives, as directed at children (Johannessen 2015), and generic imperatives, as encountered in public notices and instructions, have the same syntax. Both are infinitival, and both exhibit similar order and person restrictions. These restrictions result from lacking clausal structure above vP. Instead, prescriptive infinitives and generic imperatives are nominal, embedded under D. The division between such gerund imperatives and standard finite imperatives motivates a generative emergentist approach to Universal Grammar (Biberauer 2014).

1. Introduction

This paper argues for a unified analysis of two types of infinitival imperatives – child-directed prescriptive infinitives (Johannessen 2015) and generic imperatives – as gerund imperatives. Swedish (a) is an example of a language where infinitival imperatives are common in child-directed speech; while Italian (b) is an example of a language where generic imperatives, as encountered on public notices and instructions, are infinitival. The typology in (1) will be expanded below.

- (1) Gerund imperatives
- (a) prescriptive infinitives (Swedish)
- Inte hälla mjölken
not pour.INF milk.DEF
'Don't pour the milk!' (Childes, ant23_08.cha)
- (b) generic imperatives (Italian)
- Non disperdere nell' ambiente.
not disperse.INF in-the environment
'Don't discard in the environment.'

I show that prescriptive infinitives and generic imperatives exhibit similar syntactic restrictions on word order and person. I analyse these restrictions as resulting from a lack of clausal structure above vP. Instead, prescriptive infinitives and generic imperatives should be unified as nominal gerund imperatives, embedded under D (Abney 1987).

In outline, section 2 presents and extends Johannessen's (2015) survey of child-directed prescriptive infinitives in the Primary Linguistic Data (PLD) for Nordic languages. Johannessen observes that prescriptive infinitives are syntactically restricted in terms of word order and person as compared to finite imperatives. Section 3 introduces generic imperatives, which I argue to have the same structure as prescriptive infinitives. I advance this argument in section 4 based on infinitival imperatives in Italian. Italian generic imperatives exhibit ordering and person restrictions on clitics. These restrictions are not found in Italian direct negative imperatives, despite both having an infinitival syntax. Section 5 brings together the order and person restrictions on prescriptive infinitives and generic imperatives to argue that the two are unified by a lack of clausal structure above vP. I speculate in section 6 that prescriptive infinitives and generic imperatives should be unified as gerund imperatives. Section 7 summarises and concludes with how the division of the PLD into finite and gerund imperatives might bear on language acquisition, motivating a generative emergentist approach to Universal Grammar (Biberauer 2014).

2. Prescriptive infinitives

Johannessen (2015) observes that the Primary Linguistic Data (PLD) available to acquirers of Nordic languages (Danish, Faroese, Icelandic, Norwegian, Swedish) exhibit two forms of the imperative. Alongside 'finite imperatives', we find 'child-directed prescriptive infinitives'. While both have a command meaning, prescriptive infinitives are pragmatically restricted to intimate yet hierarchical settings from a parent to their child. There are striking syntactic differences between finite imperatives and prescriptive infinitives. These differences are exemplified in (2)-(5) and summarised in table 1 (data are directly from Johannessen (2015) unless otherwise indicated).

- (2) Order of verb and negation (Swedish)
- (a) finite imperative V – Neg
 Kom inte hit med dig!
 come.IMP not here with you
 'Don't come here, you!' (Teleman et al. 1999:2777)
- (b) prescriptive infinitive Neg – V
 Inte hälla mjölken
 not pour.INF milk.DEF
 'Don't pour the milk!' (Childes, ant23_08.cha)
- (3) Order of verb and subject (Norwegian)
- (a) finite imperative V – Subj
 Spør du meg ikkje
 ask.IMP you me not
 'Don't you ask me!' (Nordic Dialect Corpus)
- (b) prescriptive infinitive Subj – V
 Nora sitte rolig der Nora
 Nora sit.INF quietly there Nora
 'Nora, sit quietly there, Nora' (Childes, nora2.cha)

- (4) Person of the subject (Norwegian)
- (a) finite imperative 2nd person
 Ikke tegn deg selv!
 not draw.IMP you.2 self
 ‘Don’t draw yourself!’
- (b) prescriptive infinitive 3rd person
 Ikke tegne seg selv!
 not draw.INF her/him.3 self
 ‘Don’t draw yourself (lit. oneself)!’
- (5) Person of the object (with respect to the speaker) (Norwegian)
- (a) finite imperative 1st person
 Suss meg!
 kiss.IMP me.1SG.ACC
 ‘Kiss me!’
- (b) prescriptive infinitive 3rd person
 Susse mamma!
 kiss.INF mummy.3
 ‘Kiss mummy!’

	Order of verb and negation	Order of verb and subject	Person of the subject	Person of the object
Finite imperative	V – Neg	V – Subj	2	1
Prescriptive infinitive	Neg – V	Subj – V	3	3

Table 1: Syntactic differences between finite imperatives and prescriptive infinitives

From the data in (2)-(5), summarised in table 1, we see that Nordic prescriptive infinitives are syntactically restricted compared to finite imperatives. The infinitive is unable to move over negation or the subject, and only third person is possible.

The division of the PLD into finite imperatives and prescriptive infinitives extends beyond the Nordic survey presented by Johannessen (2015). Beyond Nordic, Mills (1985:153,160) reports infinitival imperatives in German (6) as part of “syntactic baby talk”, noting that they are particularly common as negative commands (6bii). And beyond Indo-European, Berman (1985:288) observes infinitival imperatives in child input and production in Modern Hebrew (7), using the general negator *lo*’ plus the infinitive (7b), as opposed to the special negator *al* plus a future verb form (7a).

- (10) Per favore non calpestare il prato. (Italian)
 for favour not tread.INF the lawn
 ‘Please don’t walk on the grass.’ (Sign on the lawn of King’s College, Cambridge)

Like prescriptive infinitives, generic imperatives exhibit an infinitival syntax. I argue that both are characterised by a radically reduced structure, lacking clausal projections above vP. The next section advances this argument based on infinitival imperatives in Italian. We will see that Italian generic imperatives exhibit the same syntactic restrictions on order and person as Nordic prescriptive infinitives.

4. Italian infinitival imperatives

Italian has two types of infinitival imperatives. In addition to generic imperatives (10), direct negative imperatives² (11) are also infinitival.

- (11) Direct negative imperative (Italian)
 Non calpestare il prato!
 not tread.INF the lawn
 ‘Don’t walk on the grass!’

Despite sharing an infinitival appearance, generic imperatives and direct negative imperatives differ in their syntax. Descriptively, generic imperatives exhibit clitic placement and person restrictions that direct negative imperatives do not. These restrictions closely match the word order and person restrictions on prescriptive infinitives. This finding will lead to the conclusion that generic imperatives and prescriptive infinitives share a radically reduced clausal syntax.

4.1. Clitic order in Italian infinitival imperatives

In Italian infinitival imperatives, clitics are restricted to following the infinitive in generic imperatives, while there is no such restriction in direct negative imperatives.

In Italian direct negative imperatives (12), clitics may follow (a) or precede (b) the infinitive. In fact, direct negative imperatives are the only structure in Italian where clitics can precede the infinitive (13) (examples from (Kayne 1992:300)).

² While direct negative imperatives are infinitival, standard positive imperatives (i) are not. Compare the division of the Nordic data into finite and infinitival imperatives.

(i) Calpesta il prato!
 tread.IMP the lawn
 ‘Walk on the grass!’

- (12) Clitic order in direct negative imperatives (Italian)
- (a) following infinitive
 Non far-lo!
 not do.INF-it
 ‘Don’t do it!’
- (b) preceding infinitive
 Non lo fare!
 not it do.INF
 ‘Don’t do it!’
- (13) Clitic order elsewhere (Italian)
- (a) following infinitive
 Gianni ha deciso di far-lo.
 John has decided of do.INF-it
 ‘John (has) decided of do it.’
- (b) not preceding infinitive
 *Gianni ha deciso di lo fare.
 John has decided of it do.INF

Kayne (1992) analyses (12b) as a hidden instance of clitic climbing. In standard clitic climbing (14), a clitic optionally climbs from its base position as sister to an infinitive verb (a) to a higher finite verb (b). Kayne extends the clitic climbing analysis to direct negative imperatives by positing a null modal auxiliary, to which the clitic optionally climbs. The null modal auxiliary is licensed by the negator *non*, and is positioned between it and the verb, as shown in (15).

- (14) Standard clitic climbing (Italian)
- (a) base position
 Gianni vuole comprar=lo
 John wants buy.INF=it
 ‘John wants to buy it.’
- (b) climbed to matrix verb
 Gianni lo=vuole comprare
 John it=wants buy.INF
 ‘John wants to buy it.’

- (15) Kayne’s (1992) clitic climbing analysis of analysis of direct negative imperatives
 Non lo-AUX fare

Kayne draws circumstantial support for his extension of clitic climbing to direct negative imperatives by noting that the orderings of (12) and (14) show the same regional preferences: the infinitive – clitic order (a) is favoured in the north; the opposite clitic – infinitive order (b) in the centre and south. Further support comes from the prohibition of a conjunction of actions (16), where a single negation *non* licenses just one null modal auxiliary. This single auxiliary provides structural support for only the first clitic to raise (a), not both (b).

- (16) One *non*, one AUX, one raised clitic (Italian)
 (a) Non lo prendere adesso e riportarme-lo tra tre giorni!
 not it take.INF now and return.INF-it within three days
 ‘Don’t [take it now and return it to me in three days]’ (Kayne 1992:301)
 (b) *Non lo prendere adesso e me lo riportare tra tre giorni!

Strikingly, Kayne notes that his posited null modal auxiliary seems to be overtly realised as *sta* in Paduan (17).³ Again, a single negator *no* licenses a single overt auxiliary in a conjunction of prohibitions (18), as in Italian (16). Beyond Kayne’s data, the modal auxiliary can also be overt in Panamanian Spanish (19) and English double verb imperatives (20).

- (17) AUX = *sta* (Paduan)
 No sta parlare!
 NEG AUX speak.INF
 ‘Shut up!’ (Kayne 1992:305)
- (18) One *no*, one *sta* (Paduan)
 No sta prenderlo uncò e (*sta) riportar-me-lo doman!
 NEG AUX take.INF-it today and (*AUX) return.INF-me-it tomorrow
 ‘Don’t [take it today and return it to me tomorrow]’ (Kayne 1992:305)
- (19) AUX = *-ve* (Panamanian Spanish)
 ¡oye-ve!
 hear-go
 ‘Hear!’ (Alcázar & Saltarelli 2014:145f.)
- (20) AUX = *go* (English)
 Go book it! (Alcázar & Saltarelli 2014:145f.)

In sum, clitics may follow or precede the infinitive in direct negative imperatives in Italian. Adopting Kayne’s analysis, the structure of Italian direct negative imperatives includes a null modal auxiliary. Clitics may remain in their base position following the infinitive, or precede the infinitive by climbing to the null modal auxiliary.

By contrast, the position of clitics is restricted to following the infinitive in generic imperatives. This contrast with direct negative imperatives is illustrated in (21).

³ Cf. *scé* in Tarantino (Portner and Zanuttini 2003)

- (21) Clitic order in infinitival imperatives (Italian)
- (a) direct negative imperative: clitic may precede (i) or follow (ii) the infinitive⁴
- (i) Non ti alzare!
not 2SG.REFL get.up.INF
'Don't you get up!'
- (ii) Non alzarti!
not get.up.INF.2SG.REFL
- (b) generic imperative: clitic cannot precede (i), but must follow (ii), the infinitive
- (i) *Non si mettere nella corsia di sinistra.
not 3SG.REFL place.INF in-the lane of left
- (ii) Non mettersi nella corsia di sinistra.
not place.INF.3SG.REFL in-the lane of left
'Don't drive on the left!'

In terms of Kayne's analysis, it seems that clitics cannot climb in generic imperatives. Our first thought might be to ascribe this restriction to the general fact that negation blocks clitic climbing in Italian (Zanuttini 1996:186; 1997), as demonstrated in (22).

- (22) Negation blocks clitic climbing (Italian)
- (a) Devo non parlarti.
must NEG talk.to.you
'I must not talk to you.'
- (b) ??Ti_i devo non parlare e_i.
To.you must NEG talk
'I must not talk to you.'

However, on Kayne's analysis (23), the null modal auxiliary to which the clitic climbs in direct negative imperatives is below the licensing negation, as in (21ai). Thus negation would not intervene, and so cannot be what prevents clitics from climbing in negative generic imperatives, as in (21bii).

- (23) Kayne (1992): Neg – AUX – V
Non ti-AUX alzare

Moreover, in the absence of negation, clitics must follow the infinitive in positive generic imperatives (24).

⁴ We saw the same ordering options with object clitics in (12) above. We see it here with subject clitics.

- (24) Positive generic imperative (Italian)
- (a) clitic cannot precede the infinitive...
- | | | | | | |
|----------|-----------|--------|--------|----|---------|
| *Si | mettere | nella | corsia | di | destra. |
| 3SG.REFL | place.INF | in.the | lane | of | right |
- (b) ... but must follow it
- | | | | | |
|--------------------|--------|--------|----|---------|
| Mettersi | nella | corsia | di | destra. |
| place.INF.3SG.REFL | in.the | lane | of | right |
- ‘Drive on the right.’

In sum, clitics are restricted to following the infinitive in generic imperatives. This restriction on generic imperatives is not due to negation, and contrasts with the freedom for the clitic to follow or precede the infinitive in direct negative imperatives. This contrast suggests that, despite sharing an infinitival syntax, generic imperatives and direct negative imperatives are structurally different. In particular, we conclude that generic imperatives lack the null modal auxiliary (Kayne 1992) present in direct negative imperatives.

The next subsection adds to this argument by showing that, in addition to the ordering restriction, clitics in generic imperatives also exhibit a person restriction, which direct negative imperatives do not.

4.2. Person in Italian infinitival imperatives

The previous subsection established that while clitics may freely follow or precede the infinitive in direct negative imperatives in Italian, their position is restricted to following the infinitive in generic imperatives. This subsection considers a second way in which generic imperatives are restricted where direct negative imperatives are not. Only third person clitics are possible in generic imperatives; whereas no such restriction obtains in direct negative imperatives.

This contrast between the possibility for first and second person in direct negative imperatives (a) and the restriction to third person in generic imperatives (b) is exemplified for subject clitics in (25), and object clitics in (26).

- (25) Person of the subject (Italian)
- (a) direct negative imperative 2nd person
- | | |
|-----|---------------------|
| Non | alzarti! |
| not | get.up.INF.2SG.REFL |
- ‘Don’t you get up!’
- (b) generic imperative 3rd person
- | | | | | |
|-----------------------|--------|--------|----|---------|
| Mettersi/*ti | nella | corsia | di | destra. |
| place.INF.3/*2SG.REFL | in.the | lane | of | right |
- ‘Drive on the right.’ (Maiden & Robustelli 2000:248)

- (26) Person of the object (with respect to the speaker) (Italian)
- (a) direct negative imperative 1st person
 Non svegliarmi!
 not wake.INF.1SG.REFL
 ‘Don’t wake me up!’
- (b) generic imperative 3rd person
 Svegliare i figli alle otto.
 wake.INF the children at.the eight
 ‘Wake your children up at eight.’

In sum, clitics are restricted to third person in generic imperatives. This restriction in generic imperatives contrasts with the freedom for the clitic to be first or second person in direct negative imperatives. As with the placement restriction in the previous subsection, this contrast suggests that generic imperatives and direct negative imperatives are structurally different, despite sharing an infinitival syntax. In particular, we conclude that generic imperatives lack person agreement projections.

The next section brings together our conclusions on clitic placement and person restrictions in Italian generic imperatives (this section) with our conclusions on word order and person restrictions in prescriptive infinitives (section 2). Overall, we will see that prescriptive infinitives and generic imperatives are alike in lacking clausal projections above vP.

5. *Generic imperatives = prescriptive infinitives*

This section reviews clitic placement and person restrictions on Italian generic imperatives in light of the similar restrictions on Johannessen’s (2015) prescriptive infinitives introduced in section 2. We will reach the conclusion that prescriptive infinitives and generic imperatives lack clausal projections above vP.

Consider first ordering restrictions. We saw in section 4.1 that clitics must follow the infinitive in Italian generic imperatives. This mirrors the word order facts for prescriptive infinitives. We saw in section 2 that in prescriptive infinitives the verb must follow negation and subjects. The relevant part of table 1 is repeated here as table 2.

	Order of verb and negation	Order of verb and subject
Finite imperative	V – Neg	V – Subj
Prescriptive infinitive	Neg – V	Subj – V

Table 2: Word order differences between finite imperatives and prescriptive infinitives

Johannessen (2015) seeks to capture the word order facts in table 2 by proposing that prescriptive infinitives lack T, whereas finite imperatives have T. The lack of T in prescriptive infinitives is argued to derive the preverbal negation and preverbal subject orders, since there is no position for the verb to raise into over negation or a vP-internal subject. For this argument to go through, Johannessen must intend that there are also no other clausal

projections besides T for the verb to raise into. Similarly, on our analysis of infinitival imperatives in Italian, the clitic placement restriction on generic imperatives results from their lack of a null modal auxiliary, which direct negative imperatives have. Unifying prescriptive infinitives and generic imperatives, then, both lack tense/modal clausal projections.

Turning now to person, we saw in section 4.2 that clitics may only be third person in Italian generic imperatives. This mirrors the person facts for prescriptive infinitives. We saw in section 2 that subjects and objects in prescriptive infinitives can only be third person. The relevant part of table 1 is repeated here as table 3.

	Person of the subject	Person of the object
Finite imperative	2	1
Prescriptive infinitive	3	3

Table 3: Person differences between finite imperatives and prescriptive infinitives

As with the word order facts, Johannessen (2015) seeks to capture the person facts in table 3 with her proposal that prescriptive infinitives lack T, whereas finite imperatives have T. Assuming T to be the locus of person features, third person results from the absence of T, reflecting default valuation, or the absence of person altogether. Similarly, on our analysis of infinitival imperatives in Italian, the clitic person restriction on generic imperatives results from their lack of person agreement projections, which direct negative imperatives have. Unifying prescriptive infinitives and generic imperatives, then, both lack person agreement projections.

We can now bring together our conclusions from the order and person restrictions on prescriptive infinitives and generic imperatives: both lack tense/modal/person projections.

How far does this lack of clausal projections extend? In particular, do prescriptive infinitives and generic imperatives have CP projections? Johannessen (2015) claims that prescriptive infinitives have CP. However, closer consideration of the order and person facts suggest that prescriptive infinitives and generic imperatives do not have CP. Regarding the order facts, a C would make available a position for movement. We might then expect verbs to raise to C over negation and subjects in prescriptive infinitives, and clitics to raise to C in generic imperatives; but we do not observe such movements. Regarding the person facts, if person features are derivative of speech-act participant structure in the C domain, a C should license first and second person features based on the speaker and addressee discourse participants; but first and second person are not licensed in prescriptive infinitives or generic imperatives. These considerations lead us to reject Johannessen's (2015) claim that prescriptive infinitives have CP. Rather both prescriptive infinitives and generic imperatives lack CP.

This conclusion begs the question of how prescriptive infinitives and generic imperatives receive their command meaning. On the standard analysis, clauses are typed as imperative in the C domain (van der Wurff 2007), specifically by Force, the highest projection in the left periphery (Rizzi 1997). How do prescriptive infinitives and generic imperatives come to carry imperative force, if they lack the relevant clausal projection?

I claim that the command meaning of prescriptive infinitives and generic imperatives is formally underspecified, and is instead determined pragmatically. Both are highly

contextually restricted, with the command meaning following automatically from their context of use. The command meaning of prescriptive infinitives follows from the intimate yet hierarchical setting of parent-child interaction. Similarly, the command meaning of generic imperatives follows from being within range of the instruction: if you can hear or see a generic imperative, then it is aimed at you.

In sum, the order and person restrictions on prescriptive infinitives and generic imperatives have led us to the conclusion that they lack tense, modal, and person agreement projections, as well as CP; that is, prescriptive infinitives and generic imperatives lack clausal projections above vP.

The next section speculates that prescriptive infinitives and generic imperatives may be nominal above vP.

6. Gerund imperatives

Based on order and person restrictions, this paper has argued that prescriptive infinitives and generic imperatives should be unified in structural terms as lacking clausal projections above vP. This section speculates that prescriptive infinitives and generic imperatives should be further unified as gerund imperatives.

On this view, prescriptive infinitives and generic imperatives have the structure in (27). They are clausal up to vP, with an arbitrary PRO subject, and then embedded under a D head (Abney 1987).⁵ Semantically, the nominal nature of gerund imperatives reflects their status as abstract objects, generic laws on appropriate behaviour deriving from an unquestionable authority – one’s parents or the author of a public notice or instructions. Syntactically, D acts as the licensing head, in the absence of clausal C.

- (27) The structure of gerund imperatives
[_{DP} D [_{vP} PRO_{arb} [_{VP} V DP]]]

Evidence for this idea comes from English (28), where negative generic imperatives exhibit the negative determiner *no* rather than clausal *not*, and the gerund inflection *-ing*.

- (28) Negative generic imperatives (English)
(a) No walking on the grass!
(b) No eating in the lecture rooms!

⁵ My use of the term gerund is restricted to the structure given in (27); that is, there is no further clausal structure between v and D. Languages vary considerably in how much clausal functional structure can be embedded below D. A reviewer offers (i) from Greek.

(i) Me eknevrizei [_{DP} to [_{CP} oti vrechei]].
me unnerves the that rain.3SG
'It unnerves me that it is raining.'

That such structures involve a full CP projection is confirmed by the possibility of wh-extraction (ii):

(ii) [_{CP} pion_i [_{IP} akuses [_{DP} ti fimi [_{CP} t_i oti [_{IP} apelisan t_i]]]]]
whom heard.2SG the rumour that dismissed.3PL
'Whom did you hear the rumour that they dismissed?' (Horrocks & Stavrou 1987:83)

For a fuller typology of the amount of clausal structure permitted under D, see Borsley & Kornfilt (2000).

Negative generic imperatives are also overtly nominal in Korean (29) and Welsh (30), where they are expressed as embedded nominalised infinitivals.

- (29) canti-ey tul-e ka-ci ma-l kes (Korean)
 lawn-to enter-INF go-NOMZ stop-PRS fact
 ‘Keep off the grass’ (Sohn 1994:350)

- (30) Paid (â) mynd yn rhy bell! (Welsh)
 stop.IMP.2SG (with) going in too far
 ‘Don’t go too far!’

Finally, gerund imperatives may offer insight into the (rare) possibility of embedding imperatives. This rarity is often attributed to the restriction of imperative force to matrix C (van der Wurff 2007). But since gerund imperatives lack C, embedding is predicted to be possible, as in Korean (31).

- (31) Yeki tto o-la ko hay-yo (Korean)
 here again come-IMP(neutral) QT say-POL
 ‘(They) tell me to come back here again.’ (Sohn 1999:272; cf. Zanuttini, Pak & Portner 2012:1268)

In sum, prescriptive infinitives and generic imperatives can be speculatively unified as gerund imperatives, clausal up to vP, then embedded under D.

7. Conclusion

To summarise, this paper has argued that child-directed prescriptive infinitives (Johannessen 2015) and generic imperatives, as encountered in public notices and instructions, have the same syntax. Both are infinitival, and both exhibit similar order and person restrictions. Regarding order, Nordic prescriptive infinitives do not allow the verb to raise, just as Italian generic imperatives do not allow clitics to climb. And regarding person, only third person is possible in both prescriptive infinitives and generic imperatives. These restrictions result from the lack of structure above vP, which means there are no clausal positions for the verb or clitics to move to, nor to license first and second person features. Instead, prescriptive infinitives and generic imperatives were speculatively analysed as gerund imperatives, embedded under D.

I conclude with comments on how the division of the PLD into clausal finite imperatives and nominal gerund imperatives might bear on language acquisition and Universal Grammar (UG). In acquisition, this division may play a role in highlighting the verbal/nominal divide in functional structure. Thus the verbal/nominal divide in relatively common imperatives could underlie the grammaticality of vanishingly rare gerund structures, such as (32).

- (32) His dating her will end in tears.

The division into finite and gerund imperatives also has implications for the theory of UG. The PLD for imperatives are richer than communicative function might predict: one communicative function – command – has two syntactic realisations – one finite and clausal, the other gerund and nominal. This and other case studies (Biberauer, e.g. 2015) motivate a rebalancing among Chomsky's (2005) three factors of language design. While still guided by their genetic endowment, UG (factor one), acquirers can gain much from exploiting the richness of the PLD (factor two) using domain-general principles of data analysis (factor three), such as making maximal use of minimal means (Biberauer and Roberts 2014). With factors two and three taking a greater explanatory load, UG can be reduced to an evolutionarily plausible small size, perhaps consisting of little more than Merge, Agree, and a formal feature template (Biberauer 2014). This generative emergentist approach – *pace* O'Grady (2005), Tomasello (2003) – is applied to imperatives more broadly in Stockwell (2015).

Acknowledgements

This work originated as part of my MPhil thesis, Stockwell (2015). Thanks to Theresa Biberauer for her supervision at the University of Cambridge, and to Tim Stowell for advising my revisions at UCLA. The many errors are all mine.

Abbreviations

ACC = accusative	POL = politeness marker
AUX = (null) modal auxiliary	PREP = prepositional case
C = complementizer head	PRS = prospective
CP = complementizer phrase	QT = quotative particle
D = determiner head	REFL = reflexive
DP = determiner phrase	SG = singular
DEF = definite	T = tense head
FUT = future	UG = Universal Grammar
IMP = imperative	V = verb head
INF = infinitive	VP = verb phrase
NEG = negator	vP = 'little v' phrase
NOMZ = nominalizer	1 = first person
PFV = perfective aspect	2 = second person
PL = plural	3 = third person
PLD = Primary Linguistic Data	

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