

Child Language Imperatives: Questioning the ‘Imperative as an RI-Analogue’ Hypothesis

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1. Introduction

What started a decade ago as a program for unifying early English and other child Germanic languages that showed similar patterns of morphosyntactic development in exhibiting a root infinitive (RI) stage (Wexler 1994), has become a major topic in the investigation of early morphosyntactic development. It was quickly established that a percentage of RIs vary not only across languages but also within the same language (Deen 2002). Furthermore, it was observed that not all child languages would employ RIs but rather a range of other verb forms that have been traditionally labeled as ‘nonfinite’, namely bare verb stems, present and past participles, and gerunds.¹ These non-adult forms, sometimes referred to as ‘early root nonfinites’ (ERNs), have been since then an area of intense investigation in child language acquisition and have been analyzed from syntactic, semantic, as well as pragmatic perspectives.

Collectively, ERNs exhibit ‘nonfinite’ morphology (i.e., morphology devoid of T and/or Agr); appear neither with T- and Agr-related elements, such as subject or reflexive clitics, nor with C-related elements, such as *wh*-elements, focalized and topicalized nominals (DPs); are generally restricted to eventive predicates; and semantically denote irrealis meaning (Hyams 2005). Various researchers have tried to provide a unified explanation of how possibly one single mechanism (or ‘core property’ in the words of Salustri and Hyams 2003) could explain the occurrence of ERNs. In this spirit, Wexler (1994) unifies early English bare verb (BV) stems with RIs and Varlokosta et al. (1998) unify early Greek bare participles with RIs. The latest ‘unification account’ considers null

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1. The terms *finite* and *nonfinite* lead to some confusion in the field. Though a complete exposition of the issue is beyond the scope of this paper, it suffices for present purposes to note that non-finite morphology is by no means a direct indication for the absence of T/Agr-related functional projections in the phrase structure. To avoid this confusion, we substitute the traditional term *finite* with *tense-based* or use traditional terms in inverted commas when referring to previous research (see Rus and Chandra in press for more details).

subject languages with rich morphology (e.g., Spanish, Italian), which have been argued to show neither the RI stage nor the BV stage. Salustri and Hyams (2003) build an analysis of early imperatives in null subject languages as RI-analogues on several ‘mainstream’ assumptions on the syntax and semantics of imperatives with a technological tweak of functional projection elimination and the ‘Merge-over-Move’ Hypothesis. This paper is a reply to their study, arguing that the Imperative-as-the RI-Analogue Hypothesis cannot be maintained (cross-linguistically).

The paper is organized as follows. We first discuss Salustri and Hyams’ (2003) analysis of early imperatives. Subsequently we introduce the aspects of adult Slovenian (imperative) verb morphology relevant for our study. Section 4 provides a detailed description and analysis of child Slovenian imperatives. Section 5 deals with some possible objections to our account and provides some additional arguments for our analysis. Section 6 concludes the paper.

2. ‘Imperatives-as-Root-Infinitive-Analogues’ Hypothesis (IRIAH)

Salustri and Hyams (2003) (henceforth, S&H) argue that imperatives (IMPs) in Italian have the same status as RIs in German and French. IMPs – like RIs – do not (generally) carry ‘finite’ morphology. They also display similar modal meanings, are restricted to eventive predicates and are much more frequent in child speech than the respective child-directed speech.

S&H follow Han (2001) in characterizing IMPs as forms that are marked with an ‘irrealis’ feature. They assume that the IMP verb (V) checks the irrealis and ‘directive’ features on Mood and Force heads respectively. The irrealis feature on Mood is checked against the V in a local configuration, namely head-complement. For this, S&H invoke *feature underspecification*, basically TP/AgrP/Asp *elimination*, shown schematically below:

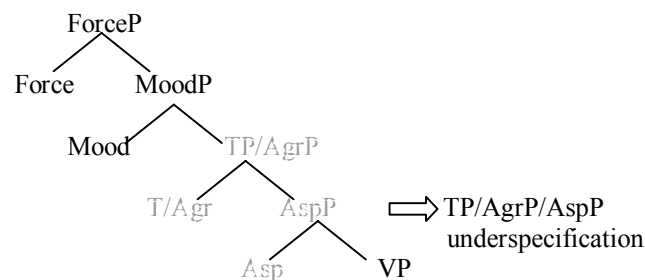


Figure 1: The clause structure of imperatives in the S&H’s (2003) analysis

Note that this type of underspecification is distinct from other underspecification accounts in the literature (e.g., Wexler 1998), where it is generally proposed that

the phrase structure contains functional projections but the features are missing (see Rus and Chandra in press for a discussion on this).

We now turn to a few technical nuances of IRIAH and its theoretical implications. First, crucially for S&H, the technology adopted for IMPs is the same as for RIs. Infinitivals (INFs) have an irrealis feature that is checked against MoodP and a local checking relation is rendered possible only by underspecifying intermediate projections. IMPs and RIs are thus outcomes of the same underlying structures and subsequently, share temporal, modal and aspectual interpretations. Note that in IMPs the V subsequently moves to Mood to check the ‘directive’ feature on Force. Second, S&H adhere to economy considerations to explain why early German opts for RIs over IMPs: INFs (which in German do not carry Agr features) can check the irrealis feature on Mood in a local head-complement relation without any V movement to the relevant heads. RIs therefore supercede IMPs since the latter involve obligatory V movement. On the other hand, Italian INFs have Agr features that must be checked and hence TP-underspecification is disallowed. RIs lose against IMPs where TP/AgrP can be underspecified. This claim concurs well with their general views on the transition from RI/RI-analogue states to adult systems. As spelled out somewhat more clearly in Hyams (2005), the core idea is that the transition takes place when modals become more productive, indicating the ‘emergence’ of functional layers such as TP, AgrP and AspP. It is at this stage of development, she argues, that the operation of *Merge* takes precedence over *Move*, and the latter, a ‘more marked’ feature-checking option is pushed out of the grammar. Arguably, adult systems make use of underspecification as well.

We believe that the mechanism behind *underspecification* in child grammars is largely unmotivated. Note that *underspecification* is an operation akin to other deletion operations and as such carries some computational cost. If so, it is not obvious why child grammars would prefer it to *Move*. S&H conveniently fail to address this ‘problem’, particularly when arguing that child Italian IMPs involve both *Move* and underspecification. This casts doubt on their claim that IMPs in Italian and Italian-like languages are more economical derivations than RIs. Further evidence against IRIAH comes from early Slovenian IMPs, introduced in the following section.

3. Introducing Adult Slovenian

3.1 Adult Slovenian Imperatives

Slovenian (SLO) is a second position (2P) ('Wackernagel') clitic language which traditionally distinguishes among three moods, namely indicative (IND), IMP and exclamative (Toporišič 2000: 657). The first piece of evidence for T-related morphology in SLO IMPs comes from the IMP paradigm, distinct from the IND one. The IND paradigm has nine cells, whereas the IMP one has a restriction in allowing only for 2nd person singular (SG) and 1st and 2nd persons dual (DU) and plural (PL) forms (after Sheppard and Golden 2002):

Table 1: Adult Slovenian IND and IMP paradigms

	2SG	1DU	2DU	1PL	2PL
PRES IND	deláš	delava	delata	delamo	delate
IMP	delaj you- work	delajva let-us two work	delajta you two- work	delajmo let-us three or more- work	delajte you three or more work

Additional evidence for T-related functional projections in IMPs (TP, AgrP) comes from the distributional properties of the complementizer *da* in embedded contexts. Consider the following examples (from Rus 2005):

- (1) Ukazal mi je, (da) naj delam.
 ordered me is (that) *naj* work-1SGPRESIND
 ‘He ordered me to work/He told me that I must work.’
- (2) Ukazal mi je delati.
 ordered me is work-INF
 ‘He ordered me to work.’
- (3) *Ukazal mi je, da delati.
 ordered me is that work-INF
 ‘He ordered me to work.’

In (1)-(3), we see that *da* cannot co-occur with INF complements. Contrast these examples with the IMPs below:

- (4) Ukazal ti je, da delaj.
 ordered you is that work-2SGIMP
 ‘He ordered you to work/that you must work.’
- (5) Ukazal ti je (*da) delati.
 ordered you is (*that) work-INF
 ‘He ordered you to work.’

As illustrated above, the presence of *da* is obligatory with IMPs. This suggests that an IMP clause *cannot* lack the TP-related projection(s). Clitic (CL) placement or movement to the C-domain is yet another piece of evidence:

- (6) Kupim ti avto.
 buy-1SGPRESIND you-CLDAT car-ACC
 ‘I buy you a car.’

- (7) Kupa mi avto!
 Buy-2SGIMP me-CLDAT car-ACC
 'Buy me a car!'

We take this set of evidence as indicating that IMPs in SLO share structural similarities with INDS (see Rus 2005 for more evidence and examples). The following are two structural representations suggested in the literature for adult SLO IMPs:

- (8) CP > Agr_sP > NegP > TP ... [from Sheppard and Golden (2002)]

- (9) [CP [MP V-IMP [TP CL] /matrix clauses/
 [CP V-IMP CL [MP ... [TP ...] /matrix clauses/
 [CP C [MP CL V-IMP [TP ...] /embedded clauses/ [from Rus (2005)]

4. Imperatives in Child Slovenian

4.1. Subjects and Data

The data for the present study are taken from Rus and Chandra (2005). They constitute part of a bigger database and are naturalistic production data coming from 15 children collected over a 3-month period. The children's MLU mean value was 1;94 (see Rus and Chandra 2005 for details). Table 2 shows the data in terms of utterances (sentence types; C-types). Compare it with S&H's Table 3:

Table 2: Construction-types in child Slovenian

C-Types	Imperatives	Past Participles	Other
Total #	679	197	329
%	56.4	16.3	27.3

Table 3: Imperatives in child Italian and German

Language	Imperatives (%)
Child Italian	27.5
Child German	10

The number of IMPs in our data is extremely high, with practically every other utterance being an IMP. Hence, frequency-wise, we confirm S&H's hypothesis.² However, on the basis of Agr facts and certain structural specifications of early

2. For the present study, we leave out child-directed data, which are extremely scarce in our corpus anyway. For more details, see Rus (2006).

IMPs found in our data, we argue that they are *not* T-less structures analogous to RIs. We review these facts in the next section below.

4.2. Properties of Child Slovenian Imperatives

IMP constructions in early SLO show a variety of Vs and V patterns, as seen in the examples below:

- (10) Čaki! (Vesna, 1;7)
 wait-2SGIMP
 'Wait!'
- (11) Glej jih! (Lenart, 1;11)
 look-2SGIMP them-CLACC
 'Look at them!'
- (12) Tuki makni tole! (Kaja, 1;11)
 here move-2SGIMP this-NOM
 'Move this in here!'
- (13) Vesna, (d)ej men! (Doroteja, 1;11)
 Vesna-NOM give-2SGIMP me-DAT
 'Vesna, give it to me!'

Child IMPs bear adult-like Agr morphology. The percentage of correct IMP Agr is schematized in Table 4, showing that Agr reaches almost 100% correct:

Table 4: Agreement on imperative verbs in child Slovenian

Total # IMPs	679
Agr correct	673/679 (99.1%) ³

4.3. More Evidence for Functional Projections in Child Slovenian IMPs

Besides distinct T-based morphology, word order facts provide some of the most crucial evidence for T-based functional projections in IMPs. First, SLO children's grammar allows object DP scrambling, resulting in non-adult constructions with DP objects raised over T-based IMP Vs:

- (14) Bončka jej! (Tomaž, 1;10)
 candy-ACC eat-2SGIMP
 'Eat the candy!'

3. The six errors that appear in the data consist of three errors of incomplete verb stem and three errors of PRES IND forms.

- (15) Tole pokaž! (Katja, 1;11)
 this-NOM/ACC show-2SGIMP
 ‘Show (me) this!’

Furthermore, some IMP constructions sometimes appear with reflexive clitics (CLs), which are standardly assumed to be either generated directly in T or moved to the T-domain (compare (16) with (8) and (9) above for adult SLO):

- (16) Se obuj teta! (Vesna, 1;7)
 refl put on shoes-2SGIMP auntie-NOM
 ‘Put on your shoes, auntie/woman!’

The examples below also show IMP V raising to the C-domain with the CLs in the T-domain:

- (17) Iski ga! (Isci ga!) (Katja, 1;10)
 search-2SGIMP it-CLSGACCMASC
 ‘Look for it!’

- (18) Dej mi ga! (Tomaž, 1;10)
 give-2SGIMP me-CLSGDAT it-CLSGACCMASC
 ‘Give it to me!’

4.4. The Structure of Imperatives: Toward an Alternative Analysis

Following ‘standard’ theories on adult IMPs (e.g., Han 2001), we also assume that early SLO IMPs carry an irrealis/mood feature located in C/Mood that must be checked by IMP V raising. However, to capture the Agr as well as the word order facts presented above, we propose successive-cyclic movement of the V via v/Asp and T/Agr. In our analysis, the V thus checks the irrealis feature in a local specifier-head configuration as illustrated below in Figure 2:

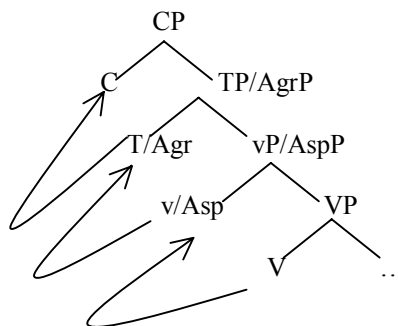


Figure 2: The clause structure of child Slovenian imperatives

Note that this is consistent with our (conceptual and empirical) arguments against T/Agr elimination as well as taking into account economy considerations regarding local feature checking. Such an analysis has two immediate advantages. First, it captures the Agr patterns observed in the IMPs; and second, it is explanatorily more desirable by undermining an operation like TP-underspecification in child grammars.

We saw that child SLO IMPs show perfect [person] [number] Agr morphology, involve reflexives and (adult-like) pronominal CL placement as well as object scrambling. Hence, we conclude that child SLO IMPs do *not* lack the T/Agr projections and that IMPs in null subject languages like Slovenian are *not* analogous to RIs. In other words, IRIAH makes the wrong predictions.

In what follows, we raise some non-trivial issues related to the study of the morphosyntax of early IMPs (particularly the status of T in IMP phrase markers and the notion of ‘morphological productivity’) that we believe need to be discussed to make our analysis clearer. We also offer further support for our analysis based on the evidence from child and adult Icelandic.

5. Imperatives in Adult and Child Systems Revisited

Let us initiate the discussion by spelling out some possible objections that could be raised against our analysis. First, our account contrasts with most ‘mainstream’ generative accounts which assume that IMPs are ‘defective’ in lacking T/Agr projections (Platzack and Rosengren 1998 among others; see Bohnacker 1999 and Rupp 2003 for detailed reviews). Second, as Hyams (p.c.) points out, IMPs in both child and adult SLO may simply be ‘hidden subjunctives’, hence showing T- and C-related properties, including evidence for ‘finite’-like functional projections (see also Rus and Chandra in press). A final possible objection concerns the extent of ‘productivity’ as evidenced in the generation of child SLO IMPs, which bears directly on S&H’s observation that though Italian children use ‘correct’ Agr on the IMPs, these do not show ‘productive’ morphology, nearly always surfacing as 2SGIMP forms. Let us unpack each of these three ‘possible objections’ and add our two cents to the discussion in question.

First, it is not true *at all* that all adult (generative) syntax literature takes IMPs to be structures with a missing or defective T. We believe that this assumption (together with a related assumption that IMPs cannot embed; see Rus 2005) has been passed down like a *mantra*, following some early work on the syntax of IMPs (for a historical review, see Rupp 2003). As Bohnacker’s (1999) in-depth review shows, the entire traditional descriptive linguistic school as well as numerous generative syntacticians (for a detailed review, see also Rupp 2003) assume that IMPs are *not* T-less. True, the accounts differ in the nature of T specification (in English IMPs) (e.g., as an ‘inert’ head, inactive feature, a feature that is not spelled out phonologically, etc.), but for our purposes the crucial assumption that all these accounts rely on is that T is *present* in the IMP phrase marker.

Second, we believe that it is very unlikely that the IMPs from our data are simply ‘hidden subjunctives’. There is indeed no (separate) morphological V paradigm for subjunctives, which may suggest that semantically children’s IMPs might be ‘subjunctive-like’ clauses, expressing irrealis meaning (volition, intention), which is basically what IMPs are *prima facie*. However, IMPs in child SLO *preserve* the IMP force, which argues against extending a ‘subjunctive’ status to them. In other words, subjunctive is a verbal form that can have various force interpretations, among them, an IMP force interpretation; but IMP, on the other hand, cannot have a ‘subjunctive-like’ force interpretation from a semantic perspective (Zanuttini p.c.). Moreover, and crucially for the present purposes, subjunctive clauses would still contain a TP.⁴

S&H assume that overt Agr in child Italian IMPs (which is, as observed above, almost always 2SG) is non-productive. Based on the ‘non-productivity’ of the IMP paradigm, they maintain that IMPs are simply spelled-out 2SG forms; in other words, *default* forms. So child Italian IMPs only appear with a default *-i* Vs, for example:

- (19) Prendi-la (INF: ‘prendere’)
 Take-2SG-it-CL
 ‘Take it!’

We believe that partial Agr paradigm should *not* be taken as non-knowledge/absence of Agr. To illustrate the point with an example, when Valian (1991) and some others argued that what looked as ‘finite’ Vs in child English were simply Vs with ‘attached’ T/Agr inflections in the VP rather than full clausal representations, a number of generativist acquisitionists protested that in the present syntactic paradigm, it is impossible to accommodate overt T/Agr inflections without positing the existence of T/Agr projections in the grammar (cf. Guasti 1993/4; Hyams 1992; Wexler 1994). They concluded that early IND ‘finite’ Vs show full clause structure with at least T/Agr if not even CP and that despite the incomplete paradigm, children know ‘finiteness’. In line with this conclusion, we argue that the issues of default form and productivity in child IMPs boils down to the *very same* issue. In other words, there is no rationale in positing that child IMPs are T/Agr-less solely on the basis of the absence of a complete IMP paradigm (see Rus in press for the same issue in child SLO ‘finite’ Vs).

4. This also leads to a big learnability problem. Suppose these clauses really were IMPs only morphologically, but syntactically and semantically subjunctive(-like). This would split IMPs into ‘true IMPs’ (or RIs in the early systems) and ‘subjunctive-like’ (IND-like) IMPs in the organization of grammar. It is extremely hard to see how this would be signaled in the input for a child, namely how a child would know that some IMPs are subjunctives, with different semantic and syntactic properties if the form overlaps with the true IMP form and if the contexts in which both types are found are the same.

A short note on *productivity* is in place here, too. A lot of researchers (and particularly those working in more probabilistic frameworks) would claim that productivity counts only if there is evidence that morphology can be used with novel tokens (Goldberg p.c.). We believe that this assumption is wrong and agree with Guasti (1993/4, p.c.) in saying that morphology is productive when it occurs on a wide variety of Vs. In other words, using the same inflection on a number of different Vs speaks against mere rote-learning (see also Rus and Chandra in press). If this is true, then the last argument against our analysis does not hold either, as SLO children use a wide variety of Vs to generate IMPs.⁵ In the same sense, child Italian IMPs – though largely restricted to 2SG forms – are also *productive* and therefore must be considered substantial evidence for the existence of T/Agr related projections in child IMPs.

In summary then, given the observations from this section, our account for child SLO IMPs as representing full clause structures remains largely uncontested.

5.1. Further Support: Child and Adult Icelandic

As Bohnacker’s (1999) investigations shows, Icelandic IMPs behave in a similar fashion to SLO IMPs in that they have a separate morphological paradigm, distinct from all other ‘finite’ and ‘nonfinite’ forms and exhibit the *same* word order facts as IND clauses in regards to negation and adverb placement. Table 5 below shows Icelandic morphological paradigms relevant for our study (from Bohnacker 1999):

Table 5: Icelandic IND, IMP and INF morphology

‘hlaupa’ (run)	PRES IND	PAST IND	IMP	INF
1SG	hleyp	hljóp	-	hlaupa
2SG	hleypur	hljópst	hlaup	
3SG	hleypur	hljóp	-	
1PL	hlaupum	hlupum	-	
2PL	hlaupið	hlupuð	hlaupið	
3PL	hlaupa	hlupu	-	

Icelandic makes an even stronger case for our argument than SLO since V raising past negation and adverbs is very regular (as opposed to a ‘messy’ scenario in SLO; cf. Rus 2003). In Icelandic IMPs, V raising is the *same* as in INDs and *different* from the V raising in infinitival clauses (from Bohnacker 1999):

5. However, we do believe that the Vs *give* and *say* in both child Italian and child SLO may be rote-learned since they appear to be extremely common in both child-directed as well as child speech (see Rus and Chandra in press and Rus 2006 for a more detailed discussion).

- (20) Leo hleypuri aldrei t_i
 Leo run-3SGINDPRES never
 'Leo never runs.'
- (21) *Leo aldrei hleypur.
- (22) hlaupi-tu aldrei t_i!
 run-STEM/IMP-2SG-you-2SGCL never
 Never run!
- (23) *aldrei hlaup!
- (24) Leo vill aldrei hlaupa.
 Leo wants never run-INF
 'Leo never wants to run.'
- (25) *Leo vill hlaupai aldrei ti.

By showing several diagnostics such as Agr morphology, word order facts etc., Bohnacker (1999) concludes that Icelandic IMPs are 'finite', hence containing [+finite] T. Icelandic children's grammar also shows 'perfect' IMP Agr and adult-like word order as regards to negation and adverbs with IMPs. Thus Bohnacker (1999) concludes that Icelandic children do have T/Agr in the grammatical representation of IMPs as early as this can be tested.⁶

6. Conclusion

On the basis of adult and child Icelandic, child Italian and particularly child Slovenian, this paper argued against Salustri and Hyams' (2003) hypothesis that it is the IMP that should be taken as an RI-analogue in early null subject languages with rich morphology. We provided arguments against the hypothesis that early grammars show no morphological productivity in IMPs and contain underspecified IMP phrase markers, devoid of T/Agr. We also argued against the claim that IMPs are merely spelled-out default forms with only 'apparent' functional material.

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