## 1	Introduction

The terms of symmetry and asymmetry have been used in various ways in typology (e.g. Haspelmath 2021). The concept of (a)symmetry central to the present article has been developed by Miestamo (2005: 51-56) for his cross-linguistic investigation of standard negation (SN). It can be characterized as follows: the grammatical structures of domain f(x) differ from those of x (not) only in the presence of f() marking. For his object of study, symmetry essentially means that negating –i.e. f()– declarative verbal main clauses –i.e. x– just involves additional negative marking, as is the case for Dutch in (1).

(1)	Dutch (Germanic, Indo-European; Belgium, the Netherlands; dutc1256, nld)
　　*jij*　　　*slaap-t*　　　(*niet*)　　*goed*
　　2SG.NOM　sleep-2SG.PRS　NEG　　good
　　'You (don't) sleep well.'
　　(personal knowledge)

Asymmetry may be of a constructional or paradigmatic nature. In Pite Saami, for instance, all paradigmatic distinctions made in the positive occur in the negative too but the negative construction involves a negative auxiliary that carries the tense-mood and agreement marking and a non-finite "connegative" form of the lexical verb or LV, as (2a) and (2b) illustrate. In Maung, by contrast, the negative construction in (3a) may be symmetric with (3b) but there is paradigmatic asymmetry when taking (3c) into account.

(2)	Pite Saami (Saami, Uralic; Norway, Sweden; pite1240, sje)
　　a.　*månnå*　*aj*　*mujhta-v*　　　　*gu …*
　　　　1SG.NOM　also　remember-1SG.PRS　when
　　　　'I also remember when …'
　　　　(Wilbur 2014: 139)
　　b.　*ittji-v*　　　*mån*　　*mujte*
　　　　NEG-1SG.PST　1SG.NOM　remember.CONNEG
　　　　'I didn't remember.'
　　　　(Wilbur 2014: 229)
(3)	Maung (Iwaidjan; Australia; maun1240, mph)
　　a.　*marig*　*ŋi-udba-ji*
　　　　NEG　　1SG>3-put-IRR
　　　　'I didn't/can't put.'
　　　　(Capell & Hinch 1970: 67)
　　b.　*ŋi-udba-ji*
　　　　1SG>3-put-IRR
　　　　'I can put.'
　　　　(Capell & Hinch 1970: 67)
　　c.　*ŋi-udba*
　　　　1SG>3-put
　　　　'I put.'
　　　　(Capell & Hinch 1970: 67)

The paradigmatic choice in the positive, between irrealis in (3b) and (zero-marked) realis in (3c), does not exist in the negative, where irrealis is compulsory (Miestamo 2005: 9).
　　With this framework of (a)symmetry, Miestamo (2005) is able to capture several recurrent phenomena in SN. He identifies an asymmetry in, for example, the grammatical expression

of reality status. In languages making the distinction, like Maung, negative declarative verbal main clauses often obligatorily or optionally have extra irrealis marking and in no language are such sentences realis while their positive counterparts are irrealis. Miestamo's (2005: 196) explanation for this tendency is that, "semantically, negation belongs to the realm of the non-realized".[1] Another type of asymmetry, instantiated by Pite Saami and of particular relevance here, concerns the finiteness of verbal elements. The LV in a negative declarative verbal main clause often exhibits a "loss" of finiteness – broadly defined – relative to its positive occurrence, in which case the negative sentence at times features a new finite element or FE. Miestamo's (2005: 206-208) account of the phenomenon centers around the nature of verbs versus nouns, which typically convey less and more time-stable concepts respectively, and the stativity of negation. Positive clauses are said to be able to describe stative (e.g. 'Nicola likes grapefruits') or dynamic situations (e.g. 'she cut the power') while negative ones (e.g. 'she didn't cut the power') "report absence of events, … negate change and thus refer to the inert state of the universe where nothing happens (or if an event is negated only partially, there is less change in the universe than in the corresponding affirmative)" (Miestamo 2005: 197). The link between the two ideas is argued to be that a verb losing its finiteness (e.g. appearing as a gerund or infinitive) becomes "less verby and more nouny" (Miestamo 2005: 206) – and thus, in the context of negation, reflects the more stative/time-stable character of what is expressed.

The above analysis of SN has become somewhat of a reference work (see Miestamo 2013 in the *World Atlas of Language Structures*, for one). The framework of (a)symmetry itself has been applied to domains beyond negation too, including polar interrogatives versus declaratives in Miestamo (2011) and non-verbal versus verbal predicates in Turunen (2011). However, Miestamo's (2005: 238) call "to broaden the scope of the study into other areas of clausal negation, especially into non-declarative negation" has hardly been acted upon, particularly not from a genuinely typological point of view (cf. Nefedov 2018 on (a)symmetry in non-verbal predicate negation in Ket) and despite its potential to advance our understanding of negation in general.

One exception is Miestamo & van der Auwera (2007). They look at imperative negation (IN) in some 30 languages and observe, inter alia, that finiteness asymmetry (A/Fin) occurs there too. Yuhup is a case in point. The imperative in (4a) is marked by the rising tone on the verb and the absence of any predicative morphemes. Its negative counterpart in (4b) involves the imperative of 'be' – a new FE – and the LV in a form normally used to convey simultaneity (Ospina Bozzo 2002: 299) and carrying a negative suffix.

(4)     Yuhup (Nadahup; Colombia; yuhu1238, yab)
         a.     *wĕdⁿ*
                eat.IMP
                'Eat!'
                (Ospina Bozzi 2002: 166)
         b.     ˍ*dɨdⁿ-˜dɨh*           *dĭh*
                speak.CONC-NEG  be.IMP
                'Don't speak!'
                (Ospina Bozzi 2002: 173)

Such asymmetries are, however, less frequent in IN than in SN, according to Miestamo & van der Auwera (2007). What motivates the difference in their view is that, unlike in the latter

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[1] However, as one of the reviewers rightly points out, the presence of irrealis marking in negation is also often the result of diachronic processes that, in themselves, have little to do with the domain of the non-realized (e.g. Cristofaro 2012: 140-142). This fact suggests that functional motivations of the kind proposed by Miestamo (2005) should be treated with caution, as we will argue too.

domain, the stativity of negation is countered by "illocutionary dynamicity" in the former. Miestamo & van der Auwera (2007: 71) argue that the negative imperative, like its positive equivalent, requires activity from the addressee, "to stop what they are doing at the moment or to prevent some possible state of affairs".

A number of issues have to be raised, however. For one, to make any typological claims, we clearly need a much larger sample than 30 languages. The comparison of the two domains of negation also brings up a few thus far unanswered questions. One has to do with the degree to which A/Fin in IN implies A/Fin in SN or, put differently, could arguably be due to analogy with SN or structural cohesion/uniformity across domains of negation. Another, not unrelated question is whether IN exhibits the same (distribution of) subtypes of A/Fin as SN. The negative imperative in (4b), with its positive FE and negated LV, is a case of Miestamo's (2005: 75-80) Neg-LV subtype, for example, while the negative declarative in (2b) is an instance of his NegVerb subtype (Miestamo 2005: 81-86), because of its inherently negative FE. Furthermore, and maybe most importantly, Miestamo & van der Auwera (2007) do not seem to limit their investigation of IN to (negative) imperatives proper. They, for instance, look at North Slavey in (5) to determine the frequencies of various (a)symmetries in IN but this language's inclusion for those numbers is questionable, as it possesses no dedicated imperative construction.[2]

(5)     North Slavey (Athapaskan, Na-Dene; Canada; nort2942, scs)
        a.      *ʔáradįła*
                go.home.2SG.IPFV
                'Go home!' or 'You go home.'
                (Rice 1989: 1109)
        b.      *ʔehdíní ʔįyę hahʔá*
                PROH    meat eat.2PL.IPFV
                'Don't y'all eat the meat!'
                (Rice 1989: 1109)

The verb in (5a) can receive a declarative or directive reading. Using it to establish (a)symmetry with the specialized construction in (5b) is therefore comparing entities of dissimilar status, in our view: any asymmetry here would exist not between imperative and negative imperative but between what is essentially an affirmative declarative construction (relevant for standard negation) and the negative imperative.

The observation that languages may lack specialized (negative) imperative constructions is obviously not new (e.g. Aikhenvald 2010: 7) but, to our knowledge, the frequency and distribution of this phenomenon across the world has not yet been examined. Such a study would also allow us to determine to what extent the presence/absence of a dedicated imperative implies the presence/absence of a dedicated negative imperative and the other way around. In words more in line with Miestamo's (2005) analytical framework, it can be said to enable the identification of symmetry in (lack of) specialization and asymmetry in specialization between imperatives and negative imperatives (A/Spe). The findings will make clear which languages to include/exclude for the investigation of other (a)symmetries in IN, like finiteness. They may have implications for the imperative's supposed status as a universal clause type too (e.g. König & Siemund 2007: 303-316, Alcázar & Saltarelli 2014: 15-18) and for the view of the imperative and the negative imperative as a paired set of constructions.

The present study will first focus on (a)symmetry in specialization in IN and seek to

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[2] PROH in (5b) stands for "prohibitive", a term that is sometimes used instead of/preferred to "negative imperative". We will stick to the latter label and reserve the former for dedicated negative markers like *ʔehdíní*.

establish how frequent its different subtypes are cross-linguistically. This issue will be the topic of Section 3, where we will introduce our operationalization of the notion of specialization as well as discuss our results. The article will then turn to (a)symmetry in finiteness in IN versus SN in Section 4. We aim to test the claim that A/Fin occurs less often in IN, examine how strongly its existence in this domain implies its presence in SN and compare the A/Fin subtypes found in the two domains. Section 4 will begin with our view and application of the concept of finiteness and subsequently go over our findings. The data for Sections 3 and 4 comes from a sizable and balanced sample of the world's languages that we will present in Section 2. Section 5, finally, is our conclusion.

## 2 Sample

Our sample follows Miestamo et al.'s (2016: 256-259) genus-macroarea sampling method with a predetermined sample size. It yields a variety rather than a probability sample (see Rijkhoff & Bakker 1998: 264-268 on types of sample). The latter is used first and foremost to uncover statistical correlations between linguistic features, which is not the primary aim of our article. To keep the potential impact on findings of any relationships between languages to an absolute minimum, a probability sample imposes a very strong requirement of independence on its languages. A variety sample, by contrast, mainly serves to uncover as much variation as possible in the way that the world's languages express a certain functional domain. This aim aligns well with questions such as "how is IN conveyed cross-linguistically?" and "which subtypes of A/Fin exist in IN in the world's languages?". To describe all existing variation, one should probably look at every single language. Such an endeavor is, however, unrealistic for most, if not all, studies. Variety sampling is therefore necessary. For this sort of sample to be reliable, it too should still "represent all the world's linguistic groupings – areal, genealogical and other – as well as possible", since we can assume that "connections between languages increase the possibility that they are similar to each other" (Miestamo et al. 2016: 235). Moreover, if this representation is achieved by neutralizing potential biases in a systematic way, the resulting variety sample may even be employed to make quantitative claims about, for instance, cross-linguistic frequencies (Miestamo et al. 2016: 251-252).

The present method starts from Dryer's (1989) concepts of genus and macroarea. Genera are groupings of languages for which a common ancestor can be reconstructed that is typically not younger than 3,500 years old or older than 4,000 years old (Dryer 1989: 267). A genus may be part of a larger language family (e.g. Celtic), constitute a language family itself (e.g. Kartvelian) or be an isolate (e.g. Basque). As Miestamo et al. (2016: 238-239) argue, taking genera as the basis for one's genealogical classification – instead of, for instance, language families – has the advantage that one is using groupings of languages that are quite widely accepted as related. Particularly for under-documented languages and/or languages without historical records, the debates about their relations beyond the level of genus are often not settled. The way now in which our sampling method brings genus into play to reduce genealogical bias goes as follows: (i) Dryer's (2013) list of 521 genera for the world's languages is the point of departure; (ii) only one language can be selected for each genus; (iii) the choice of language is, in principle, random but a language may (have to) be discarded if the information about IN is absent or insufficient; (iv) if no data is available for a single language in a genus, the entire genus may (have to) be omitted; and (v) languages from genera belonging to the same top-level language family are avoided to the extent possible (e.g. if Dutch were included, one would ideally give a language like Romanian a miss, since their respective genera of Germanic and Romance are part of the same Indo-European family).

This last step is linked to the fact that the genus-macroarea sampling method with a predetermined sample size does not necessarily contain languages from all genera for which

relevant information exists. The reason for this limitation is of a geographical and bibliographical nature: the languages – and, hence, also genera – in some areas are better described than those in others (Miestamo et al. 2016: 250-251). A sample that simply includes a language from any genus with available data is therefore bound to overrepresent certain regions (e.g. Europe) and underrepresent other ones (e.g. Australia). To mitigate such bias, Miestamo et al. (2016: 256) turn to Dryer's (1992) more or less continent-size zones: the six "macroareas" of Africa (Af), Australia and New Guinea (A&NG), Eurasia (EuAs), North America (NoAm), South America (SoAm) and South East Asia & Oceania (SEA&O). They propose that the proportion of genera – and, hence, languages – in the sample for a macroarea be the same as the proportion of genera that the macroarea accounts for in the whole world, as in Table 1.

|  |  | Af | A&NG | EuAs | NoAm | SoAm | SEA&O | Total |
|---|---|---|---|---|---|---|---|---|
| world | # genera | 74 | 140 | 43 | 92 | 106 | 66 | 521 |
|  | % genera | 14.20 | 26.87 | 8.25 | 17.66 | 20.35 | 12.67 | 100.00 |
| sample | # languages | 28 | 54 | 17 | 35 | 41 | 25 | 200 |
|  | % languages | 14.00 | 27.00 | 8.50 | 17.50 | 20.50 | 12.50 | 100.00 |

Table 1: Genus-macroarea sampling with a predetermined sample size of 200 (Miestamo et al. 2016: 259)

Let us illustrate the proposal, which we adopt here, with Africa. In Dryer (2013), this macroarea features 14.20% of the world's genera (74 divided by 521). A 200-language sample, like ours, should therefore have 28 African languages (all from different genera), which totals 14.00% of the sample (28 divided by 200).

To reduce geographical bias more, the sample also aims not to include neighboring languages (cf. Miestamo et al. 2016: 249). Step (ii) above, the arbitrary language selection from a genus, is thus constrained even further. For instance, since Basque (isolate) is part of our sample, Spanish and French would have been avoided if Romance had been a sampled genus. This goal has, however, proven hard to achieve for small regions with extensive linguistic diversity making up a large share of a macroarea's genera. The Northern Territory in Australia is a case in point: excluding neighboring languages there would mean losing out on entire genera. In such cases, we follow Miestamo (2005: 32) and prioritize genealogical over geographical variety. As step (v) indicates, the former's importance is considered too when choosing the languages for each macroarea. Precedence is given to languages from genera not belonging to the same language family (cf. Miestamo et al 2016: 253). This principle is intended to guarantee that smaller families, perhaps consisting of just one genus, are represented – if, of course, data is available. It does not mean that a sample may not contain related languages. A selection of 25 languages from South East Asia and Oceania will inevitably include multiple Austronesian and Sino-Tibetan languages, as these two language families account for the majority of genera in this macroarea.

For an overview of our sample, we refer to the Supplementary Material. It gives, for each language, the following information: its macroarea, its genus, the top-level family that it belongs to, its Glottocode and its ISO 639-3 code (as well as its A/Spe and A/Fin classification with exemplification and references; see Sections 3 and 4).

## 3 Specialization (a)symmetry

### 3.1 Operationalization

### 3.1.1 Characterization

(Negative) imperatives have been the subject of much cross-linguistic research (e.g. Xrakovskij 2001, Mauri & Sansò 2012, Van Olmen 2021) but, perhaps somewhat surprisingly, many such

studies do not characterize their topic accurately (Van Olmen & Heinold 2017: 6-8). Van der Auwera & Lejeune (2013), for one, simply define the negative imperative as "the grammaticalization of a prohibition". They do not discuss what counts as grammaticalized or as a prohibition. A possible issue that arises as a result is whether we should consider (6) as a negative imperative or not. The construction seems relatively conventionalized, as "the preventive particle *moli* is used only in combination with the Future affirmative second person forms in sentences intended to prevent unintended results of the hearer's careless actions" (Maslova 2009: 498). However, the answer to the question whether the meaning 'make sure that you don't' qualifies as a "proper" prohibition is not so self-evident. Moreover, as a negative imperative, (6) would hardly be comparable to English *don't shoot the dogs!*, which need not have preventive or so-called admonitive overtones.

(6)    Kolyma Yukaghir (Yukaghir; Russia; sout2750, yux)
       *towke    moli  aji:-te-met*
       dog      ADM  shoot-FUT-2PL.TR
       'Make sure that you don't shoot the dogs!'
       (Maslova 2009: 498)

Likewise, Aikhenvald (2010: 1-2) defines the imperative only implicitly, as the construction in a language that is specialized for prototypically expressing a command. The term "command" is to be understood here as equivalent to Searle's (1975: 355) concept of directive – the speaker wants and attempts to get the addressee to do something – and not as a more specific type of directive speech act involving a speaker with institutionalized power. A question that one can ask then, though, is whether we should regard (7) as an imperative or not.

(7)    Nikvh (Nivkh; Russia; nivk1234, niv)
       *vi-iny-ga            vi-gira*
       go-MOD-CVB.COND  go-2SG.PERM
       'If you want to go, (I allow you to) go!'
       (Gruzdeva 1998: 35)

The construction *is* included by Aikhenvald (2010: 223) but it clearly does not convey directivity in the classical sense of speech act theory. The speaker is not actually trying to make anyone do anything here. Rather, they are giving their consent to something that the addressee wishes to do. In addition, as an imperative, (7) would hardly be equivalent to English *go!*, which can fulfill functions other than permission.

A fairly recent attempt to address this lack of precision in earlier work comes from Jary & Kissine (2016). Their aim is explicitly to give a definition of in particular the imperative that enables accurate cross-linguistic analysis. The comparative concept – in Haspelmath's (2010) sense – that they propose goes as follows:

> "[The imperative is] a sentence-type whose only prototypical function is to provide the addressee(s) with a reason to act [and] that is suitable for the performance of the full range of directive speech acts." (Jary & Kissine 2016: 132)[3]

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[3] We should add that Jary & Kissine's (2016: 132) definition has a further requirement: "and whose manifestations are all morphologically and syntactically homogeneous with the second person". This condition is not immediately relevant for our object of study, i.e. addressee-oriented or second person constructions (e.g. 'eat!'). It primarily aims to tackle the question whether/which directive constructions aimed at a first or third person (e.g. 'let's eat!', 'let them eat cake!') should be regarded as imperatives. Aikhenvald (2010: 3) calls them all "non-canonical" imperatives. Jary & Kissine (2016), by contrast, want to distinguish those that make up a structurally

"Provid[ing] the addressee(s) with a reason to act" is how they interpret directivity. They argue that imperatives across languages typically serve not only to command but also to give advice and grant permission and that the latter uses are not captured by the Searlean notion of directivity. We have already made this observation for permission but, in advice too, the speaker does not truly try and get the addressee to do anything. Take an imperative like *read the instructions if you want to know more*. It does not really matter to the advisor whether the advisee looks at the instructions or not. The speaker just mentions a course of action that could be useful in their view and that the addressee is free to take or not. Both permission and advice can, however, be said to give someone a motive to act, i.e. the speaker's approval and counsel respectively.

Given the two uses' compatibility with this novel view on directivity, one presumes that they are part of what the comparative concept calls "the full range of directive speech acts". Interestingly, though, Jary & Kissine (2016) are not very clear about what (else) this range is meant to include. Their lack of specificity is probably partly due to the fact that classifications of directive speech acts vary greatly in the number and types of distinctions that they make and the terms that they use for them (cf. Aikhenvald 2010: 198-203, 223-228, Siemund 2018: 231-235; does one, for instance, need to differentiate between advice and recommendations and, if so, how and what distinguishes them from suggestions?). The closest that Jary & Kissine (2016: 121) come to spelling out the intended range is an unstructured list containing "commands and orders", "requests, suggestions and pleas", "warnings and advice" and "permission". Some of these speech acts could be described as directive in the classical sense (e.g. commands, orders, pleas, requests). Others appear to be acts in which the speaker proposes something to the addressee but has no particular desire to see their proposal adopted (e.g. advice, warnings, suggestions). A last speech act (i.e. permissions) could be characterized more broadly as one where the speaker commits themself to a course of action (i.e. allowing the addressee to act on their desires), a general type that might be taken to encompass offers and invitations too (cf. Jary & Kissine 2016: 125).

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homogeneous paradigm with the "canonical" imperative, i.e. they share the morphosyntactic features of the second person constructions, from those that do not. In their view, we should only consider the former imperatives. French in (i) (as well as English in the translations) can serve as an example.

(i)     French (Romance, Indo-European; France, Switzerland; stan1290, fra)
    a.     *mang-e(/ez)*
           eat-2SG.IMP/2PL.IMP
           '(Y'all) eat!'
           (personal knowledge)
    b.     *mange-ons*
           eat-1PL.IMP
           'Let us eat!'
           (personal knowledge)
    c.     *qu'   ils          mang-ent    de la        brioche*
           COMP  3PL.M.NOM   eat-3PL.SBJV  of SG.F.DEF  cake
           'Let them eat cake!'
           (personal knowledge)

The first person plural construction in (ib) would be an imperative. Like (ia), it is characterized by the absence of a subject pronoun and the use of what are basically present indicative verb endings. The third person plural construction in (ic) would not be an imperative. Unlike (ia), it involves a complementizer, a subject pronoun and a subjunctive verb form and, according to Jary & Kissine (2016), it is therefore better analyzed as a hortative. For the English counterparts in the translations, this approach means that neither (ib) nor (ic) would count as an imperative, since they diverge from *eat!* in requiring *let* and a pronoun. Crucially here, distinguishing imperatives and hortatives in this way undoubtedly has its pros and cons (see van der Auwera et al. 2013 too) but, as our article focuses on addressee-oriented constructions, a discussion falls outside of its scope.

The ability to convey this entire array of acts is a necessary feature of the imperative for Jary & Kissine (2016). Accordingly, they do not consider as imperatives constructions that are dedicated to specific directive speech acts, like the Nivkh permissive in (7) (and, by extension, they would presumably not analyze the Kolyma Yukaghir admonitive in (6) as a negative imperative either). As this section's initial paragraph already suggests, we share Jary & Kissine's (2016) assessment that such constructions are best excluded from a study comparing imperatives across languages. They cannot be regarded as equivalent to, say, the Plains Cree imperative – which is described as suitable for performing "orders, commands, invitations or requests" (Okimāsis 2018: 60) – or the Albanian one – which Breu (2010: 462-463) writes may be used for "commands, requests, instigation, … advice … [and] permission". It is probably also important to add here that, for no language in our sample, ruling these more specialized constructions out leads to an analysis under which it has no imperative (or negative imperative, for that matter). Nivkh, for instance, still has the construction in (8).

(8)     Nikvh (Nivkh; Russia; nivk1234, niv)
        *ra-ja*
        drink-2SG.IMP
        'Go!'
        (Gruzdeva 1998: 34)

Two comments are in order, however. First, establishing whether the imperative in a language is suitable for Jary & Kissine's (2016) whole range of directive speech acts is difficult, if not impossible, for a typological investigation. For some languages, the descriptions do specify at least a certain range of potential uses. For others, we can infer from the examples – which may seem more or less forceful, more beneficial to the speaker or the addressee and so on – that the imperative can convey *some* distinct directive speech acts anyway but, for yet other languages, the available information is insufficient to determine whether what is identified as their imperative indeed allows a variety of uses. Many sources just state that imperatives are directives in the traditional sense, a usage type that is in fact mentioned for every sample language's imperative in one way or another. Second, Jary & Kissine (2016: 123) offer little evidence for their claim that "in the vast majority of languages these same functions [i.e. the full range] are happily performed with the imperative". They even argue, with no real proof, that, for languages with constructions like (7), "it is not always clear that these forms genuinely stand in complementary distribution with imperative sentences" (Jary & Kissine 2016: 123) and thus that the imperative in (8), for instance, cannot express a permission.

    To avoid these assumptions and in view of the practical concerns about what sources can tell us, we will adopt an adapted version of Jary & Kissine's (2016) comparative concept. While acknowledging the likelihood of imperatives conveying advice, permission and the like, it puts Searlean directivity center stage again (cf. Aikhenvald 2010: 1-2 implicitly, van der Auwera et al. 2013):

    The imperative is a sentence type whose only prototypical function is to provide the addressee with a reason to act and that is *at least* suitable for the performance of directive speech acts *where the speaker wants and attempts to get the addressee(s) to do something*.

A similar definition of the negative imperative that guarantees comparability with the positive constructions under investigation would be (cf. Van Olmen 2021: 526-528):

    The negative imperative is a sentence type whose only prototypical function is to

provide the addressee with a reason not to act and that is at least suitable for the performance of negative directive speech acts where the speakers wants and attempts to get the addressee(s) not to do something.

The term "negative directive speech act" covers any situation where the speaker presents the addressee(s) with a reason not to act. Such uses include not only what may generally be referred to as prohibitions (e.g. an order like 'don't pick your nose, son!') but also, for example, advice (e.g. 'don't use social media if you want to stay sane'). So, in our view (Van Olmen 2011: 45), positive and negative directive speech acts can fulfill similar specific functions but contrast in their fundamental orientation of action and non-action.

Let us now turn to the notion of "sentence type" in the above definitions. Our operationalization of it requires constructions to be morphologically and/or syntactically distinct from other constructions to count as (negative) imperatives. This distinctiveness may arise as some form of dedicated marking by affixes, clitics or separate words. The Lezgian prohibitive suffix *-mir* in (9) is a case in point and so is the Pacoh imperative particle *ʔaw* in (10).

(9)  Lezgian (Lezgic, Nakh-Daghestanian; Azerbaijan, Russia; lezg1247, lez)
     *qʷe-mir*
     come-PROH
     'Don't come!'
     (Haspelmath 1993: 23)
(10) Pacoh (Katuic, Austro-Asiatic; Vietnam; paco1243, pac)
     *pləj  ʔa.məh     ʔaw*
     buy    something  IMP
     'Buy something!'
     (Alves 2006: 303)

(Negative) imperatives may differ from other constructions in (purely) syntactic terms as well. The omission of subject markers is a common phenomenon. Maung in (11) can serve as another example. In this language, the verb's irrealis form combines with *da* 'if' to express conditions and with *marig* 'not' to convey negative past indicatives. Its second person instantiations in particular can also be employed on their own, to issue directives (Capell & Hinch 1970: 67-68). The absence of *da* or *marig* makes such uses syntactically distinct and (11) therefore counts as an imperative.

(11) Maung (Iwaidjan; Australia; maun1240, mph)
     *an-ŋinga-nji*
     2SG.PST-speak-IRR
     'Speak!'
     (Capell & Hinch 1970: 76)

Not included as (negative) imperatives are (negatively) directive constructions that do not differ from other constructions grammatically. English *stop walking!*, for instance, offers the addressee a reason not to act but does not constitute a negative imperative. Morphologically and syntactically, it is identical to a positive imperative like *keep walking!*. Its negative directivity simply results from the lexical meaning of *stop*.[4] Furthermore, we take sentence type to refer

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[4] Such verbs do develop into full-fledged prohibitive markers in many languages, of course (e.g. Devos & Van Olmen 2013: 30-31). Kresh is one of them (see Section 4.3.2), with *a'bi* 'don't!/cease'. Together with the adverb *a'da* 'down', it forms a construction that is specialized for negative directivity and can even combine to convey

to a construction that exhibits productivity or, in other words, can feature a wide range of different verbs (all verbs would not be a satisfactory requirement since imperatives are known to be incompatible with, for instance, stative verbs in some languages; e.g. Aikhenvald 2010: 150-153). Thus, constructions limited to particular verbs fall outside the present article's scope. In Chalcatongo Mixtec, for example, the imperative is characterized by the usage of the potential stem of the verb and the absence of pronominal subject clitics. The directive forms of the verbs 'go' and 'come', however, are idiosyncratic: the former lacks clitics too but takes the progressive verb stem whereas the latter may (but need not) appear suppletively as *ñä́ʔä* 'come!' (cf. potential *kii* 'come!'; Macaulay 1996: 134-135). Neither construction is taken into consideration here.[5] We do believe, however, that future research should look at (a)symmetry in suppletive (negative) imperatives too.

A second component of our above definitions that needs to be explained further is that, for sentence-types/constructions to be (negative) imperatives, (negative) directivity should be their only prototypical function. This requirement excludes cases like (12) and (13). The construction in (11) is the primary way that speakers of Ghomara issue negative directives but it is not dedicated to the expression of negative directivity. It is a negative declarative about the future, which, in context, can be used to provide the addressee with a reason not to act. The language does not actually possess a specialized construction for this function and is therefore analyzed here as lacking a negative imperative. In the same vein, the construction in (13) is the main directive strategy in Lokono. It does not constitute an imperative, however, since offering the addressee(s) a reason to act is not the prototypical function of this present declarative. It is said to only acquire a directive interpretation with a particular intonation. The language has no construction that meets our criteria for an imperative and, hence, we analyze it as lacking one.

(12)  Ghomara (Berber, Afro-Asiatic; Algeria, Morocco; ghom1257, gho)
      *ma    ya    ḵerz-et            ši*
      NEG   IRR   plough.AOR-2SG   NEG
      'Don't plough!' or 'You will not plough.'
      (Mourigh 2015: 149)
(13)  Lokono (Caribbean Arawakan, Arawakan; Suriname; araw1276, arw)
      *bu-shika    da-mun   no*
      2-give        1-DAT     3.F
      'Give it to me!' or 'You give it to me.'
      (Patte 2008: 105)

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'don't stop!' (Santandrea 1976: 160). Languages like Kresh are, to be clear, regarded as having a negative imperative here.

[5] One of the reviewers deplores the exclusion of suppletive imperatives. They argue, probably rightly so, that such forms are clearly directive and may be "the most frequent direct commands" in a language (cf. Veselinova 2006: 135-148). Still, in our view, we would be comparing non-equivalent constructions if they were taken into account. Let us illustrate our claim with Dupaninan Agta. This language uses "simple declaratives" to issue directives (Robinson 2008: 173). We do not analyze this construction as an imperative because directivity is not its only prototypical function. Dupaninan Agta does have special forms of 'go' and 'come' that "are most often used for imperatives" (Robinson 2008: 189). One could thus conclude that the language has an imperative after all. This conclusion would, however, obscure the fact that, in general, Dupaninan Agta has to rely on declaratives to express a directive and mean something very different from the statement that Pacoh in (10) has an imperative. The reviewer also points out, again rightly so, that suppletive imperatives often display interesting behavior when it comes to negation. Chalcatongo Mixtec *ñä́ʔä*, for instance, cannot be negated: like with all other verbs, the potential stem is needed to say 'don't come!' (Macaulay 1996: 136). One could therefore likely identify various (other) asymmetries specific to such forms and we agree with the reviewer that they merit further study. We do not think, though, that they should be included in the present article. Doing so may result in a proliferation of asymmetries relating to a few particular verbs in languages with suppletive imperatives and obfuscate the comparison with languages that do not have such forms.

(Negative) present or future declaratives are the constructions that most languages in our sample with no (negative) imperative rely on to express (negative) directivity. Other recurrent non-specialized constructions, which need not be directive, are: (i) declaratives with a verb of volition, meaning 'I (don't) want you to' or 'you (don't) want to' (e.g. Katukína-Kanamarí; Groth 1988: 55-56); (ii) declaratives featuring some modal (e.g. Kannada; Steever 2020: 205); (iii) irrealis constructions vague, for instance, between directive, optative and dubitative readings (e.g. Fur; Waag 2010: 268). Languages having to turn to such constructions to express (negative) directivity because they do not possess more specialized means (like those between brackets) are regarded here as having no (negative) imperative. Note, though, that these types of constructions may develop into (negative) imperatives over time. In Makalero, for instance, a declarative with a modal verb meaning 'not allowed to' gets a dedicated negative directive interpretation when the subject pronoun is left out (Huber 2011: 446).

3.1.2 Problems

The following list summarizes, for convenience's sake, the criteria that, as discussed in Section 3.1.1, a (negative) imperative needs to satisfy:

(i)     a morphologically and/or syntactically distinct sentence type
(ii)    that has (negative) directivity as its only prototypical function
(iii)   and can at least be used for acts where the speaker wants and tries to get the addressee(s) (not) to do something.

Applying them to the information provided in grammatical descriptions is not always straightforward, however.

A case in point is Kanuri in (14), which presents what Hutchinson (1981: 130) calls the "imperative/subjunctive" paradigm of *lè* 'go'. All forms are said to be specialized in some way: the second person and first person plural ones are exclusive to this paradigm; the other person-number forms are morphologically identical to the conjunctive but syntactically distinct because of their main clause usage here.

(14)   Kanuri (Western Saharan, Saharan; Chad, Niger, Nigeria, Sudan; cent2050, knc)

| | SG | DU | PL |
|---|---|---|---|
| 1 | *lè-ngê* | *lè-nyê* | *lè-nyówó* |
| 2 | *lè-né* | | *lè-nówó* |
| 3 | *lè-zé* | | *lè-zá* |

(Hutchinson 1981: 130)

Hutchinson (1981: 130) only characterizes the meaning of the complete paradigm, as "expressing orders, commands, wishes, desires, blessings, etc.". This description is suggestive of optative interpretations alongside directive ones, which is borne out by some third person examples translated as 'may (s)he/they …!'. It is, however, not clear from the grammar whether or not the second person forms permit optative readings too and do not therefore satisfy criterion (ii). It is nonetheless not unreasonable, from a typological perspective, to assume that they are imperatives. Earlier research (e.g. Aikhenvald 2010: 76-77, van der Auwera et al. 2013) has revealed a distinctive trait across languages of paradigms dedicated to expressing directivity: if they go beyond the second person, the first other person-number value that they always include is the first person plural (see French in footnote 3), with further extensions to the third person and then the first person singular being increasingly infrequent. Looking at Kanuri in this light,

we can and do take the fact that only the second person and first person plural forms are really specific to (14) to suggest that they make up an imperative paradigm like many attested cross-linguistically and thus that *lèné* 'go!' and *lènówó* 'y'all go!' are indeed imperatives. The other, conjunctive forms can be analyzed as a hortative construction that fills in in the "gaps" in the imperative paradigm (like *let* in English).

For another example, we can turn to Lao in (15). The basic way of issuing a directive in this language is given in (15a). This construction has no overt subject but, as zero anaphora are very widespread in Lao, it can function not only as a directive but also as another type of speech act/sentence type, with a second person or non-second person subject. As Enfield (2017: 191) writes, "imperatives share their general characteristics – i.e. basic constituent order – with other sentence types, including interrogatives and declaratives." In other words, example (15a) does not satisfy criterion (i) (or, for that matter, the other two criteria) and cannot be regarded as an imperative here.

(15)  Lao (Kam-Tai, Tai-Kadai; Laos, Thailand; laoo1244, lao)
    a.    *qaw3    nang3    maa2    saj1    phii4*
          take       hide      come    put    here
          '(I/you/he/she/we/they) put the fish skin in here.'
          (Enfield 2017: 192)
    b.    *peet5    patuu3   haj5   dèè1*
          open      door     give  IMP.SOFT
          'Please open the door!'
          (Enfield 2007: 66)

Lao has a highly grammaticalized class of sentence-final particles, though. Some of these *are* specialized for directivity and they are in complementary distribution with a range of declarative and interrogative ones (Enfield 2017: 190). *Dèè1* in (15b) is one such particle, serving to mitigate the imposition of a request. Others are: *mèè4*, used to urge the addressee to do something to which no impediments exist; *vaj2*, serving to ask the addressee to hurry up and act; and *duu2*, used to implore the addressee to do something for the speaker (Enfield 2007: 63-68). In our view, sentences such as (15b) can be argued to be syntactically distinct, with the absence of a subject and the presence of a particle like *dèè1* as their characteristics. Directivity is, moreover, their only prototypical function and they all express acts in which the speaker wants and tries to get the addressee(s) to do something. For that reason, Lao, as well as some other South East Asian languages with similar phenomena, is still analyzed here as possessing an imperative, in spite of (15a).

## 3.2   Results

In Table 2, we present the breakdown of our sample languages (see Section 2) with or without a construction satisfying our definition of imperatives (± IMP) that have or do not have a construction meeting the requirements of our definition of negative imperatives (± NEG.IMP) (see Section 3.1). Both absolute frequencies and percentages are provided. Before we discuss these numbers, we offer some further examples of the different language types.

|  | + NEG.IMP | – NEG.IMP | Total |
|---|---|---|---|
| + IMP | 171 (85.50%) | 9 (4.50%) | 180 (90.00%) |
| – IMP | 8 (4.00%) | 12 (6.00%) | 20 (10.00%) |
| Total | 179 (89.50%) | 21 (10.50%) | 200 (100.00%) |

Table 2: Specialization (a)symmetry frequencies

An instance of a language displaying specialization symmetry, with an imperative as well as a negative imperative, is Yoruba. The imperative in (16a) is marked by the optional character of second person pronouns and the absence of the high-tone syllable *ọ́* found in declaratives and interrogatives (Adéwọlé 1991: 103-104). What sets the negative imperative in (16b) apart is the lack of a subject and the use by itself of *máà* 'not', which can also appear "in non-imperative clauses after the potential marker … [or] the conditional marker" (Adéwọlé 1991: 108).

(16)  Yoruba (Defoid, Niger-Congo; Nigeria; yoru1245, yor)
    a.   *(iwo) jẹun   yó*
        2SG   eat    full
        '(You) eat to your satisfaction!'
        (Adéwọlé 1991: 104)
    b.   *máà  fẹ́      ẹ*
        NEG  marry    3SG.ACC
        'Don't marry him!'
        (Adéwọlé 1991: 108)

Lower Chehalis in (17) is a language with A/Spe, with an imperative but without a negative imperative. Construction (17a) involves a dedicated imperative suffix *-aʔ*. The primary strategy for negative directives in (17b), which translates literally as 'your filling it is not the case', does not actually need to be directive and does thus not count as a negative imperative.

(17)  Lower Chehalis (Tasmosan, Salishan; United States of America; lowe1427, cea)
    a.   *√yəl-áʔ-əc*
        help-IMP-1SG.PFV
        'Help me!'
        (Roberston 2014: 108)
    b.   *√hílu-Ø      ʔə-s-√ləč'-ə́n*
        NEG-3.PFV   2SG.POSS-NMLZ-fill-3.PFV
        'Don't fill it!' or 'You do not fill it.'
        (Robertson 2014: 110)

Another example of a language with A/Spe, though in the other direction, is Nyulnyul. Positive directives like (18a) "are expressed as second person futures" (McGregor 2011: 289). The negative imperative, by contrast, has a specialized negator, as in (18b).

(18)  Nyulnyul (Nyulnyulan; Australia; nyul1247, nyv)
    a.   *way    mi-jid*
        away    2MIN-go
        'Go away!' or 'You will go away.'
        (McGregor 2011: 210)
    b.   *arriban mi-li-j*
        PROH    2MIN-IRR-say
        'Don't do that!'
        (McGregor 2011: 357)

Yagua in (19), finally, is a language that is symmetric in the lack of specialization, possessing neither an imperative nor a negative imperative.

(19)  Yagua (Peba-Yaguan; Peru; yagu1244, yad)

    a.    *są́ą́da-ą̨    jimyiy-rà*
             2DU-IRR    eat-INAN
             'The two of you eat!' or 'You will both eat.'
             (Payne & Payne 1990: 314)
    b.    *néé  yi- ą̨    juváay-rà*
             NEG   2SG-IRR do-INAN
             'Don't do it!' or 'You will not do it.'
             (Payne & Payne 1990: 314)

Its primary ways of issuing (negative) directives are "formally ambiguous with … future non-imperative predications", even if they are "pragmatically more likely … to be interpreted as imperatives (or even as yes/no questions)" (Payne & Payne 1990: 315).

    The numbers in Table 2 suggest that we find imperatives in most of the world's languages (90% of our sample) and that the same holds for negative imperatives (89.50% of our sample). These findings confirm that both can indeed be regarded perhaps not as universal sentence or construction types but certainly as near-universal ones (cf. König & Siemund 2007: 303-316, Alcázar & Saltarelli 2014: 15-18). (Negative) directivity is clearly such a basic/recurrent function of language that it typically gets encoded in grammar. In view of their pervasiveness, it is also not surprising that most languages have an imperative as well as a negative imperative (85.50% of our sample) and thus exhibit symmetry in specialization. Many fewer languages are symmetric in the absence of specialization, not having an imperative or negative imperative (6% in our sample), and even fewer languages display A/Spe in lacking an imperative in spite of the presence of a negative imperative (4% in our sample) or wanting for a negative imperative despite the existence of an imperative (4.50% in our sample).

    Interestingly, together, these last (admittedly small) numbers indicate that the lack of a negative imperative seems to imply little about the absence/presence of an imperative and vice versa. The 21 languages with no negative imperative are about just as likely to lack an imperative (nine of them) as to possess one (twelve of them). Similarly, of the 20 languages without an imperative, twelve want for a negative imperative and eight have one. One way to interpret these results for (negative) imperatives is as suggesting a certain independence from each other as sentence/construction types. They are traditionally seen as somehow paired but this finding, as well as earlier ones about their constructional make-up (e.g. van der Auwera & Lejeune's 2013 observation that approximately 40% of languages feature another verb form in the negative imperative than in the imperative), could be taken to mean that languages need not – and thus, by extension, linguists perhaps should not – treat them as (closely) linked.

    To end this section, let us briefly illustrate the areal distribution of the languages with no imperative and/or no negative imperative in Figure 1 (while acknowledging that a worldwide sample of 200 languages does not allow us to reveal any real areal tendencies across the globe).[6]

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[6] See the Supplementary Material for an interactive map that includes the languages with both an imperative and a negative imperative.
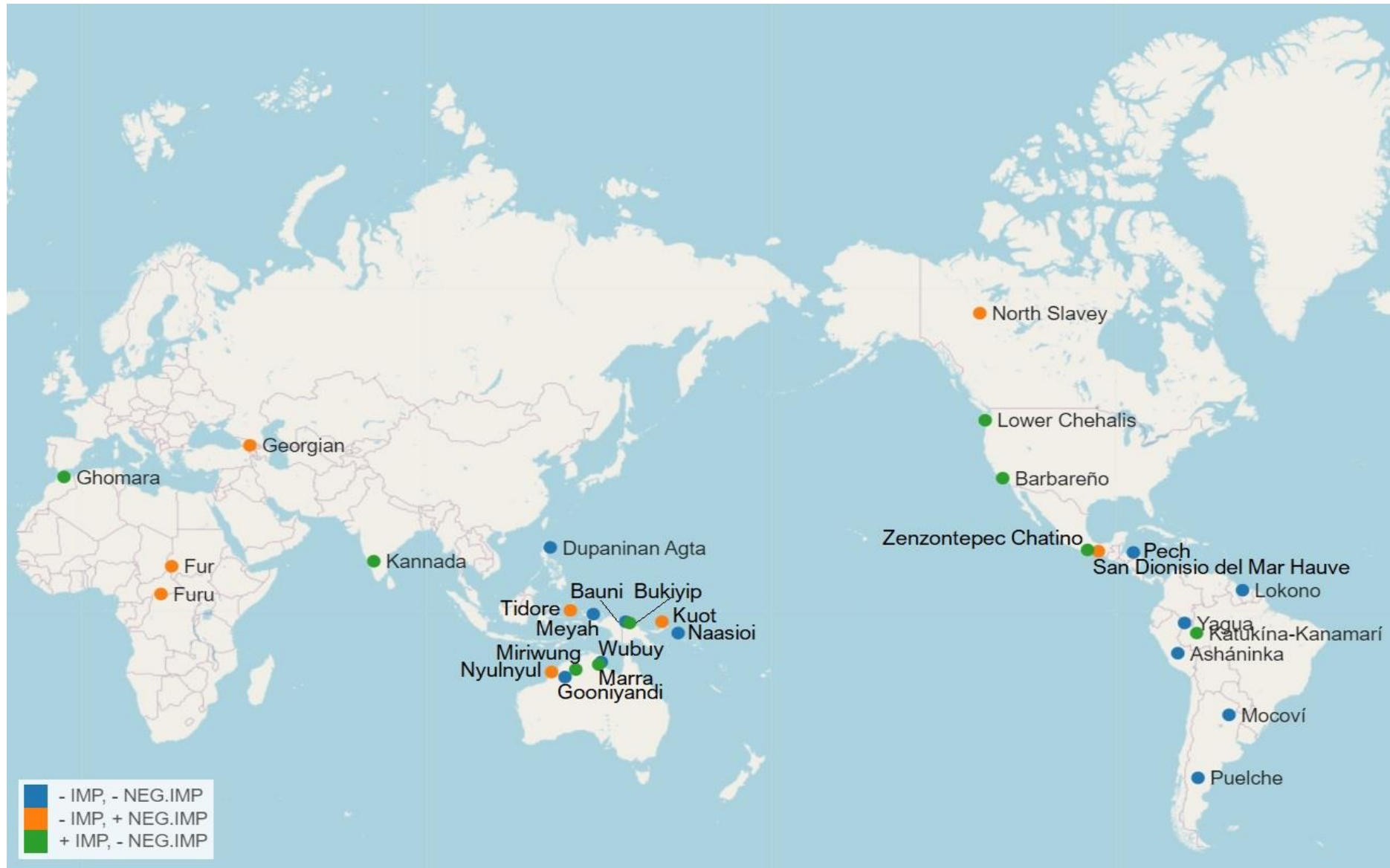
Figure 1: Areal distribution of A/Spe and symmetry in lack of specialization

4       Finiteness (a)symmetry

4.1     Operationalization

4.1.1 Characterization

4.1.1.1   In general

Miestamo (2005: 74) describes A/Fin as the phenomenon whereby the LV becomes less finite in the negative compared to the positive, while recognizing that there is probably "no hard and fast cross-linguistically applicable definition of finiteness". One potential sign of such a "loss" of finiteness is the LV acquiring nominal traits, like case or a nominalizer. Shuswap in (20) can serve as an example.

(20)   Shuswap (Interior Salish, Salishan; Canada; shus1248, shs)
       a.   *píć-n-c-n*
            squeeze-TR-2-1
            'I squeeze you.'
            (Kuipers 1974: 48)
       b.   *táʔ   k-s-x̌əqpnwéẃn*
            NEG   IRR-NMLZ-understand
            'I don't understand.'
            (Kuipers 1974: 81)

In the positive declarative verbal main clause (20a), the LV carries the agreement marking. In the negative, as in (20b), it is marked by the nominalizer *s-* (as well as the irrealis prefix *k-*; see Miestamo 2005: 344) and a negative FE *táʔ* is introduced. The finite nature of this new element is clear from the fact that it may combine with agreement suffixes in certain contexts (Kuipers 1974: 82). Note also that *táʔ* means 'there is no' when preceding a regular noun, which suggests that the structure in (20b) results from a so-called negative existential cycle (Croft 1991, Veselinova 2014). This process sees negative existentials breaking into the domain of verbal negation and one of the most common ways in which it takes place is their use with a nominalized verb form, presenting the event as non-existent ('there is no understanding'; Veselinova 2016: 171-172).
       Another possible sign of loss of finiteness is the LV appearing in a form that is typically reserved for contexts in which it is syntactically dependent, like infinitives and converbs. The SN of past tense clauses in Kannada is a case in point.

(21)   Kannada (Southern Dravidian, Dravidian; India; nucl1305, kan)
       a.   *avanu-ɸ       ban-d-anu*
            3SG.M-NOM      come-PST-3SG.M
            'He came.'
            (Amritavalli & Jayaseelan 2005: 180)
       b.   *avanu-ɸ       ban-al(u)   illa*
            3SG.M-NOM      come-INF    NEG
            'He didn't come.'
            (Amritavalli & Jayaseelan 2005: 181)

In the positive clause (21a), the LV takes tense and agreement suffixes. In the negative in (21b),

it appears in its infinitival form before the negator *illa*, which is negative existential in origin (Veselinova 2016: 165), and the tense and agreement marking is absent. Note, though, that SN in Kannada is more complex than (21) suggests (see Miestamo 2005: 78-79, 140-141, Veselinova 2016: 168-170). It also has A/Fin in non-past/habitual clauses, for instance, where the LV occurs in its gerund form. Many languages actually have such splits in SN.

For Miestamo (2005: 75), loss of finiteness may also mean that the LV simply becomes syntactically dependent on a new FE. An example comes from one of the SN constructions in Awa Pit (see Miestamo 2005: 258).

(22)   Awa Pit (Barbacoan; Colombia, Ecuador; awac1239, kwi)
    a.    *na-ϕ=na*       *ku-mtu*
          1SG-NOM-TOP    eat-IPFV.PTCP
          'I am/was/will be eating.'
          (Curnow 1997: 57)
    b.    *putsha awa tunya ku-mtu shi-ϕ*
          white    person    rat       eat-IPFV.PTCP  NEG-NLCT
          'The white people don't eat rats.'
          (Curnow 1997: 336)

In this language, it is possible for a non-finite verb form like the imperfective participle in (22a) to be the predicate of a main clause. To negate such clauses, like in (22b), *shi* 'not' is put after the LV. Crucially, this negator has certain verbal traits in that it marks person: *-s* for locutors and *-ϕ* for non-locutors (Curnow 1997: 189-192). The LV can thus be said to become "dependent on the added FE" and lose "its finiteness from a syntactic point of view" (Miestamo 2005: 258).

Two comments are in order. First, A/Fin may involve the introduction of a new FE but it is not a requirement. If present, this FE is usually of a stative nature in SN, like a (negative) existential verb or (negative) copula. Miestamo (2005: 207) takes this fact to be an extra indication – alongside the LV's less finite character – of the stativity of SN (see Section 1 but also Section 4.3.2). It remains to be seen whether or not any FEs in negative imperatives tend to be the same. Second, A/Fin often leads to the loss of tense-aspect-mood and/or person-number-gender marking but such changes can occur in negation without any A/Fin too (see Miestamo 2005: 112-153 on asymmetry in verbal categories). Kaki Ae in (23) is a case in point (Miestamo 2005: 158-159).

(23)   Kaki Ae (Tate, Eleman; Papua New Guinea; kaki1249, tbd)
    a.    *aru era ma-ha*
          man  3SG  come-3SG
          'The man came.'
          (Clifton 1995: 39)
    b.    *aru ore ma-na-ra*
          man  NEG  come-?-IRR
          'The man didn't come.'
          (Clifton 1995: 39)

The third person singular agreement suffix in (23a) disappears in (23b) but there are no changes in the LV indicating A/Fin (e.g. syntactic dependence on another item, a non-finite form or nominal traits). The irrealis marker cannot be held responsible either, since it freely combines with agreement suffixes in other contexts (Curnow 1995: 40).

4.1.1.2   Subtypes

Within A/Fin in SN, Miestamo (2005: 75-96) distinguishes a number of subtypes. They all fit the general description in Section 4.1.1.1 in that:

(i)     the LV acquires nominal traits;
(ii)    the LV appears in a form typically reserved for syntactically dependent contexts;
(iii)   and/or the LV becomes syntactically dependent on a new FE.

They differ in what the negator is positioned relative to and/or the nature of the negator. These subtypes can all be observed in IN too and we will illustrate them with cases from this domain of negation.

A short indent: In the subtype called Neg-LV, the LV becomes less finite and the negator gets attached to or put in a position relative to this LV. Consider Yuhup in (4), repeated as (24).

(24)   Yuhup (Nadahup; Colombia; yuhu1238, yab)
    a.    *wĕdⁿ*
          eat.IMP
          'Eat!'
          (Ospina Bozzi 2002: 166)
    b.    *˷dɨ́dⁿ-˜dɨ̀h       dĭh*
          speak.CONC-NEG  be.IMP
          'Don't speak!'
          (Ospina Bozzi 2002: 173)

The imperative in (24a) is characterized by the rising tone on the verb and the absence of any predicative morphemes. Its negative equivalent in (24b) features the imperative of 'be' – a new FE – and the LV in a non-finite form normally employed to express simultaneity. The fact that the negative affix -˜dɨ̀h attaches to this LV makes Yuhup in (24) a case of Neg-LV.

A second subtype is Neg-FE, which differs from Neg-LV mainly in the negator's placement: it is added to or put in a position relative to a newly introduced FE rather than relative to the LV. An ambiguous case can be found in Vitu in (25).

(25)   Vitu (Oceanic, Austronesian; Papua New Guinea; mudu1242, wiv)
    a.    *miu   pele-a*
          2PL    take-3SG
          'Y'all take it!'
          (Van den Berg & Bachet 2006: 203)
    b.    *taua  miu  na      kuahi*
          PROH  2PL  IRR.PL  fear
          'Don't y'all be afraid!'
          (Van den Berg & Bachet 2006: 203)

The imperative in Vitu is characterized by the lack of any aspect-mood-sequentiality markers, like in (25a). The negative imperative in (25b), by contrast, requires the inflected irrealis auxiliary *na* (versus singular *nu*), which the LV can be said to depend on syntactically. It also features a specialized negator *taua*. It is unclear, however, whether this prohibitive marker is positioned relative to the auxiliary or the whole clause. In the former case, (25b) counts as Neg-FE; in the latter, as Neg-Cl.

In Neg-Cl, the negator is placed in relation to the entire clause rather than just the LV or

any FE. This subtype of A/Fin is very infrequent and is not found for SN in our sample. An interesting example for IN is Chinantec Lealao in (26).

(26) Chinantec Lealao (Chinantecan, Oto-Manguean; Mexico; leal1235, cle)
    a.    *ŋia$^M$*             *la$^M$*
          come.2SG.COMPL    here
          'Come here (now!).'
          (Rupp 1989: 93)
    b.    *ʔi$^M$*   *ha$^{LM}$i*
          REL   come.2SG.PROG
          'Come (sometime)!'
          (Rupp 1989: 93)
    c.    *ʔa$^L$-ʔi$^M$*    *ki$^M$i*
          NEG-REL    dream.2SG.PROG
          'Don't dream!'
          (Rupp 1989: 94)

This language has two imperatives. The construction in (26a) is syntactically dedicated because of the absence of other tense-aspect-mood markers and presumes a direct response. Immediate compliance is not essential to the milder imperative in (26b). Its construction is highly idiosyncratic, with "a second-person progressive-aspect verb as [its] predicate … preceded by the relative word *ʔi$^M$* in the manner of a complementizer, even though there is no overt matrix clause of which the sentence is a complement" (Rupp 1989: 93). It probably results from insubordination (see Section 4.3.2) and in a comparative loss of syntactic independence of the LV. The negative imperative in (26c) is constructionally symmetric with (26b): the only difference between the two is the negator *ʔa$^L$*. Yet, the tense/politeness distinction in the positive is neutralized in the negative and (26c) also acts as the negative equivalent of (26a). IN in Chinantec Lealao can thus be argued to form a (rare) case of paradigmatic A/Fin (see Miestamo 2005: 179) – of the Neg-Cl subtype in particular: the negator is a prefix on the relative word, which the rest of the clause depends on syntactically.

    The last subtype is called NegVerb. Its defining trait is the presence of an inherently negative FE. Consider Pite Saami in (27) (cf. Section 1 on this language's SN).

(27) Pite Saami (Saami, Uralic; Norway, Sweden; pite1240, sje)
    a.    *dáhke-n*     *dal*   *d-a-v*
          do-2DU.IMP    now   DEM-DIST-ACC.SG
          'You two do that now!'
          (Wilbur 2014: 152)
    b.    *elle-n*         *tsábme*
          PROH-2DU.IMP   eat.CONNEG
          'Don't you two eat!'
          (Wilbur 2014: 158, 180)

The imperative in (27a) is characterized by the absence of an overt subject noun phrase and by special suffixes on the LV (e.g. singular *-ø*, dual *-n* and plural *-t* for inflectional class I; Wilbur 2014: 160, 245). These markers also occur in the negative imperative in (27b) but they do not attach to the LV, which appears in its non-finite connegative form, but to the prohibitive and thus inherently negative auxiliary *elle* 'don't!'.

4.1.2 Problems

A first, ostensibly fundamental issue concerns the (non-)finite status of (negative) imperatives. The verb forms of second person singular imperatives in particular are often considered to be intrinsically non-finite. As Nikolaeva (2007: 139-141) and Heine (2016: 252-257) among others note, imperative verbs tend to be very restricted, for instance, in the tense-aspect-modality distinctions that they can make – compared to other parts of the verbal paradigm but not unlike "ordinary" non-finite forms. We have seen examples of this phenomenon in previous sections: what characterizes the imperative in languages like Vitu in (25a) and Chinantec Lealao in (26a) is the absence of marking of (other) verbal categories. Accordingly, (second person singular) imperatives "are often the simplest and most straightforward forms in a language" (Aikhenvald 2010: 89). Yoruba in (16a) and Yuhup in (24a) are cases in point. Nikolaeva (2007: 140) also observes that, like many non-finite forms, imperatives "have limited co-occurrence with subjects" (see Aikhenvald 2010: 92, Heine 2016: 252-252 too). In some languages, such as Adang (Haan 2001: 76), they do not appear to be able to combine with subject pronouns at all. In other languages, such as Pima Bajo (Estrada Fernández 1996: 33), subject pronouns are optional with the imperative and retaining them may produce particular pragmatic effects (e.g. emphasis in Pima Bajo).

If (negative) imperatives are indeed non-finite, it does not seem sensible to analyze them in terms of finiteness (a)symmetry. None of the above tendencies are exceptionless, though, as Nikolaeva (2007) and Heine (2016) themselves point out. In numerous languages, verbs display imperative-specific morphology and agreement with their subject. Itelmen in (28) is one of them: the *q-* prefix marks the verb as a second person imperative while the *-xç/-sx* suffixes mark it as having a singular/plural subject.

(28)  Itelmen (Southern Chukotko-Kamchatkan, Chukotko-Kamchatkan; Russia)
      *q'-nu-(qzu-s)-xç(/sx)*
      2.IMP-eat-INCH-PRS-2SG(/2PL)
      '(Y'all) eat now!'
      (Georg & Volodin 1999: 155-156)

The situation in Klamath is especially noteworthy. In this language, indicative verbs do not convey person-number subject agreement but imperative ones do (Stegnij 2001: 81). It is also fairly common for specialized imperative constructions to feature finite forms from other parts of the verbal paradigm. The plural imperative verb form in Western Farsi, for one, is identical to the second person plural subjunctive, which normally occurs only in subordinate clauses but is dedicated to expressing directivity in main clauses (Mahootian 1997: 247-251). Moreover, imperatives do frequently make aspect distinctions as well as construction-specific tense distinctions. An example of the former is Kiowa: it distinguishes perfective ('do!') from imperfective ('keep doing!') imperatives (Watkins 1984: 169-170). The latter usually involves a contrast between immediate and delayed compliance, like in Menggwa (de Sousa 2006: 380-385). Finally, there are also languages where subject pronouns are actually required in the imperative. Teribe (which is not part of our sample) is a case in point. In this language, intransitive verbs take the imperative suffix *-zong* but need to be preceded by a second person singular or plural pronoun to indicate the addressee (Quesada 2000: 79-80).

Even if one nevertheless wishes to maintain that imperatives are generally non-finite, one should at least recognize that, as Heine (2016: 262) argues, they "have little in common with nominalization and other forms of verbal non-finiteness: the latter operate within the morphosyntax of a sentence". In other words, verbs normally appear nominalized or as infinitives or participles because they fulfill a particular function or occupy a particular slot (e.g. a nominal one) in a clause. Imperatives, by contrast, "do not seem to serve primarily the structuring of a

sentence; rather, they belong to a different space of speech processing, [i.e.] … the component of speaker-hearer interaction" (Heine 2016: 262). We adopt this distinction and do not regard the characteristics mentioned in the first paragraph of the present section as sufficient – for our purposes – to call (negative) imperatives less finite or non-finite. We do analyze them as such if the LV has any of the features discussed in Section 4.1.1.1.

Accordingly, we do not consider English *keep quiet!* as non-finite (e.g. *keep* has no overt nominal traits and is not syntactically dependent on anything else). Its Wagiman counterpart in (29a), however, does count as non-finite in our view. 'Be quiet' is part of an open, non-finite class of roots called co-verbs or participles. They may express aspect (-*na* is non-perfective) but, to form a clause, they ordinarily require the presence of a member of a closed class of roots able to take inflections (Krauße & Harvey 2021: 97). *Ya* 'go' in (29b) is one of them: it carries the tense and agreement marking and combines with the non-perfective participle of *durdut* 'run' to yield a complete sentence. These participles can even be case-marked, as (29c) shows – as well as, of course, occur on their own with a directive interpretation, like in (29a). Since, in this imperative construction, the verb is in a form that is usually found in syntactically dependent environments, we regard it as non-finite.

(29)  Wagiman (Wagiman; Australia; wage1238, waq)
    a.   *nye'n-na*
        be.quiet-NPFV.PTCP
        'Be quiet!'
        (Cook 1987: 255)
    b.   *durdut-ta*        *ng-a-ya-nggi*
        run-NPFV.PTCP     PST-1SG-go-PST
        'I ran/went running.'
        (Krauße & Harvey 2021: 97)
    c.   *labali-gunda  ganiggin   guyim-garrag,    dudut-a-gunda*
        leg-ABL        1SG.POSS   sore-COM       run-NPFV.PTCP-ABL
        'My leg is sore from running.'
        (Cook 1987: 261)
    d.   *dudut-a-ne'en*
        run-NPFV.PTCP-ABE
        'Don't run!'
        (Cook 1987: 256)

There is, by the way, no A/Fin in Wagiman. As (29d) demonstrates, the participles also occur in the negative imperative, where the abessive suffix -*ne'en* serves as the negator (Cook 1987: 150, 256).

A more concrete problem than the finite or non-finite nature of (negative) imperatives is that it is unclear at times which subtype of A/Fin a specific case of negation belongs to (see also Miestamo 2005: 87-96). An earlier example is Vitu IN in (25), which is ambiguous between a Neg-FE and a Neg-Cl analysis. A case that does not fit any subtype is IN in Wari'. Imperatives like (30a) are marked by the use of what Everett & Kern (1997: 34) call "second person realis future VICs [verbal inflectional clitics]". They can also occur at the end of "leading questions" (Everett & Kern 1997: 12) but are otherwise essentially limited to the imperative. In fact, Apontes (2015: 166) analyzes them as imperative pronouns. Negative imperatives like (30b) resemble complementizer clauses. The latter are characterized by the use of tenseless VICs and the presence of one of a set of "INFL[ectional]" morphemes that only appear in such clauses or in noun and relative clauses (Everett & Kern 1997: 41-42). In (30c), for instance, we can see the tenseless VIC *caca* 'they' (cf. realis future *ra-in* 'you-him' in 30a) and the realis

future INFL morpheme *ta* (others include realis non-future *iri* and irrealis *xi*). Crucially here, the negative imperative in (30b) also features a tenseless VIC (*ma-on* 'you-him') and an INFL morpheme, suggesting that it has a complement(-like) structure. In fact, Everett & Kern (1997: 169) point out that it differs from the SN complement construction in (30d) (see Miestamo 2005: 359-360 too) only in the absence of the negative verb *'om* 'not exist'. Compared to the imperative (30a), (30b) can thus be argued to exhibit a loss of finiteness.

(30)   Wari' (Chapacura-Wanham; Brazil; wari1268, pav)
      a.    *tacam' horon ra-in*
            cut      big.PL   2SG.REAL.FUT-3.N
            'Cut them big!'
            (Everett & Kern 1997: 34)
      b.    *ta        ari   ma-on*
            REAL.FUT   resist 2SG-3SG.M
            'Don't resist him!'
            (Everett & Kern 1997: 35)
      c.    *ma'    ta        mama'  caca*
            so.that  REAL.FUT  go.PL    3PL.M
            'so that they will go'
            (Everett & Kern 1997: 44)
      d.    *'om      ta       tomi'  hwe-on    Orowao*
            not.exist  REAL.FUT  speak   2PL-3SG.M Orowao
            'Y'all will not speak to Orowao.'
            (Everett & Kern 1997: 169)

Still, unlike (30c) with *ma'* and (30d) with *'om*, (30b) does not include any overt element that the construction clearly complements. There is actually no negator at all either in this negative imperative. Wari' IN is, in other words, simply unclassifiable as Neg-LV, Neg-FE, Neg-Cl or NegVerb. We therefore group it together with cases like Vitu as miscellaneous instances of A/Fin.

      A last issue concerns languages with multiple negative constructions that vary as regards A/Fin. This phenomenon is mainly found in SN, where specific tenses and/or aspects, for instance, may be negated in different ways. Kannada is a case in point, as briefly discussed in Section 4.1.1.1. An even more diverse example is Awa Pit (see Miestamo 2005: 138-139, 258). This language's SN includes a construction with no A/Fin, a NegVerb construction and a construction ambiguous between NegVerb and Neg-LV. We will generally analyze such languages simply as displaying A/Fin. The details will be considered when relevant, though. Our comparison of the subtypes of A/Fin occurring in SN versus IN, for instance, will take into account the two subtypes found in Awa Pit (see Section 4.2).

## 4.2   Results

In Table 3, we provide the absolute frequencies and percentages of our sample languages (see Section 2) that have A/Fin and of those that do not (± A/Fin), for (SN) first and then for IN. For the latter domain, only the languages with both a specialized imperative and a specialized negative imperative are taken into consideration (see Sections 1 and 3.2).

|     | + A/Fin | – A/Fin | Total |
| --- | --- | --- | --- |
| SN | 43 (21.50%) | 157 (78.50%) | 200 (100.00%) |
| IN | 37 (21.64%) | 134 (78.36%) | 171 (100.00%) |

Table 3: Finiteness (a)symmetry frequencies

Our result for SN, i.e. one fifth of languages displaying A/Fin, is similar to Miestamo's (2005: 173) figure of 25.14% and Miestamo & van der Auwera's (2007: 70) of 26.67%. We can thus confirm that loss of finiteness is a frequent phenomenon in SN. By contrast, our result for IN, i.e. also approximately one fifth of languages exhibiting A/Fin, is much higher than Miestamo & van der Auwera's (2007: 70) figure of 10.00%. In other words, contrary to earlier findings, loss of finiteness appears to be as common in IN as in SN. This fact is perhaps particularly remarkable given that SN – with a typically wider range of grammatical distinctions – has, in a sense, more "room" for A/Fin to arise somewhere. The similar frequencies of A/Fin in SN and IN obviously also cast doubt on Miestamo & van der Auwera's (2007: 71) appeal to the negative imperative's illocutionary dynamicity (i.e. it still expects action from the addressee) to explain the supposed difference between the two domains of negation. However, a more in-depth comparison is required to make an overall assessment of A/Fin in SN and IN.

Table 4 therefore gives the absolute frequencies and percentages of our sample languages with both a specialized imperative and a specialized negative imperative (see Section 3.1) displaying A/Fin or not (± A/Fin) in SN and in IN.[7]

| | | IN | | |
| | | + A/Fin | – A/Fin | Total |
|---|---|---|---|---|
| SN | + A/Fin | 19 (11.11%) | 19 (11.11%) | 38 (22.22%) |
| | – A/Fin | 18 (10.53%) | 115 (67.25%) | 133 (77.78%) |
| | Total | 37 (21.64%) | 134 (78.36%) | 171 (100.00%) |

Table 4: Relations between finiteness (a)symmetry in SN and IN

The figures indicate that a language without A/Fin in SN is likely not to have it in IN either (115 out of 133) and that the same is true vice versa (115 out of 134). The existence of A/Fin in one domain of negation, by contrast, predicts little about its presence in the other domain. Of the 38 languages exhibiting it in SN, 19 have it in IN too but 19 do not. Similarly, of the 37 languages with A/Fin in IN, 19 also have it in SN but 18 do not. Put differently, despite their comparable overall frequencies in Table 3, A/Fin in SN and A/Fin in IN appear to be relatively unrelated phenomena.

A comparison of the subtypes of A/Fin (see Section 4.1.1.2) attested in the two domains of negation lends some support to this observation. Table 5 presents, for the languages included in Table 4, the absolute numbers and percentages of the various subtypes in SN and IN. Constructions not fitting one of the four main subtypes are classified as miscellaneous and (the few) languages with multiple constructions belonging to two different subtypes are counted twice (see Section 4.1.2).

| | Neg-LV | Neg-FE | Neg-Cl | NegVerb | Miscellaneous |
|---|---|---|---|---|---|
| SN | 19 (47.50%) | 1 (2.50%) | 0 (0.00%) | 17 (42.50%) | 3 (7.50%) |
| IN | 13 (34.21%) | 1 (2.63%) | 2 (5.26%) | 19 (50.00%) | 3 (7.89%) |

Table 5: Frequencies of A/Fin subtypes

The numbers for Neg-FE and Neg-CL are very low in SN, which is line with Miestamo's (2005: 174) results, as well as in IN. What may be more interesting is the ratio of the two most common subtypes. In SN, Neg-LV occurs marginally more often than NegVerb (19 versus 17 instances; the difference is slightly larger in Miestamo's 2005: 174 data). In IN, the relation between Neg-LV and NegVerb is reversed and the difference is even somewhat more pronounced (19 versus 13 instances). This comparatively higher number of NegVerb cases deserves attention and will

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[7] See the Supplementary Material for an interactive map that presents the languages in Table 5 with(out) A/Fin in SN and/or IN.

be discussed further in Section 4.3.

## 4.3    Discussion

### 4.3.1 A/Fin in both domains and economy?

The 19 languages exhibiting A/Fin in both SN and IN could be taken to point to economy as a motivation. Miestamo (2005) sees it as the force behind the language-internal analogy in symmetric SN: the negative copies the structure of the positive "to maintain a formally coherent system[, which is] … economic – easier to store and to process" (Miestamo 2005: 205). This "desire" for coherence/economy might be argued to apply to negation across domains as well. The Warao negatives in (31b) and (31d), for instance, are both asymmetric compared to their positive equivalents in (31a) and (31c). They have the exact same Neg-LV construction, however. In each case, the LV takes the negative suffix *-naka* and the inflection appears on the FE *ta*. One could therefore say that Warao maintains a coherent system of negation, with A/Fin in both domains.

(31)  Warao (Warao; Venezuela; wara1303, wba)
     a.     *hi-rima*           *nao-te*
            2SG.POSS-father   come-NPST
            'Your father doesn't come.'
            (Romero-Figeroa 1997: 28)
     b.     *hi-rima*           *nao-naka*   *ta-te*
            2SG.POSS-father   come-NEG   AUX-NPST
            'Your father doesn't come.'
            (Romero-Figeroa 1997: 28)
     c.     *seora-kotu*
            look-2PL.IMP
            'Y'all look!'
            (Robertson & Rybka 2020: 80)
     d.     *seora-naka*     *ta-kotu*
            look-NEG        AUX-2PL.IMP
            'Don't y'all look!'
            (Robertson & Rybka 2020: 80)

Still, "full" coherence, like in Warao, is only attested in five of the 19 languages with A/Fin in SN and IN. In eleven of them, there is still some difference between the two domains. In Yuhup, for instance, SN involves a Neg-LV structure where the LV occurs in a form normally used to convey simultaneity and all tense-aspect distinctions are neutralized (Ospina Bozzi 2002: 171). Its IN exhibits the same A/Fin but requires the presence of imperative 'be' as the FE, possibly to mark/distinguish the clause type (see Section 4.1.1.2). Most of the eleven languages are like Itelmen, though. Its SN in (32a) and (32b) displays Neg-LV asymmetry. The LV no longer has its tense-aspect and agreement affixes, which may appear on an optional copula, and is marked as negative by the suffix *-kaq* and the particle *qaʔm*, which are negative existential in origin (and also serve to express 'without' with nouns). IN in Itelmen exhibits the same subtype of A/Fin asymmetry, as (32c) and (32d) show, but the negative particle is not *qaʔm* but the dedicated prohibitive marker *zaq*. There are thus clearly factors other than just economy at work in languages like Yuhup and Itelmen.

(32)  Itelmen (Southern Chukotko-Kamchatkan, Chukotko-Kamchatkan; Russia; itel1242, itl)

a. *kən'çpaɬ   kist-enk    t-ɬa-s-kiçen*
always      house-LOC  1SG-sit-PRS-1SG
'I always sit at home.'
(Georg & Volodin 1999: 153)

b. *qaʔm    wetat-kaq   (t-ɬ-s-kiçen)*
NEG      work-NEG    1SG-COP-PRS-1SG
'I don't work.'
(Georg & Volodin 1999: 200)

c. *q'-nu-qzu-s-xç*
2.IMP-eat-INCH-PRS-2SG
'Eat now!'
(Georg & Volodin 1999: 155)

d. *zaq      wetat-kaq   (q-lq-qzu-s-xç)*
PROH      work-NEG    2.IMP-AUX-INCH-PRS-2SG
'Don't work!'
(Georg & Volodin 1999: 200)

More generally, it remains rather speculative to assume language-internal analogy between two domains of negation (from SN to IN or vice versa) without extensive historical or comparative evidence. However, the former type of data does not exist or is very limited for most languages under investigation and the latter would require a more in-depth look at specific sets of closely related languages than the present typological study can realistically take. Moreover, the impact of economy here is probably quite small anyway – given that, across the entire sample, A/Fin in SN and A/Fin in IN seem to be fairly independent phenomena (see Section 4.2) and that, in most languages with A/Fin in both domains, there are still differences between them.

4.3.2 A/Fin in IN only and diachrony

Of the 18 languages fitting this description, nine have NegVerb asymmetry and, for seven of them, we have data about the negative FE's source. In one case, it derives from a modal verb meaning 'not allowed to' (see Makalero in Section 3.1.1) and, in all other cases, it comes from an LV meaning 'leave' or something similar. Kresh is a case in point. Its SN, like in (33a), exhibits no A/Fin (Miestamo 2005: 304-305). The negative counterpart of its imperative in (33b) may be symmetric (Santandrea 1976: 160) but it may be the construction in (33c) too. It features the LV as an infinitive, the adverb *a'da* 'down' and the negative FE *a'bi*, which has a 'cease, leave' origin (and can even combine to say 'don't stop!').

(33) Kresh (Kresh, Central Sundanic; South Sudan; gbay1288, krs)
a. *kôkó    ãnjã     mömõ   ('dĩ)*
Koko    go.3SG    home    NEG
'Koko went(/didn't go) home.'
(Brown 1994: 166)

b. *úlú*
run.2SG.IMP
(Santandrea 1976: 160)

c. *a'bi     gulí     gbá   a'da*
PROH     run.INF   fast   down
'Don't run fast!'
(Santandrea 1976: 160)

It is likely that at least some of the other, diachronically obscure, prohibitive auxiliaries in the languages discussed thus far derive from a verb with a meaning like 'leave' as well. It is a cross-linguistically common source for prohibitive markers after all (Aikhenvald 2010: 364). It may also explain why NegVerb asymmetry occurs comparatively more frequently in IN than in SN (see Section 4.2). Such languages are interesting in yet another respect. A/Fin in their IN essentially results from the grammaticalization of a form that is initially an explicit directive to desist from something. This original form can therefore be said to an overt manifestation of the illocutionary dynamicity of negative imperatives, i.e. the fact that they still expect (the) action (of desisting) from the addressee. In other words, contra Miestamo & van der Auwera's (2007) appeal to this dynamicity as a motivation for less A/Fin in IN, not only does it not appear to limit the overall rate of A/Fin in IN (see Section 4.2), explicit expressions of it may even give rise to the asymmetry.

It is important to point out here that the character of the FE is actually part of Miestamo's (2005) argument for stativity as a motivation for A/Fin in SN. It is not just the LV's loss of finiteness that is seen as reflecting stativity. Miestamo (2005: 207, 221-224) also considers it indicative of the role of stativity that the FE tends to be or can typically be traced back to a (negative) existential or (negative) stative copula. The languages in our data confirm this trend: for every language where the FE in SN is recognizably more dynamic, such as *fe* 'do' in Imonda in (34), we have three languages where it is clearly stative, like *dì* 'be' in Yuhup in (35).

(34)  Imonda (Border; Papua New Guinea; imon1245, imn)
      *ehe   uagl  auaia   fe     fe-f*
      3      go    NEG     do     do-PRS
      'He will not go.'
      (Seiler 1985: 117)
(35)  Yuhup (Nadahup; Colombia; yuhu1238, yab)
      *wèdɔ́wêt     pógⁿ-˜dɨh          (˜dì-v́-p)*
      chicken      grow.CONC-NEG      be-PROG-?
      'The chicken will grow.'
      (Ospina Bozzi 2002: 182)

The FE's status in IN is quite different. In half of the languages for which we have enough information, it is dynamic. Kresh *a'bi* in (33c), coming from a verb with the meaning 'leave', is a case in point. In the other half, the FE is stative in origin. Yet, with one exception (i.e. a negative existential in the Adang polite negative imperative; Haan 2001: 78), it is always marked as an imperative. This form can be said to coerce a more agentive reading and to reflect illocutionary dynamicity in a sense. In the Yuhup negative imperative mentioned in Section 4.1.1.2, for one, the FE 'be' appears as an imperative and arguably urges the addressee to make it so that they are in a certain state. This contrast shows, again, that A/Fin is not the same in IN as in SN, notwithstanding its equally frequent occurrence.

A/Fin in IN may result, as pointed out earlier, from the grammaticalization of 'leave' into a prohibitive marker. Another mechanism that produces the asymmetry, in both languages that have it just in IN and languages that exhibit it in the two domains of negation, is insubordination. Evans (2007: 367) describes insubordination as "the main clause use of (prima facie) subordinate constructions". Likely cases already discussed are Chinantec Lealao (see Section 4.1.1.2) and Wari' (see Section 4.1.2). Another possible example comes from Copainalá Zoque. Its imperative in (36a) is specialized through the suffix -ʌ and the missing pronominal prefixes. In the negative imperative in (36b), the LV takes the suffix -*i*, which marks it as dependent on a negative auxiliary and also occurs in SN (Miestamo 2005: 367-368), and *uy* 'don't!' appears. Interestingly, *uy* can introduce subordinate clauses of negative purpose too: *uy chʌjcu* 'lest you

don't do it' (Harrison et al. 1981: 442). A plausible connection between the two uses is the insubordinated use of the 'lest'-clause to indicate apprehension ('(be careful) lest you fall!'). Such an expression verges upon and can become a warning ('make sure that you don't fall!'), which may then in turn develop into a more general negative directive/imperative ('don't fall!'). This pathway has been documented for many languages (e.g. Aikhenvald 2010: 278, 355-356).[8]

(36) Copainalá Zoque (Mixe-Zoque; Mexico; copa1236, zoc)
    a.    *min-ʌ*
           come-IMP
           'Come!'
           (Harrison et al. 1981: 445)
    b.    *uy*      *min-i*
           PROH    come-CONNEG
           'Don't come!'
           (Harrison et al. 1981: 446)

For Evans (2007: 391), insubordination includes the free-standing use of non-finite verb forms. In three of our sample languages, this phenomenon has resulted in A/Fin specific to IN. Korowai in (37) is one of them.

(37) Korowai (Awju-Dumut, Trans-New Guinea; Indonesia; koro1312, khe)
    a.    *lo-m-un*
           enter-2.IMP-PL
           'Y'all enter!'
           (De Vries 2017: 253)
    b.    *dépa-tin-da*           *belén*
           smoke-NEG.IRR.2PL-NEG    PROH
           'Don't smoke!'
           (De Vries 2017: 255)
    c.    *dépo-n*    *belén*
           smoke-INF  PROH
           'Don't smoke!'
           (De Vries 2017: 255)
    d.    *dodu-n-da=xup*
           split-INF-NEG=DESID
           'Don't split!'
           (De Vries 2017: 254)

The imperative involves a set of dedicated suffixes, like in (37a). Negative imperatives can be formed in two ways. The finite one in (37b) features the prohibitive adverb *belén* and a negative irrealis verb form that lacks the first part of the normal negative circumfix *be-…-da*. In its non-finite alternative, the LV always appears as an infinitive and, as (37c) and (37d) show, *belén* may be present or *-da* may be used instead alongside the desiderative clitic *=xup*.
        Such independent occurrences of non-finite verb forms do not seem to count as insubordination for Aikhenvald (2010: 275-284). She does indicate that they share a sense of incompleteness with insubordination. At least as originally non-conventionalized directive strategies

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[8] Still, as one of the reviewers points out, the opposite scenario can probably not be ruled out entirely. *Uy* 'lest' would then result from some reanalysis along the lines of 'I warn you – may you not do that!' becoming 'I warn you so that you don't do it'.

rather than negative imperatives, both phenomena do not explicitly encode the offer of a reason not to act to the addressee and leave it to be inferred. Another phenomenon in our data that fits this description is the abessive (or privative) construction. It has been pointed out before (e.g. Phillips 2020) that a construction with the meaning 'without' is able to turn into SN. In three of our sample languages, however, a negative construction of abessive origin is attested solely in IN and SN displays no A/Fin. Murui in (38) is a case in point.

(38)  Murui (Huitoto, Huitotoan; Brazil, Columbia, Peru; muru1274, huu)
    a.   *ɨi-(ñe-)di-kue*
         swim-NEG-LK-1SG
         'I (don't) swim.'
         (Wojtylak 2017: 430)
    b.   *maka-ø*
         walk-IMP
         'Walk!'
         (Wojtylak 2017: 459)
    c.   *maka-ñe-no*
         walk-NEG-ABE
         'Don't walk!'
         (Wojtylak 2017: 278)
    d.   *maɨɨ-ñe-no*     *bi-tɨ-kue*
         work-NEG-ABE   come-LK-1SG
         'I came without having worked.'
         (Wojtylak 2017: 312)

SN in this language has no A/Fin, as (38a) makes clear. IN does, however. Imperatives can be expressed by a range of suffixes (e.g. *-kai* for immediate compliance; Wojtylak 2017: 462). The one for a "basic" imperative of a disyllabic verb is *-ø*, like in (38b). The negative imperative (38c) has the LV taking the negative suffix *-ñe* and the abessive marker *-no*. The comparison with (38d) shows that this construction is normally reserved for syntactically dependent contexts. It also suggests a literal translation of (38c) as 'without walking' – which, crucially here, contains no overt expression of negative directivity.

    An important question to answer now is why these processes take place. The motivations for the developments are clearly varied. Verbs originally meaning 'leave' or something similar occur in constructions that are, initially at least, analytical/compositional and can be argued to highlight the negative character of the directive act. A free-standing non-finite verb form often – though not necessarily – serves at first to indicate non-negotiable and instant compliance. Its presentation of the event as a "given" contributes to the effect and so does the likely brevity of the utterance, iconically echoing immediacy (Aikhenvald 2010: 283). Insubordinated constructions, by contrast, are frequently – though, again, not always – used originally to express a less forceful directive.[9] Leaving the speech act implicit, they can be regarded as implementations of Brown & Levinson's (1987: 227) politeness strategy "be incomplete, use ellipsis"

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[9] Our aside "though, again, not always" is crucial, as one of the reviewers emphasizes. We do not wish to imply that insubordinated constructions as directives are necessarily polite. The cross-linguistic surveys by Evans (2007: 387-393) and Aikhenvald (2010: 275-280) do suggest that they tend to function in this way but, as Evans (2007: 393) adds, it would be an "oversimplification" to claim that they are polite by their very nature (cf. *if you (dare) open that door...!*). D'Hertefelt (2018: 188) makes a similar point for Germanic and highlights "the contribution of the subordinate marker to the semantics and pragmatics of insubordinate constructions": conditionals, for instance, might be more likely to produce polite directives than complementizers because they present the addressee with two possible scenarios, i.e. 'if so' and 'if not'.

(Aikhenvald 2010: 277). A good illustration of the phenomenon is from Chinantec Lealao.

(39)  Chinantec Lealao (Chinantecan, Oto-Manguean; Mexico; leal1235, cle)
    a.    *ŋia$^M$*                    *la$^M$*
        come.2SG.COMPL    here
        'Come here (now!).'
        (Rupp 1989: 93)
    b.    *ʔi$^M$*   *ha$^{LM}$i*
        REL    come.2SG.PROG
        'Come (sometime)!'
        (Rupp 1989: 93)
    c.    *ʔa$^L$-ʔi$^M$*     *ki$^M$i*
        NEG-REL    dream.2SG.PROG
        'Don't dream!'
        (Rupp 1989: 94)

The subordinate construction found in the negative imperative in (38c) actually has a positive equivalent – in (39b) – and it functions as a polite alternative to the imperative construction in (39a).

A perhaps even more important question is why such constructions seem to conventionalize more often into negative imperatives than into imperatives, giving rise to A/Fin. Languages do employ independent non-finite verb forms in positive contexts as well, after all (e.g. Dutch infinitival *zwijgen!* 'shut up!'; Van Olmen 2010). As (39b) shows, insubordination too can produce positive directive strategies (e.g. requestive *if you could open the door* in English). A possible explanation is that negative imperatives are generally much less stable diachronically than imperatives. The latter are often archaic forms "inherited, unchanged, from the protolanguage" (Aikhenvald 2010: 339). The verb stem plus the final vowel *-a* in Bantu is a case in point: it can still be found in 97% of the languages in the family (Devos & Van Olmen 2013: 10). The former appear to undergo changes and/or be replaced much more quickly. The result in Bantu is substantial synchronic variation within the family (Devos & Van Olmen 2013: 24-43). Similarly, in their diachronic study of negative imperatives in Egyptian, Grossman & Polis (2014: 42) contrast "the frequent innovation of prohibitive … constructions" with "the relative stability of the affirmative imperative system" (see also Van Olmen 2010: 495-496 on Latin).

The reasons for this instability are probably complex. It has been suggested, for instance, that languages may develop a novel negative imperative with a preverbal negator to satisfy the need for negative first. This principle would be even more powerful in directives than in assertives. Horn (2001: 450) formulates it as follows: "While a violation of Neg First by the post-verbal negation in [declaratives] … might result in temporary confusion, a similar transgression in the context of [imperatives] … would literally constitute a matter of life and death (*Kill him – oops – not!*)." Another potential reason is described in Grossman & Polis (2014). For some of the changes in Egyptian, they present the idea of a process reminiscent of a Jespersen Cycle: an existing negative imperative construction is felt to be insufficiently strong, a more emphatic one is introduced and this innovation may replace the older construction (and weaken in turn). A partially opposing view is expressed by Devos & Van Olmen (2013). They agree with Evans (2007: 393) that "the face-threatening nature of requests and commands places strong pressures on the language system to come up with new variants whose pragmatic force is freed from the history of existing formulas". Additionally, they hypothesize that negative imperatives may be under more such pressure than imperatives. They are both normally a threat to the addressee's negative face, since trying to get them (not) to do something restricts their freedom of action. Unlike imperatives, though, negative imperatives also tend to threaten the addressee's positive

face, i.e. their desire to be appreciated or approved of: telling someone to refrain from doing something "amounts to an unfavorable evaluation of the hearer's expected behavior" and telling someone to stop doing something "comes down to a direct rejection of his or her behavior" (Devos & Van Olmen 2013: 44).

To replace a negative imperative, for whichever of the reasons mentioned in the previous paragraph, a language is bound to look at the directive strategies that it has at its disposal. The strategy that meets its needs the best is then likely to increase in frequency and may eventually conventionalize as a new dedicated construction. If this strategy happens to involve a less finite or syntactically dependent verb, the outcome will be an A/Fin relative to the more stable imperative. In other words, it is perhaps better to avoid proposing any comprehensive explanation for A/Fin in IN – like Miestamo (2005) with stativity as a motivation for its occurrence in SN – and to regard it simply as a possible by-product of the diachronic differences between imperatives and negative imperatives. This view is, in fact, in line with the conclusion of an earlier study of (ir)realis asymmetry in IN. Van der Auwera & Devos (2012: 182) argue that, rather than some overall motivation, "the explanation [for the presence/absence of irrealis marking in imperatives and/or negative imperatives] … must be that imperatives and prohibitives are the results of partially independent diachronies" (see also footnote 1 on irrealis in SN).

### 4.3.3 A/Fin in SN only

As mentioned before, A/Fin in SN is often the result of diachronic processes that see existential negation (Veselinova 2014, 2016) or nominal negation (e.g. Phillips 2020) being used for verbal negation. There are various ways in which such an extension may occur. Some could be said to be motivated by SN's stativity (Miestamo 2005: 221-224). If a negated event like 'she didn't sing' is presented with a negative existential and a nominalized verb form, i.e. as 'there was no her singing', or with an abessive marker, i.e. as 'she was without singing', the event's state of non-existence or absence is arguably highlighted. However, other mechanisms that still produce A/Fin in SN may have little to do with its stative character or could be explained in a different way too.[10] Veselinova (2014: 1336), for example, shows that the Bulgarian SN of the future tense, which involves negative existential *njama* 'not have' and the LV in a subordinate clause, is simply inherited from a 'have'-future construction in Old Church Slavonic that was particularly frequent in the negative. Veselinova (2014: 1357) also argues that negative existentials regularly expand into SN as "higher verbs in a complex clause structure", where they essentially mean 'it is not the case that' and the LV occurs in the subordinate clause. One might wonder whether such A/Fin constructions really manifest SN's stativity or whether they just reflect the fact that the negation has scope over the whole proposition. Another common feature of such extensions, irrespective of origin or motivation, is that they remain limited to specific SN contexts (e.g. the future in Bulgarian) and/or alternate with an earlier SN construction in some way that stays remarkably stable over time (Veselinova 2016: 158). As a result, there is often variation with regard to A/Fin in SN that has no counterpart in IN.

In ten of the 17 languages displaying A/Fin solely in SN, its absence from IN lies in the latter domain's symmetry, in two non-mutually exclusive ways. First, a language's IN may be symmetric with an SN construction that does not exhibit A/Fin. Nivkh in (40) is a case in point. It has a number of SN constructions. One of them is a NegVerb one (Miestano 2005: 86) and a negative existential cycle involving the verb *qʰaw-* 'not exist' is responsible for it (Gruzdeva & Fedotov forthc.). Another, less frequent one features *-ǵavr*. This marker is negative

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[10] We should emphasize, for the sake of clarity, that extensions into SN of other domains of negation do not always give rise to A/Fin. Negative existentials, for instance, also often seem to end up in SN without A/Fin as a result of their development into proposition-external 'no' and their subsequent reanalysis as a proposition-internal negator (Veselinova 2016: 155-156).

existential in origin too but, synchronically, it functions as a negative suffix and the construction is symmetric, as (40a) and (40b) make clear (Gruzdeva & Fedotov forthc.). It is the latter pattern – more or less restricted to the future in declaratives – that is followed in IN, as (40c) and (40d) show.

(40)  Nivkh (Nivkh; Russia; nivk1234, niv)
    a.   *if    pʰry-d'*
          3SG  come-FUT-IND
          'He will come.'
          (Miestamo 2005: 86)
    b.   *if    phry-ny-ˀgavr-d'*
          3SG  come-FUT-NEG-IND
          'He will not come.'
          (Miestamo 2005: 326)
    c.   *ra-ja*
          drink-2SG.IMP
          'Go!'
          (Gruzdeva 1998: 34)
    d.   *ra-ˀgavr-ja*
          drink-NEG-2SG.IMP
          'Don't drink!'
          (Gruzdeva 1998: 34)

Second, IN may not have A/Fin because negative imperatives are symmetric with imperatives. Epena Pedee can serve as an example. As argued by Miestamo (2005: 274-275), SN of the past in this language involves a Neg-LV construction and the past and future are not negated symmetrically either, since the tense suffixes are suppressed in the negative (Miestamo 2005: 274-275). Consider its IN in (41), though: (negative) imperatives carry the same imperative suffixes and differ only in the presence of the prohibitive marker *-náa*.

(41)  Epena Pedee (Choco; Colombia; epen1239, sja)
    a.   *āyáa    wã̀-tɨ*
          aside   go-2PL.IMP
          'Y'all move aside!'
          (Harms 1994: 116)
    b.   *pháta   kʰo-náa-tɨ*
          plantain eat-PROH-2PL.IMP
          'Don't y'all eat plantains!'
          (Harms 1994: 136)

It is again possible (see Section 4.3.1) that language-internal analogy and economy are factors in the coherence that IN exhibits with part of SN in a language like Nivkh or the coherence that a language like Epena Pedee displays within IN. However, more data about *-ˀgavr*'s expansion and *-náa*'s diachrony is needed to determine whether they indeed played a role.

    Another reason why languages may have A/Fin in SN only is the manifestation of a different form of asymmetry in IN. In this type, negative imperatives are asymmetric with imperatives because their respective markers belong to the same mood paradigm (cf. Miestamo 2011: 2, 12-13 on polar interrogative marking as part of mood). Awa Pit is one of five languages in our sample where such an asymmetry is attested. It has a range of SN constructions, some of which exhibit A/Fin (see Section 4.1.1.1) and might be the result of a negative existential cycle

(see Krasnoukhova & van der Auwera 2019: 455 on *shi*). Its (negative) imperative suffixes, including first person object imperative *-zha* in (42a) and second person plural negative imperative *-man* in (42b), form a set of markers that all occupy the same slot on the verb. The full second person paradigm is given in (42c) and it can perhaps even be extended to first person imperative suffixes such as *-pay* 'let's both …' (Curnow 1997: 248-250) and other "mutually exclusive" (Curnow 1997: 239) markers for moods like the potential and the obligative.

(42)  Awa Pit (Barbacoan; Colombia, Ecuador; awac1239, kwi)
     a.  *an       kwin-zha*
         more     give-1.OBJ.2.IMP
         'Give me more!'
         (Curnow 1997: 245)
     b.  *suna=kana       ki-man*
         DIST.DEM=like     do-2PL.PROH
         'Don't do (like) that!'
         (Curnow 1997: 247)
     c.

|       | POS      | NEG    |
|-------|----------|--------|
| SG    | *-ti*    | *-mun* |
| PL    | *-tayn*  | *-man* |
| 1.OBJ | *-zha*   | /      |
| POL   | *-n(a)ka*| /      |

         (Curnow 1997: 243-247)

In languages like Awa Pit, SN involves a separate exponent of negation whereas, in IN, the negative is arguably encoded as simply one of the options/variants within a mood paradigm dedicated to expressing directivity, on a par with the positive.

In the remaining languages with A/Fin in SN only, the negative imperative shares little to no resemblance to the imperative or any SN construction. The explanation probably lies in other analogies or in its independent diachrony. For most of our sample languages, the origin of the negative imperative is hard to determine without checking historical evidence or related languages. We do have the information, for instance, for Japanese. It has some A/Fin in SN (Miestamo 2005: 294). Its plain imperative is expressed through the suffix *-e* for consonant-root verb, as in (43a). Its negative imperative consists of the prohibitive marker *na* and the verb in its non-past form, as in (43b).

(43)  Japanese (Japonic; Japan; nucl1643, jpn)
     a.  *kak-e*
         write-IMP
         'Write!'
         (Jarkey 2017: 174)
     b.  *kak-u       na*
         write-NPST  PROH
         'Don't write!'
         (Jarkey 2017: 174)

According to Jarkey (2017: 175), the idiosyncratic nature of (43b) results from the grammaticalization of a construction with third-person-imperative-like semantics: "This particle [*na*] is a reduced form of the Classical Japanese *na-kar-e*, itself a reduction from *na-ku ar-e* (neg-INFIN be-IMP) 'let there not be'". IN in Japanese may, in other words, have involved A/Fin originally but it has been obscured by the further development of *na* into a particle.

4.3.4 Reverse A/Fin

As discussed in Section 4.3.2, processes like insubordination and the free-standing use of non-finite forms are not unique to negative directives. For Northern Paiute, for one, Thornes (2017: 155-156) observes that nominalized clauses such as (44) can be employed as positive directives and makes no mention of the option for negative ones. Their degree of specialization is unclear, however, since "nominalized clauses pervade Northern Paiute grammar as a means of packaging information in running discourse" and are said to fulfill the specific speech act of "offering advice" (Thornes 2017: 55).

(44)   Northern Paiute (Numic, Uto-Aztecan; United States of America; nort2954, pao)
       *i=tɨ-buni-ma*
       2SG=ANTIP-see-NMLZ
       'Wake up!'
       (Thornes 2017: 156)

Despite the respective diachronic (in)stability of (negative) imperatives, it is not inconceivable that a strategy like (44) grammaticalizes into a proper imperative. If the negative imperative in such a language did not exhibit any loss of finiteness, we would have a case of "reverse" A/Fin. There is little actual evidence of this pattern in our sample, though. The only concrete instance of reverse A/Fin comes from Japanese. Unlike its negative imperative in (43b), the imperative in (43a) has a polite alternative in which, as (45) shows, the LV appears as an infinitive.

(45)   Japanese (Japonic; Japan; nucl1643, jpn)
       (o)-kak-i-nasai
       HON-write-INF-POL.IMP
       'Write (it)!'
       (Jarkey 2017: 175)

According to Jarkey (2017: 175), the construction is "modelled on the productive subject honorific pattern – *o-V-INFIN-ni.nar-u* (HON-V-INFIN-S[UBJ.]HON-NPAST) … – which has a variant form that utilizes the subject honorific verb *nasur-u* 'do' when it occurs with verbal nouns of Sino-Japanese origin". The suffix *-nasai* in (45) derives from the imperative of this verb.

5     Conclusion

Our study of A/Spe shows that most languages have specialized constructions for the imperative and the negative imperative. They can therefore be regarded perhaps not as universal sentence types but definitely as near-universal ones. The results also suggest that no implicational relations exist between the absence of one or the other in a language. This fact may be taken as indicating some level of mutual independence between imperatives and negative imperatives as sentence types. Such a conclusion would tie in with much earlier research – as well as with our findings about A/Fin in IN – revealing the substantial differences between the two, even in languages that have both.
       Our examination of A/Fin shows that, contrary to earlier research, A/Fin is as widespread in IN as it is in SN, suggesting that the illocutionary dynamicity of (negative) imperatives has no impact. The findings also indicate that A/Fin's presence in SN has no predictive power for its presence in IN or vice versa and that the latter domain has comparatively more cases of the NegVerb subtype than the former. These facts may be seen as evidence that A/Fin in SN and

A/Fin in IN are relatively unrelated phenomena.

Our qualitative analysis reveals that languages can, of course, have similar negative constructions with A/Fin in SN and IN. This coherence/uniformity across domains could be argued to stem from language-internal analogy and be motivated by economy. However, comparative and/or historical data is needed to determine whether these factors indeed play a role. Moreover, the fact that, even in such languages, IN still tends to differ from SN in some way (e.g. a distinct FE) indicates that other forces are at work too. A/Fin may also be limited to IN, where our study suggests it often results from processes like insubordination and LVs meaning 'leave' developing into prohibitive auxiliaries. The last one in particular casts further doubt on the role of illocutionary dynamicity: a form that explicitly expresses this dynamicity grammaticalizes into a negative auxiliary and actually generates A/Fin. A likely reason why the products of such processes turn into full-fledged negative imperatives is that, diachronically, the negative imperative is less stable than the imperative. This instability is probably due to a range of competing factors such as a stronger need for preverbal negation, a need to reinforce negation and a need for more polite alternatives. Our investigation of languages with A/Fin only in SN suggests that it often arises as (one of the options) in SN as a result of processes like the negative existential cycle. One reason why, in such languages, IN does not "participate" in the SN system is that negative imperatives may be regarded/encoded as one of the variants – next to imperatives – within a specialized paradigm for directivity.

To conclude, our study confirms one of the observations used in earlier research to argue for stativity as an overarching motivation for A/Fin in SN, i.e. the typically stative character of any new FE in SN. However, SN constructions featuring such FEs may arise in a way that has nothing to do with stativity (e.g. the FE is inherited from an older construction) and could also easily be explained differently (e.g. negation has scope over the entire proposition). One might therefore wonder to what extent stativity actually accounts for A/Fin in SN and perhaps even whether SN is truly stative. For instance, cognitively, a negated telic event like 'they didn't eat the salad' may only profile the absence of an event but it would still activate a dynamic event.[11] Moreover, our results for IN show not only that a related appeal to illocutionary dynamicity is not backed up by the facts but also that those facts about A/Fin are probably best explained by considering a variety of possibly competing and primarily diachronic factors. Previous research into (ir)realis asymmetry in IN appears to point in a similar direction. It remains to be seen whether the same can be said of other potential asymmetries in IN as well as SN.

Abbreviations (not listed in the Leipzig Glossing Rules)

| | |
|---|---|
| 1, 2, 3 | first, second, third person |
| A/Fin | finiteness asymmetry |
| A/Spe | specialization asymmetry |
| ABE | abessive |
| ABL | ablative |
| ACC | accusative |
| ADM | admonitive |
| ANTIP | antipassive |
| AOR | aorist |
| AUX | auxiliary |
| COM | comitative |
| COMP | complementizer |
| COMPL | completive |

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[11] As pointed out to us by one of the reviewers.

| | |
|---|---|
| CONC | concomitant |
| COND | conditional |
| CONN | connector |
| CONNEG | connegative |
| COP | copula |
| CVB | converb |
| DEF | definite |
| DEM | demonstrative |
| DESID | desiderative |
| DIST | distal |
| DU | dual |
| F | feminine |
| FE | finite element |
| FUT | future |
| HON | honorific |
| HYP | hypothetical |
| IMP | imperative |
| IN | imperative negation |
| INAN | inanimate |
| INCH | inchoative |
| IND | indicative |
| INF | infinitive |
| IPFV | imperfective |
| IRR | irrealis |
| LK | linker |
| LOC | locative |
| LV | lexical verb |
| M | masculine |
| MIN | minimal |
| MOD | modal |
| N | neuter |
| NEG | negative |
| Neg-Cl | finiteness asymmetry where the negator is placed in relation to the entire clause |
| Neg-FE | finiteness asymmetry where the negator is placed in relation to the finite element |
| Neg-LV | finiteness asymmetry where the negator is placed in relation to the lexical verb |
| NegVerb | finiteness asymmetry involving a negative verb |
| NLCT | non-locutor |
| NMLZ | nominalizer |
| NOM | nominative |
| NPFV | non-perfective |
| NPST | non-past |
| OBJ | object |
| PERM | permissive |
| PFV | perfective |
| PL | plural |
| POL | polite |
| POS | positive |
| POSS | possessive |
| PROG | progressive |
| PROH | prohibitive |

| | |
|---|---|
| PRS | present |
| PST | past |
| PTCP | participle |
| REAL | realis |
| REL | relative |
| SBJV | subjunctive |
| SG | singular |
| SN | standard negation |
| SOFT | soft |
| TOP | topic |
| TR | transitive |

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