

Irrealis in positive imperatives and in prohibitives¹

Johan van der Auwera
University of Antwerp

& Maud Devos
Africa Museum, Tervuren

Abstract

Against a general background of the question of what constitutes irrealis, the paper investigates whether there is any sense in which prohibitives (negative imperatives) are more irrealis than positive imperatives. The study operationalizes this issue in three ways on a sample of 179 languages and parameters are argued to include whether or not the irrealis marking is obligatory and whether or not the irrealis marking is added to dedicated imperative or prohibitive marking or instead replaces it.

1. Mapping irrealis and realis

We take it that irrealis encodes that some state of affairs is not real or only possible or at least that the speaker does not express his commitment to the reality of the state of affairs. This definition is of course very general but most linguists would, we think, agree to it—witness the overview studies documenting this sense of the term (Elliott 2000; De Haan, this issue, Mauri & Sansò, this issue). True, some linguists would prefer other terms, like ‘subjunctive’ for ‘irrealis’—see van der Auwera and Schalley 2004). More alarming is that some linguists, most famously probably Bybee (1998: 269) (and earlier Bybee et al. 1994: 236-240) find the definition much too general to be of real use. The generality is due to the fact that the languages for which the notion has any relevance have been found to mark different sets of constructions as irrealis. In some languages irrealis encodes all or some negative sentences, all or some conditional constructions or perhaps only (some of) the counterfactual ones and perhaps only the protases or only the apodoses, then also questions, generic or habitual propositions, future propositions, past propositions, wishes, positive imperatives, prohibitives (i.e. negative imperatives), and certain types of subordinate propositions. The papers mentioned adequately document the cross-linguistic variation found here.

The huge degree of cross-linguistic variation is no reason for despair, however. Or at least, before one despairs, one should try to account for the highly variable multifunctionality of irrealis marking with the semantic map approach, a task pleaded for by van der Auwera & Schalley (2004). Meanwhile, De Haan (2009) has taken on the task. But it is interesting to see that De Haan has not shaken off all despair. Because ‘every possible category can be either realis or irrealis’, De Haan is content to map the polyfunctionality of marking in the realm of reality status without having a need to call any one polyfunctionality chain ‘realis’ or ‘irrealis’ or any category a ‘typical’ realis or irrealis category. We will not go that far. Basically, we remain to be convinced on his starting point. We agree that most categories can be either realis or irrealis, but not quite all. The one category for which we haven’t seen a convincing case for irrealis coding is that of the main clause affirmative declarative referring to the present time sphere. This seems to be the one typical realis category, out of reach of irrealis marking. We agree that it is possible that there is no one typical irrealis category, but instead rather many, and not one being most typical, and that the two notions are thus not symmetric.

¹ This work was supported by the Belgian Federal Grant P6/44 (within the program of interuniversity attraction poles). Special thanks are due to Caterina Mauri (Pavia) and Andrea Sansò (Como) for organizing the Realisness workshop on the occasion of the 41st Annual Conference of the Societas Linguistica Europaea and to the critical participants.

It is telling to notice that the one page on the semantics of realis contrasts with the ten pages on the semantics of irrealis in Elliott (2000). But the typicality of irrealis uses and the degree of their typicality is an empirical question. We would not be surprised to find out, for instance, that the counterfactual conditional is a much more typical irrealis category than the hypothetical conditional.

This paper addresses one aspect of this empirical problem. We know that both positive imperatives and prohibitives can receive irrealis coding: in some languages both can or have to be marked as irrealis, in some languages only the positive imperatives, and in some languages only the prohibitives. Is there any sense in which either the positive imperative or the prohibitive is the more typical irrealis category?

The above question is not a neutral question. On the one hand, we know that languages sometimes encode negatives as irrealis and some also positive imperatives. Prohibitives are both negative and imperative. So if there is a reason, be it a semantic synchronic one or a diachronic one, why a language encodes both negatives and positive imperatives as irrealis, wouldn't one expect prohibitives to have a double reason for being encoded as irrealis (or a double chance)? On the other hand, we also know that prohibitives are most often not composed of the ordinary positive imperative and the ordinary declarative negation (van der Auwera et al. 2005, van der Auwera 2006). In that case they are constructions with a grammaticalization trajectory partially or completely different from that of positive imperatives and of ordinary negatives. They might of course still be irrealis, but if they completely or partially lack the ordinary imperative and negative input they might lack the latter's potential irrealis marking.

In section 2, we will operationalize the question whether prohibitives are more typical irrealis categories than positive imperatives and we will end up with three more specific questions. Sections 3 to 5 will provide the answers.

2. Operationalization

2.1. What counts as irrealis marking?

A positive imperative or prohibitive construction may be marked with a dedicated imperative or prohibitive marker. This is illustrated with Maale in (1).

- (1) Maale (Omotic, Ethiopia, Amha 2001: 126, 128)²
- a. ʃaʃk-é
 run-IMP.2SG
 ‘Run !’
 - b. ʃaʃk-íppo
 run-PROH.2SG
 ‘Don’t run!’

To call these positive imperative and prohibitive markers ‘irrealis’ is not very useful. Of course, their meaning does concern a state of affairs that is not real, but this is simply part of the meaning of the categories ‘imperative’ and ‘prohibitive’. To say that an imperative or prohibitive construction uses irrealis marking, this must mean either that the language

² For each example, we mention the genus and the location, as described in Haspelmath et al (2005). ‘-’ instead of a page reference means that we have made up an example ourselves, on the basis of the grammatical description. The glosses are adapted to our analysis.

employs a general irrealis marker either as a component of dedicated positive imperative or prohibitive marking or instead of it. In the latter case the imperative or prohibitive reading is just one of the readings of the more general irrealis marking. The first case is illustrated with Wintu in (2).

- (2) Wintu (Wintuan, USA, Pitkin 1984: -, 122, 80)
- a. hara`-da
go.R-1SG
'I am going.'
 - b. ʔelew-da har-mina
NEG-1SG go.IRR-NEG
'I am not going.'
 - c. Har!
go.IRR
'Go!'

Wintu verbs have various stems. One of them is used in negative statements, as in (2b), and in positive imperatives, as in (2c). We propose to call it the 'irrealis' stem. There certainly is no point in calling it an 'imperative stem' (except for heuristic reasons³), for its use in (2b) is not imperative, nor should one call it a 'negative stem', for it is not negative in (2c). Note that though (2c) uses the general irrealis marking, the construction as such is not ambiguous: it can only be imperative.

The second case is illustrated with Kera in (3).

- (3) Kera (East Chadic, Chad, Ebert 1979: 91)
- aʃ dee-la
2PL go-IRR
'May you go!' or 'Go (pl)!'

The irrealis marker is called 'Optative' by the grammarian, and as the term suggests that is one of its uses. We find it in (3), but (3) can also be interpreted as an imperative. At least for the second person plural⁴ the language does not distinguish between the expression of a wish and that of a command. It might well be that the wish meaning is older and from that point of view there is a case for following the grammarian and calling the form 'Optative'. (cp. van der Auwera & Schalley 2004, Mauri & Sansò, this issue). However, synchronically it is possible that the imperative use is the more prominent one, i.e., the more frequent one. And there are yet other uses, e.g., in adverbial purpose clauses and after a modal predicate like 'necessary' and 'had better' (Ebert 1979: 92). It is possible therefore to analyze the *-la* marker as a polyfunctional irrealis marker, just like the Wintu stem. Its uses are a little different but that is of course what is expected of irrealis markers crosslinguistically, and more importantly, different from the Wintu construction, the Kera construction as a whole is polyfunctional.

In the cases of Wintu and Kera, the illustrated positive imperatives have to be irrealis. However, it is possible for a language to have two strategies, one that is irrealis and another one that is not. (4) illustrates this with the prohibitive in Hare Slave.

³ The grammarian Pitkin does call it the 'imperative' stem, because, it seems, one can find it through eliciting imperatives: "In response to commands 'you sing!' or 'sing!' the imperative stem /ča-wu/ is volunteered" (Pitkin 1984: 64).

⁴ The second singular is a little different in that the subject pronoun is optional for the command, yet necessary for the wish (Ebert 1979: 91).

(4) Hare Slave (Athapaskan, Canada, Rice 1989: 1109, 1110)

- a. ʔehdíní ʔiyɛ hahʔá
 PROH meat eat.IMPF.2PL
 ‘Don’t eat the meat!’
- b. ʔelad ewoʔl’éle
 boat paint.IRR.2SG.NEG
 ‘Don’t paint the boat!’ or ‘I wish/hope that you don’t paint the boat.’

What we gloss as IRR in (4b) is an Optative for the grammarian, like what we saw in the description of Kera, and again, the marker has other uses besides the expression of wishes and commands (only negative ones, though), all having to do with unrealized actions (Rice 1989: 1118-1119) and we feel authorized to speak about ‘irrealis’ marking. But the point of the example is that Hare Slave has another prohibitive strategy. In this study we will consider both instances of obligatory and of optional irrealis marking.

What kind of polyfunctionality counts as an irrealis polyfunctionality? The mere fact that a positive imperative or prohibitive employs a polyfunctional marker is not sufficient. Consider the prohibitive of Comaltepec Chinantec in (5).

(5) Comaltepec Chinantec (Chinantecan, Mexico, Anderson 1989: 91)

- Ha^L-hiú:^M-ʔ lú^{LM}!
 NEG-blow.PROGR-2 instrument
 ‘You are not playing an instrument.’ or ‘Don’t play an instrument!’

Like Kera, Comaltepec Chinantec lacks a dedicated imperative and uses a category that is historically something else and synchronically vague. The non-imperative interpretation of (5) is that of an indicative progressive, which is not an irrealis category. On the contrary, it is a realis category. So just like positive imperatives and prohibitives may be coded as irrealis, they may be coded as realis. The details of realis coding will not be dealt with in this study, but it is, of course, important to be able to distinguish between irrealis and realis coding. The decision is usually straightforward and of the type illustrated with the Wintu, Kera, Hare Slave and Comaltepec Chinantec, but the one case that is problematic is when the marker has two uses: (i) positive imperative or prohibitive, and (ii) future, either positive or negative. Consider the positive imperative in Pech and the prohibitive in Kiowa.

(6) Pech (Paya, Honduras, Holt 1999: 56)

- Ašà-h-úh
 eat-FUT-2SG
 ‘Eat!’ or ‘You will eat!’

(7) Kiowa (Kiowa-Tamooan, USA, Watkins 1984: 169, 172)

- a. èm-á
 2SG-come.IMP.IMP
 ‘Come here’
- b. pòy t^hàlí tq·bót bódō·-q̣·-t’ò
 PROH boy horn 2PL>3SG-give-IRR
 ‘Don’t give the horn to the boy!’ or ‘You will not give the horn to the boy.’

Both constructions are actually vague, the relevant affixes are called ‘future’ by the grammarians, and the constructions can be indeed also be read as future. The future is, of course, a notoriously difficult category when it comes to the realis/irrealis distinction (see also De Haan, this issue). In this debate, we will let ourselves be guided by the grammarians of the languages. From this point of view, the contrast between Pech and Kiowa is interesting. Though the grammarian of Kiowa calls *-tò* a future affix, it is paraphrased as follows: “The underlying sense of the future suffix is ‘potential’, the potential events being relatively more or less likely to be realized in the opinion of the speaker” (Watkins 1984: 171) and he then exemplifies this with a whole range of uses, including even the counterfactual use, illustrated in (7c).

- (7) Kiowa (Watkins 1984: 171)
- c. mágyá à-bá-t’-t’ò
 might.but.not 1SG-go-IRR
 ‘(I thought) I might go (but I didn’t).’

The situation is different in Pech. The language has different future markers (as well as different past markers). The one shown in (6) is described as conveying the immediate future. There is also a more general future, with a different suffix, and there is a so-called ‘potential’, which adds a special suffix to the general future suffix. The future marker that doubles up for imperatives is not the one that can combine with a special affix to yield a potentiality reading. We will therefore consider the ‘immediate future’ to be one that is anchored in the present, not potential, not realis, and as a result we will take the future *cum* imperative polyfunctionality to be an instance of shared realis coding.

2.2. What counts as a positive imperative and a prohibitive?

It is not always easy to decide what counts as a positive imperative or a prohibitive. Consider the following 3 pairs.

- (8) a. Open the window.
 b. Don’t open the window.
- (9) a. You will open the window.
 b. You will not open the window.
- (10) a. You must open the window.
 b. You mustn’t open the window.

The constructions in (8) are dedicated positive imperative and prohibitive constructions. In this paper such constructions will be considered, unless the grammar indicates that they are only used for a marginal set of verbs. But what about the constructions in (9) and (10), in languages like English that also have the dedicated constructions? It is clear that such constructions may have exactly the same effect as dedicated positive imperative and prohibitive constructions. One could call them ‘indirect’ constructions and it seems uncontroversial to assume that every language possesses at least some kinds of indirect constructions for conveying orders and prohibitions. In this paper, we will include those indirect constructions that the grammar indicates to have been strongly conventionalized for

the job of issuing orders and prohibitions. So we will study not just any indirect strategy that will, in the given context, convey the meaning of an order or a prohibition, but only those that have acquired a degree of context-independence and frequency. It goes without saying that decisions on what to include and what not to include are often difficult, and some of our decisions are certainly mistaken.

We also have to mention a strategic limitation. So far all the examples have shown second person imperatives. Languages may have imperatives for first and third persons too, though one may prefer to give them separate labels (like ‘hortative’ or ‘jussive’). It is uncontroversial to say that the 2nd person constructions are the typical imperatives (see van der Auwera et al. 2004, Schalley 2008). This paper is restricted to 2nd person imperatives. The non-2nd person imperatives are no less interesting, and one may expect them to show more irrealis constructions, for non-second imperatives are often less dedicated and thus sharing markers with non-imperatives, but these issues would take us too far (but see Schalley 2008 and Mauri & Sansò, this issue).

Finally, for the sake of brevity, we take the terminological decision to henceforth drop the adjective ‘positive’ in ‘positive imperative’.

2.3. The sample

The sample we will use is a version of the so-called ‘restrictive’ sample of 179 languages used in Miestamo (2005). The principle guiding this sample is the following. One wants to sample one language for each of the genera defined in Dryer (2000) and one evaluates one’s success in this attempt relative to essentially⁵ 6 macro areas, viz. Africa, Eurasia, Southeast Asia & Oceania, Australia & New Guinea, North-America, South-America. It turns out that Australia & New Guinea has the lowest success rate, viz. 43,2 %, and in order not to overrepresent the other areas each of these will also be covered for only 43,2 % of their genera. The result is the sample of 179 languages. It is represented in Appendix 1. Our ‘restricted sample’ is not quite identical to the one found in Miestamo (2005). The latter served the study of standard negation. If the information that was available for imperatives and prohibitives for any one of Miestamo’s languages proved insufficient, this language was replaced by a better documented language, ideally out of the same genus. This way our sample differs from the Miestamo sample with respect to 11 languages. In some cases the description of imperatives and prohibitives was still not as good as one would hope for, a fate that is not unusual for typological work based on larger samples. And, not unusual again, we can only hope that the mistakes that this typology will inherit from the individual descriptions will not distort the general picture too much.

2.4. Three questions

The question whether or not prohibitives will trigger more irrealis than imperatives will be tackled as follows. First we try to find out, for each language of the sample, what the prohibitive and the imperative look like and we count the number of languages that show irrealis marking in both constructions. Then either there will be more languages with irrealis marking in prohibitives than in imperatives or not. In case there are indeed more languages with irrealis making in prohibitives than in imperatives, we will ask a further question: does for any language the appearance of irrealis marking in the imperative (the construction that is

⁵ The hedge is due to the inclusion of creoles: they do not, of course, define a macro area. See Miestamo (2005: 36-37) on the special status of creoles for sampling purposes.

less prone to irrealis marking) imply the appearance of irrealis marking in prohibitives (the better host)? The answer will be either positive or negative. In case it is negative, a third question will ensue: does the appearance of irrealis marking in imperatives at least facilitate (make more likely) the appearance of irrealis marking in prohibitives?

3. Do languages have more IRR marking in prohibitives than in imperatives?

Table 1 documents the use of irrealis marking in both imperatives and prohibitives. It lists the number of languages whose imperatives and prohibitives have strategies with irrealis (marked as ‘IRR’) and without (‘nIRR’), languages with only IRR strategies, and languages with only nIRR strategies.

Imperative	Prohibitive	Languages			Examples
		Numbers			
IRR & nIRR	IRR & nIRR	8	14	24	Diola-Fogny, Ebira, Ijo, Armenian, Hindi, Sentani, Amele, Ngiyambaa
	IRR	4			Supyire, Koyraboro Senni, Arapesh, San Juan Atzingo Popoloca
	nIRR	2			Alamblak, Pirahã
IRR	IRR & nIRR	0	5	5	—
	IRR	3			Wintu, Chalcatongo Mixtec, Nadëb
	nIRR	2			Maung, Misantla Totonac
nIRR	IRR & nIRR	3	5	5	Ngiti, Yimas, Hare Slave
	IRR	2			Wardaman, Kiowa
	nIRR	155			Maale, Pech, ...

Table 1: Languages with IRR and/or nIRR strategies for imperatives and prohibitives

Table 1 shows that the large majority of the sample languages (155 languages) do not use any irrealis markers, neither for imperatives nor for prohibitives. Maale (1) illustrates this type: it has both a dedicated imperative and a dedicated prohibitive. Pech (6) is another example: this language has no dedicated imperative or prohibitive makers, but the polyfunctional ones do not show irrealis coding but realis coding. Pech (6) shows how the imperative and the immediate future share their coding; the same is true for the prohibitive and the negative immediate future.⁶

For the study of irrealis marking we can discard the 155 languages that have irrealis neither for imperatives nor for prohibitives. This leaves us with 24 languages. They fall into eight categories, each corresponding to a row in the table. All but one have representatives in the sample. We will now discuss and, when possible, illustrate each category, starting from the top of Table 1.

First, there are three types of languages that allow but do not necessarily involve an irrealis marker in the imperative. The subtype that allows the irrealis in the prohibitive as well, but does not require it, is illustrated with Ebira in (11). Next to a straightforward

⁶ Note also that an even larger majority of languages (166 languages) treat the imperatives and the prohibitives in the same way, in the sense they either both have non-irrealis marking, the 155 languages just alluded too, or both offer an irrealis and a non-irrealis marking (8 languages) or irrealis marking only (3 languages).

imperative and an equally straightforward prohibitive, there is also what the grammarian Adivè calls a ‘subjunctive strategy’, conveying mild commands, wishes, exhortations and modal meanings like ‘should’ and ‘ought’ (Adivè 1989: 89-90).

- (11) Ebira (Nupoid, Nigeria, Adivè 1989: 89, 90, 95, 95)
- a. hú
drink
‘Drink!’
 - b. we hú
IRR.2SG drink
‘Drink!’, ‘May you drink.’ or ‘You should drink.’
 - c. àsù hú
PROH drink
‘Don’t drink!’
 - d. àsù zê ka we hú
PROH IRR IRR IRR.2SG drink
‘Don’t drink!’, ‘May you not drink.’ Or ‘You should not drink.’

The subtype that requires irrealis in the prohibitive but only allows it in the imperative is illustrated with Supyire in (12). The examples show perfective aspect—there are also imperfective forms. The nIRR uses a bare stem, the IRR ‘subjunctive’ strategy, found also in subordinate clauses (Carlson 1994: 421-465, 540-590), adds a special non-declarative 2nd person subject pronoun. In the prohibitive only the IRR strategy is found.

- (12) Supyire (Gur, Mali, Carlson 1994: 369, 522, 524)
- a. pa náhá!
come.PF.IMP.2SG here
‘Come here!’
 - b. ma taha na fyè
2SG.NONDECL follow.PF.IMP.2SG 1SG.NONDECL footprints
e!
in
‘Follow me!’
 - c. Ma hà m̀-bwòn lì nà mé!
2SG.NONDECL PROH FUT-touch it on NEG
‘Don’t touch it!’

The third subtype allows irrealis in the imperative but not in the prohibitive—we illustrate it with Alamblak in (13). The language has a set of irrealis markers. They are obligatory in negative declaratives. In the imperative/prohibitive domain, they are obligatory in the imperative—it is the *t* morpheme in the portmanteau *twa* in (13b)—and impossible in the prohibitive.

- (13) Alamblak (Sepik Hill, Papua New Guinea, Bruce 1984: 212, 140)
- a. nuat wa-ya-n-t
sago.patty IMP-eat-2SG-3SG.F
‘Eat the sago patty!’
 - b. wa-roh-twa-kë
IMP-sit-IRR.FUT-2PL
‘Sit!’

- c. a-yhot-wah-n
 HORT-cough-PROH-2SG
 ‘Don’t cough!’

Then there are the languages that require irrealis marking in the imperative. The subtype that allows but does not require irrealis marking in the prohibitive is not attested. The subtype requiring irrealis marking in both imperatives and prohibitives can be illustrated with Wintu. The irrealis marked imperative was already illustrated in (2c). (14) shows an irrealis marked prohibitive.

- (14) Wintu (Pitkin 1984: 197)
 Be·di hu·mum ba·-mina
 PROH fat eat.IRR-NEG
 ‘Don’t feat any fat!’

The third subtype requires irrealis in the imperative but forbids it in the prohibitive. The illustration comes from Misantra Totonac.⁷

- (15) Misantra Totonac (Totonacan, Mexico, MacKay 1999: 119, 207)
- a. kastáat
 ka-staa-ti
 IRR-sell-2SG
 ‘Sell it!’
- b. ’alastáa
 ala-staa
 NEG-sell.IMPF
 ‘Don’t sell it!’

Finally, we come to the type which forbids irrealis in the imperative but either allows or requires it in the prohibitive. For the first subtype, Hare Slave could be used and its prohibitive was already illustrated in (4). (16) illustrates its imperative, which in fact equals a realis imperfective.

- (16) Hare Slave (Rice 1989: 1109)
- Sets’é ’ekahén̄idi
 1SG.to 2SG.say.thus
 ‘Tell him for me!’ or ‘You tell him for me.’

The subtype requiring irrealis in the prohibitive was illustrated with Kiowa (7).

⁷ The other language in this category is Maung. It is a little special for a number of reasons. First, on a casual survey of the 179 languages, Maung would be the only language that would require irrealis marking in both negative declaratives and imperatives, but not in prohibitives. The latter uses a prohibitive particle *juwunji* followed by a realis form of the verb. Second, the grammarians express surprise at the fact that prohibitives are not irrealis: “A note is needed here on the Imperative Negation, which belongs to the Realis forms. The idea seems to be that if one is told not to do a thing, the situation remains unchanged, and so it is part of the Real’ (Capell and Hinch 1970: 78). Third, the 2nd person irrealis ending *-nji* looks suspiciously like the last part of the prohibitive marker *juwunji*. The grammarians do not decompose this form, but it is not unlikely that *juwunji* was once an irrealis form of a verb, so that at least older Maung could be said to have irrealis in the prohibitive. In this paper we stick to the purely synchronic analysis and consider *juwinji* as a prohibitive particle.

We can now address the question whether languages use more irrealis marking in prohibitives than in imperatives. Table 2 extracts the relevant information out of Table 1. The notion of having irrealis marking is spelled out in three ways: (i) having only irrealis marking, (ii) having irrealis as well as non-irrealis marking, (iii) having irrealis marking as either the only strategy or as one of two strategies, next to non-irrealis marking.

	Imperative	Prohibitive
IRR	5	9
IRR & nIRR	14	11
either IRR & nIRR or IRR	19	20

Table 2: Do languages have more IRR in prohibitives than in imperatives?

The results are the following. It is indeed true that overall the sample languages have more obligatory irrealis marking in prohibitives than in imperatives: 9 languages have irrealis as the only option in prohibitives, and 5 have it as the only option in imperatives. But to have irrealis as one option next to a non-irrealis option, however, the numbers are reversed: 11 for prohibitives and 14 for imperatives. If we put the two groups together, prohibitives score best again, even if only marginally.

We now tabulate the languages once more, this time making a distinction between the Wintu and the Kera type of irrealis marking, i.e., between irrealis constructions that are unambiguously imperative or prohibitive and irrealis constructions that are vague. In Table 3 this subclassification is added: here ‘irr’ means ‘vague irrealis construction’ ‘irrimp’ means ‘irrealis within an imperative construction’, and ‘irrprouh’ means ‘irrealis within a prohibitive construction’. Non-irrealis types are not subclassified. The bracketed numbers in the last column refer to example sentences.

Types		Subtypes of IRR marking		Languages	
Imperative	Prohibitive	Imperative	Prohibitive	Numbers	Examples
IRR & nIRR	IRR & nIRR	irr	irr	2	Armenian, Hindi
			irrproh	3	Diola-Fogny, Ebira (11), Ngiyambaa
		irrimp	irrproh	3	Ijo, Sentani, Amele
	IRR	irr	irrproh	1	Arapesh
		irrimp		3	Supyire (12), Koyraboro Senni, San Juan Atzingo Popoloca
	nIRR	irrimp	—	1	Alamblak (13)
		irr & irrimp	—	1	Pirahã
IRR	IRR & nIRR	—	—	0	
	IRR	irrimp	irrproh	3	Wintu (2, 14), Chalcatongo Mixtec, Nadëb
	nIRR	irr	—	2	Maung, Misantla Totonac (15)
nIRR	IRR & nIRR	—	irr	1	Hare Slave (4, 16)
			irrproh	2	Ngiti, Yimas
	IRR	—	irr	1	Wardaman
			irrproh	1	Kiowa (7)
	nIRR			155	Maale (1), Pech (6), ...

Table 3: Languages with IRR and/or nIRR strategies for imperatives and prohibitives: IRR specified as irr or irrimp/irrproh

To find out whether the difference between irr marking vs. irrimp/irrproh marking is relevant to the question of whether languages have more irrealis in prohibitives than in positive imperatives, we have exported the relevant information out of Table 3 into Tables 4 and 5. Table 6 collapses Tables 4 and 5.

IRR		Imperative	Prohibitive
	irr	2	1
	irrimp/irrproh	3	8
	Σ	5	9

Table 4: Do languages with only IRR marking in their imperatives and prohibitives have irr or irrimp/irrproh marking?

IRR & nIRR		Imperative	Prohibitive
	irr	6	3
	irrimp/irrproh	7	8
	irr or irrimp/irrproh	1	0
	Σ	14	11

Table 5: Do languages with IRR and nIRR marking in their imperatives and prohibitives have marking irr or irrimp/irrproh marking?

either IRR or IRR & nIRR		Imperative	Prohibitive
	irr	8	4
	irrimp/irrprou	10	16
	irr or irrimp/irrprou	1	0
Σ	19	20	

Table 6: Do languages with IRR and nIRR or only IRR marking in their imperatives and prohibitives have irr or irrimp/irrprou marking?

Do these figures shed any light on whether the nature of the irrealis marking makes it more or less likely to appear in either imperatives or prohibitives? The figures are, of course, very low, but one can nevertheless venture a positive answer. Whenever the irrealis marking is added to unambiguous imperatives or prohibitives, the figure for the prohibitives is virtually always higher than for the imperatives (8 vs. 3 in Table 4, 8 vs. 7 in Table 5, 16 vs. 10 in Table 6).⁸ When the irrealis marking yields a vague irrealis, however, we always find it more in imperatives than in prohibitives (2 vs. 1 in Table 4, 6 vs. 3 in Table 5 8 vs. 4 in Table 6). We therefore tentatively conclude that the presence of prohibitive marking triggers irrealis marking, at least more so than the presence of imperative marking does.⁹

The general conclusion is that languages do, to some extent, have more irrealis marking in prohibitives than in imperatives. Two factors are relevant and the first is whether or not the irrealis strategy is obligatory. In case it is, we indeed see languages showing more irrealis marking in prohibitives than in imperatives: this is the information of the first row of Table 2. This preference also shows up in the figures than combine the languages with obligatory and optional irrealis marking (last row of Table 2). The second factor is whether the irrealis yields a vague irrealis construction or one that is explicitly imperative or prohibitive. It is only for the second type of irrealis marking that prohibitives have more irrealis marking than imperatives, at least for languages with obligatory irrealis marking (the contrast between the second and the third row of Table 4) and for languages irrespective of the obligatoriness of the irrealis marking (the contrast between the second and third row of Table 6).

⁸ There is the one language (Pirahā) with 0 for prohibitives and 1 for imperatives. In Table 5 one could add it both to the 6 of irr imperatives and to the 7 of irrimp imperatives. In the latter case the figures for irrealis marking in imperatives and prohibitives would be equal. Otherwise this case does not invalidate the generalizations.

⁹ Tables 4 to 6 also show that languages prefer the unambiguously imperative or prohibitive IRR constructions to the vague IRR constructions: independent of whether the IRR strategy is obligatory or not, it most often concerns IRR marking that is adding to imperative or prohibitive marking. Thus in Table 4 we see 3 for irrimp imperatives vs. 2 for irr imperatives, and 8 for irrprou prohibitives vs. 1 for irr prohibitives. In Table 5 we see 7 for irrimp imperative vs. 6 for irr imperative, and 8 for irrprou prohibitives vs. 3 for irr prohibitives. Table 6, the summary table, has 10 for irrimp imperatives vs. 8 for irr imperatives, and 16 for irrimp prohibitives vs. 4 for irr prohibitives. More interestingly, we see that the difference is strongest for prohibitives. Thus in Table 4 the difference between 8 and 1 (for prohibitives) is bigger than that between 3 and 2 (for imperatives). In Table 5, the difference between 8 and 3 (for prohibitives) is bigger than that between 7 and 6 (for imperatives). Table 6 has the difference between 16 and 4 (for prohibitives) and 10 and 8 (for imperatives). So in the domain of IRR imperatives and prohibitives, the latter more often have explicit prohibitive marking than the former contain explicit imperative marking.

4. If a language has irrealis marking in its imperatives, will it then also have IRR marking in its prohibitive?

In its general format, the answer to the question whether irrealis marking in imperatives implies irrealis marking in prohibitives is known already. It is known to grammarians of individual languages (e.g. Capell and Hinch 1970: 78 (see note 7)) and to the typologist Elliott (2000: 77)¹⁰. But our operationalization is a bit more specific: the previous section has shown that in some circumstances languages have more irrealis marking in prohibitives than in imperatives. The more specific question is this: does the presence of irrealis marking in these circumstances in the less irrealis prone imperative imply its presence in the more irrealis prone prohibitive?

Let us first look at the second row of Table 2 again. There are 5 languages that have obligatory irrealis in the imperative, and 9 that have it in the prohibitive. The question is whether the 5 languages are a subset of the 9 languages? The answer is negative: there are two languages that have obligatory irrealis marking in the imperative, but not in the prohibitive, viz. Maung and Misantla Totonac. Table 7 presents the figures in a more direct way. It crosstabulates the presence and absence of obligatory IRR marking and the difference between imperative and prohibitive. We have put the figures 5 and 9 between pointed brackets, and the figure 2, for Maung and Misantla Totonac is between double pointed brackets.

	Prohibitive	IRR	either IRR & nIRR or nIRR	Σ
Imperative				
IRR		3	<<2>>	<5>
either IRR & nIRR or nIRR		6	168	174
Σ		<9>	170	179

Table 7: Does obligatory irrealis in the imperative imply obligatory irrealis in the prohibitive?

We can ask the same question with respect to the fourth row of Table 2, i.e. does optional or obligatory irrealis in the imperative, found in 19 languages, imply optional or obligatory irrealis in the prohibitive, found in 20 languages. Of course, we already know that the answer will be negative, for the sets of languages to be compared include Maung and Misantla Totonac.

	Prohibitive	IRR & nRR or IRR	nIRR	Σ
Imperative				
either IRR & nIRR or IRR		15	<<4>>	<19>
nIRR		5	155	160
Σ		<20>	159	179

Table 8: Does obligatory or optional irrealis in the imperative imply obligatory or optional irrealis in the prohibitive?

¹⁰ Elliott (2000:77) considers the fact that a language may have irrealis in its imperatives and yet realis in its prohibitives one for which “a satisfactory explanation [...] has not been found to date”. On today’s date, however, the explanation is basically clear: imperatives and prohibitives may independently grammaticalize from non-dedicated constructions, both realis and irrealis (see van der Auwera 2005, Mauri & Sansò, this issue).

Now there are four ‘counterexamples’. When we go back to Table 1, we can see that the additional two languages are Alambak and Pirahã.

We should also bring in the difference between the vague irr and the dedicated irrimp/irrprou subtypes of IRR marking. Let us first go back to Table 4. It shows there to be 3 languages with obligatory irrimp marking and 8 with obligatory irrprou marking (row 3). These two figures appear between pointed brackets on the summary Table 9.

	prohibitive	Irrprou IRR	either irr IRR or IRR & nRR or nIRR	Σ
imperative				
irrimp IRR		<3>	—	3
either irr IRR or IRR & nRR or nIRR		5	168	176
Σ		<8>	170	179

Table 9: Does obligatory irrimp irrealis imply obligatory irrprou?

Are the 3 languages a subset of the 8 languages? The answer is positive. As can be gleaned from Table 3, the three languages with irrealis irrimp marking are Wintu, Chalcatongo Mixtex and Nadëb, all of which also have irrealis irrprou marking.

The second of the earlier tables that we should look at again is Table 6. It shows that for languages which have either an optional or an obligatory irrealis marking in their imperatives or prohibitives, there are 11 languages (10 + 1) in which the irrealis imperative marking can or has to be irrimp and there are 16 languages in which the irrealis prohibitive marking can or has to be irrprou (rows 3 and 4). Table 10 shows these figures between pointed brackets.

	prohibitive	either irrprou IRR or irrimp IRR & nIRR	other	Σ
imperative				
either irrimp IRR or irrimp IRR & nIRR		<11>	<<2>>	13
Other		5	161	166
Σ		<16>	163	179

Table 10: Does obligatory or optional irrimp irrealis imply obligatory or optional irrprou?

Are the 11 languages a subset of the 16 languages? Checking this in Table 3 makes clear that there are two languages whose imperatives are optionally irrealis with dedicated irrimp marking. One could have expected them to have at least optional dedicated irrprou marking, but they don't. The languages, represented on Table 10 with double pointed brackets, are Alambak and Pirahã.¹¹

¹¹ Acquiring the status of an exceptional language is an invitation to a second and more sceptical look—see also note 7 on Maung. The Alambak facts are clear. The grammarian Bruce (1984: 140) explicitly says that the irrealis and prohibitive markers are mutually incompatible. The Pirahã facts are less clear. They concern the presence of an irrealis suffix *-áti*. It is very frequent in imperatives and for prohibitives, the grammarian does not actually say that it is impossible but it looks like the irrealis suffix is in the same morphological slot as the prohibitive suffix *-saháí* or its variants. There are no examples with a prohibitive use of *-áti*. There is a nice

Conclusion: does irrealis marking in the imperative imply irrealis marking in the prohibitive? We have made a distinction as to whether the irrealis is obligatory or not and as to whether the imperative and prohibitive constructions are dedicated imperative and prohibitive constructions or not. The general answer is negative. However, in one case it is positive, viz. when the irrealis marking is obligatory and when we are dealing with dedicated imperative or prohibitive constructions.

5. Is irrealis marking in imperatives a good predictor for irrealis marking in prohibitives?

The largely negative answer to the question whether or not irrealis marking in the imperative entails irrealis marking in the prohibitive allows us to ask a third question. Does the presence vs. the absence of irrealis marking in the imperative at least increase the chance that the language also has IRR marking in the prohibitive? For this question we can look at Tables 7, 8, 9, and 10.

As for Table 7, of the 5 languages that require irrealis marking in the imperative, 3 require it in the prohibitive as well—this is 60 %— and of the 174 languages that do not require irrealis marking in the imperative, only 6 still require it in the prohibitive—roughly 3,5 %. For Table 8 the figures are similar: 15 out of 19 or 79 % of the languages that allow irrealis marking in the imperative also allow in the prohibitive, while of the 160 languages that do not allow irrealis marking in the imperative, only 5 out of 160 or 3 % still allow it in the prohibitive. Table 9 is a little special: each of 3 languages that require irrimp marking also require irrproh marking; of the 176 languages that do not require irrimp imperatives, only 5 still require irrproh prohibitives—roughly 3 %. And for the Table 10 the figures are similar to those of Tables 8 and 9. 11 out of 13 or roughly 84,5 % of the languages that allow irrimp marking in their imperatives allow irrproh marking in the prohibitive, while only 5 out of 166 or roughly 3 % of the languages that do not allow irrimp imperatives but do allow irrproh prohibitives. Table 12 puts the percentages together.

If imperative	then ... chance	that the prohibitive
requires IRR marking	60 %	requires IRR marking
does not require IRR marking	3,5 %	
allows IRR marking	79 %	allows IRR marking
does not allow IRR marking	3 %	
require irrimp marking	100 %	requires irrimp marking
does not require irrimp marking	3 %	
allows irrimp marking	84,5 %	allows irrimp marking
does not allow irrimp marking	3 %	

Table 11: Is irrealis marking in the imperative a good predictor for irrealis marking in the prohibitive?

So we can conclude that if we know for any language that the imperative requires or allows irrealis marking, chances are high to very high that the prohibitive requires or allows it as well. Of course, this is not really surprising: we know from Table 1 that most languages (166

example translating ‘Don’t speak Portuguese. Speak Pirahã!’ and it has *-áti* only in the imperative (Everett1986. 246-250).

out of 179) behave the same with respect to the IRR vs. nIRR parameter. So the predictive power holds in the other direction too. This is made explicit in Table 12. Note that the predictive power is consistently lower, though.

If prohibitive	then chance	that the imperative
requires IRR marking	33,5 %	requires IRR marking
does not require IRR marking	1 %	
allows IRR marking	75 %	allows IRR marking
does not allow IRR marking	2,5 %	
require irrimp marking	37,5 %	requires irrimp marking
does not require irrimp marking	0 %	
allows irrimp marking	69 %	allows irriimp marking
does not allow irrimp marking	1 %	

Table 12: Is irrealis marking in the prohibitive a good predictor for irrealis marking in the imperative?

6. Conclusion

In this paper we have operationalized the question whether prohibitives show more irrealis than imperatives. Depending on the operationalization, the answer is a little different. To some extent, it is true that there are more irrealis prohibitives than irrealis imperatives. However, it does not follow from the fact that a language has an irrealis positive imperative that it has an irrealis prohibitive, although the probability is high. The factors that are important are the obligatory vs. the optional character of the irrealis marking, with obligatory marking being more typical for prohibitives, and the type of irrealis making, with the irrealis marking that is added to a dedicated imperative/prohibitive being more typically prohibitive. The conclusion remains tentative, given the tentativeness of the many language-specific decisions and the fact that the figures are low.

With respect to the more general issues of the nature of irrealis, we hope to have shown that for imperatives and prohibitives it is important to distinguish between constructions in which the irrealis markers are added to imperative or prohibitive markers and constructions which are only irrealis and not overtly imperative or prohibitive. For the problem of mapping the irrealis domain, this study has no new implications, but it does restate a point made before, and in this issue also by Mauri & Sansò: with respect to irrealis marking, there is no general implicational relationship between imperative and prohibitive. Even though there is some sense in saying that prohibitives are more typically irrealis than imperatives, the prototypicality does not yield the implication that if a language has an irrealis imperative, it will also have an irrealis prohibitive. The explanation, alluded at several points in this paper and focused on by Mauri & Sansò (this volume), must be that imperatives and prohibitives are the results of partially independent diachronies.

Abbreviations

F ‘feminine’, FUT ‘future’, HORT ‘hortative’, IMP ‘imperative’, IMPF ‘imperfective’, IRR ‘irrealis’, ^L ‘low tone’, ^M ‘medium tone’, NEG ‘negative’, NONDECL ‘non-declarative’, PL

'plural', PROGR 'progressive', PROH 'prohibitive', R 'realis', SG 'singular', 1 'first person', 2 'second person', 3 'third person', > 'agent>patient'

Appendix 1: The Restricted Sample

Macro area	Language	
Africa	Khoekhoe, Jul'huan, Gbeya Bossangoa, Diola-Fogny, Yoruba, Degema, Igbo, Ebira, Dogon, Supyire, Kolukuma Ijo (), Bagirmi, Kresh, Ngiti, Lugbara, So, Maasai, Nubian (Dongolese), Murle, Kunama, Maba, Kanuri, Koyraboro Senni, Tera, Masa, Somali, Iraqw, Maale, Egyptian Arabic	29
Eurasia	Basque, Albanian, Eastern Armenian, Icelandic, Hindi, Finnish, Mansi, Khalkha, Evenki, Nivkh, Japanese, Korean, Godoberi, Lezgian, Brahui	15
Southeast Asia & Oceania	Cantonese, Standard Spoken Tibetan, Eastern Kayah Li, Bawm, Meithei, Thai, Jru', Khasi, Khmer, Nicobarese (Car), Khmu, Vietnamese, Seediq, Kambera, Maori, Taba, Paiwan, Chamorro, Tagalog, Tukang Besi, Karo Batak	21
Australia & New Guinea	Maybrat, Warembori, Sentani, Sko, Arapesh, Imonda, Alamblak, Yimas, Hamtai, Asmat, Kombai, Suena, Lower Grand Valley Dani, Ono, Koiari, Amele, Kobon, Tauya, Una, Inanwatan, Kaki Ae, Yareba, Daga, Nasioi, Lavukaleve, Gooniyandi, Burarra, Maranungku, Garrwa, Wardaman, Maung, Laragia, Warndarang, Nyulnyul, Ngiyambaa, Tiwi, Wambaya, Ungarinjin	38
North America	West Greenlandic, Hare Slave, Haida, Plains Cree, Wiyot, Oneida, Yuchi, Koasati, Tonkawa, Kiowa, Tetelcingo Nahuatl, Comanche, Pima Bajo, Makah, Bella Coola, Shuwsap, Quileute, Kutenai, Klamath, Nez Perce, Wintu, Southeastern Pomo, Seri, Maricopa, Karok, Wappo, Ventureño Chumash Lealao Chinantec., Chalcatongo Mixtec, Mezquital Otomí, San Juan Atzingo Popoloca, Purépecha, Misantla Totonac, Copainalá Zoque, Huave, Mam	36
South America	Ika, Pech, Rama, Epena Pedee, Páez, Awa Pit, Cuiba, Tuyuca, Andoke, Betoí, Yaruro, Warao, Sanuma, Waorani, Yagua, Jebero, Shipibo-Konibo, Imbabura Quechua, Jaqaru, Nadëb, Baré, Apalaí, Mekens, Wayampi, Bororo, Canela-Karô, Trumai, Kwazá, Wari', Pirahã, Paumarí, Canamarí, Araona, Movima, Mosestén, Chipaya, Pilagá, Mapudungun, Gününe Küne	39
Creoles	Haitian Creole	1
Total		179

For the languages that this sample shares with either the 'restricted sample' in Miestamo (2005) or his larger so-called 'extended sample' we use the same sources as he did and we refer to his work. The languages and sources unique to the present sample the sources are the following: Maale (Amah 2001), Jru' (Pascale Jacq, p.c.), Kambera (Klamer 1998, Klamer 2005), Misantla Totonac (Mackay 1999), Seri (Moser and Marlett 2005), Wappo (Thompson et al. 2006), Ventureño Chumash (Mamet 2005), Betoí (Zamponi 2003), Mekens (Galucio 2001), Chipaya (Cerrón-Palomino 2006), and Pilagá (Vidal 2001).

References

- Adivé, John R. 1989. *The Verbal Piece in Ebira*. Dallas: Summer Institute of Linguistics.
- Amha, Azeb. 2001. *The Maale Language*. Leiden: University of Leiden-Research School of Asian, African, and Amerindian Studies.
- Anderson, Judi Lynn. 1989. *Comaltepec Chinantec syntax*. Dallas, TX: Summer Institute of Linguistics.
- Bhat, D.N.S. 1999. *The prominence of tense, aspect and mood*. Amsterdam: Benjamins.
- Bruce, Les. 1984. *The Alambalak Language of Papua New Guinea (East Sepik)*. Canberra: ANU Dept. of Linguistics–Research Unit of Pacific Studies.
- Bybee, Joan, Perkins, Revere, and Pagliuca, William. 1994. *The evolution of grammar: tense, aspect and modality in the languages of the world*. Chicago: University of Chicago Press.
- Bybee, Joan. 1998. "Irrealis" as a grammatical category. *Anthropological Linguistics* 40:257-271.
- Capell, Arthur, and Hinch, H.E. 1970. *Maung Grammar. Texts and Vocabulary*: The Hague & Paris: Mouton.
- Carlson, Robert. 1994. *A Grammar of Supyire*. Berlin: Mouton de Gruyter.
- Cerrón-Palomino, Rodolfo. 2006. *El chipaya o la lengua de los hombres del agua*. Lima: Pontificia Universidad Católica del Perú.
- De Haan, Ferdinand. 2009. Building a semantic map: top-down versus bottom-up approaches. *Linguistic Discovery*
- Dryer, Matthew. 2000. Counting genera vs. counting languages. *Linguistic Typology* 4:334-350.
- Ebert, Karen H. 1979. *Sprache und Tradition der Kera (Tschad). Teil III: Grammatik..* Berlin: Dietrich Reimer.
- Elliott, Jennifer R. 2000. Realis and irrealis: Forms and concepts of the grammaticalisation of reality. *Linguistic Typology* 4:55-90.
- Everett, Daniel L. 1986. Pirahã. In *Handbook of Amazonian Languages, vol. 1*, eds. Desmond C. Derbyshire and Geoffrey K. Pullum, 200-325. Berlin: Mouton de Gruyter.
- Galucio, Ana Vilacy. 2001. The morphosyntax of Mekens (Tupi). Doctoral dissertation, University of Chicago.
- Haspelmath, Martin, Dryer Matthew S., Gil, David and Comrie Bernard. Eds. 2005. *The world atlas of language structures*. Oxford: Oxford University Press.
- Holt, Dennis. 1999. *Pech (Paya)*. München: LINCOM EUROPA.
- Klamer, Marian. 1998. *A Grammar of Kambera*: Berlin: Mouton de Gruyter.
- Klamer, Marian. 2005. Kambera. In *The Austronesian languages of Asia and Madagascar*, eds. Alexander Adelaar and Nikolaus P. Himmelmann, 709-734. London: Routledge.
- MacKay, Carolyn J. 1999. *A grammar of Misantla Totonac*. Salt Lake City, UT: University of Utah Press.
- Mamet, Ingo. 2005. *Die Ventureño-Chumash-Sprache (Südkalifornien) in den Aufzeichnungen John Peabody Harringtons*. Frankfurt am Main: Peter Lang.
- Moser, Mary B., and Marlett, Stephen A. 2005. *Comcáac quih yaza quih hant ihúip hac: Diccionario seri-español-inglés: Diccionario seri-español-inglés*. Hermosillo: Universidad de Sonora.
- Pitkin, Harvey. 1984. *Wintu grammar*. Berkeley: University of California Press.
- Rice, Keren. 1989. *A Grammar of Slave*: Mouton Grammar Library 5. Berlin & New York: Mouton de Gruyter.
- Schalley, Ewa. 2008. Imperatives: a typological approach, Doctoral dissertation, University of Antwerp.
- Thompson, Sandra A., Sung-Yul Park, Joseph, and Li, Charles N. 2006. *A reference grammar of Wappo*. Berkeley: University of California Press.
- van der Auwera, Johan, Dobrushina, Nina, and Goussev, Valentin. 2004. A Semantic Map for imperative-hortatives. In *Contrastive Analysis in Language. Identifying Linguistic Units of Comparison*, eds. Dominique Willems, Bart Defrancq, Timothy Coleman and Dirk Noël, 44-66. Basingstoke: Palgrave.
- van der Auwera, Johan, and Schalley, Ewa. 2004. From Optative and Subjunctive to Irrealis. In *Speech, Community, and Seduction.*, eds. Frank Brisard, Michael Meeuwis and Bart Vandenabeele, 87-96. Amsterdam: Benjamins.

- van der Auwera, Johan, Lejeune, Ludo, and Goussev, Valentin. 2005. The prohibitive. In *The world atlas of language structures*, eds. Martin Haspelmath, Matthew S. Dryer, David Gil and Bernard Comrie, 290-293. Oxford: Oxford University Press.
- van der Auwera, Johan. 2006. Why languages prefer prohibitives. *Wai guo ju [Journal of Foreign Languages]*:2-25.
- Vidal, Alejandra. 2001. Pilagá grammar (Guaykuruan family, Argentina). Doctoral dissertation, University of Oregon.
- Watkins, Laurel J. with McKenzie, Parker. 1984. *A grammar of Kiowa*: Lincoln & London: University of Nebraska Press.
- Zamponi, Raoul. 2003. *Betoi*. München: LINCOM EUROPA.