

Descriptive notions vs. grammatical categories: unrealized states of affairs and ‘irrealis’

1 Introduction

Over the past decades, the term ‘irrealis’ has become increasingly widespread in language description. One major use of this term is to refer to constructions encoding some type of unrealized states of affairs, e.g. possible or future states of affairs¹. ‘Irrealis’ in this sense is a descriptive label for particular constructions, roughly equivalent to more traditional terms such as, e.g., future, subjunctive, or conditional. For example, in his description of Koasati, Kimball (1991: 190) uses the term ‘irrealis’ to refer to a verbal suffix used to encode future states of affairs, as illustrated in (1).

Koasati (Muskogean)

- (1) *hopó:ni-li-laho-Y*
cook-1SS-IRR-PHR.TERM
‘I will cook it’ (Kimball 1991: 190)

In another use, ‘irrealis’ refers to a general distinction that is assumed to be reflected in the grammar of the language, that between realized and unrealized states of affairs. The latter are states of affairs that are not presented as positively occurring or having occurred, as is the case, for example, with commands, conditions, questions, possible or future states of affairs, attempted actions, and the like. In some cases, ‘irrealis’ in this sense is assumed to be a grammatical category of the language, that is, it is assumed that unrealized states of affairs form a class that is part of a speaker’s knowledge of their language insofar as it determines a speaker’s synchronic use of particular constructions. For example, Lichtenberk (1983) argues that Manam has a grammatical category of irrealis insofar as every verb form has to bear one of two sets of pronominal prefixes (as illustrated for example by the third person prefixes on the two verbs in (2) below) depending on whether it encodes realized or (some types of) unrealized states of affairs. Roberts (1987, 1988a, 1988b, 1990, 1994) argues that Amele has a category of irrealis because in this language different types of final verb forms encoding unrealized states of affairs must all be combined with a specific set of person affixes on a cooccurring medial verb form. In other cases, linguists assume that the notion of unrealized state of affairs plays

¹The term ‘state of affairs’ will be used in this paper in its Functional Grammar sense, that is, the conception of something that can be the case in some world, as defined by a nuclear predication consisting of a predicate and its terms (Dik 1997). In this sense, ‘state of affairs’ is a cover term for a number of conceptual entities that, depending on their semantic features, are often variously described in the literature as ‘events’, ‘situations’, ‘states’, and the like.

a role in particular diachronic processes that lead to the extension of individual constructions from one context to another, but do not appear to be making any specific assumption about whether unrealized states of affairs form a class that is part of a speaker's linguistic knowledge (see e.g. Verstraete 2005).

Manam (Austronesian)

- (2) *tamóata i-píle mása ŋa-dúma-ya*
 man 3SG-say INIRR 3SG.IRR-help-1SG.OBJ
 'The man said he would help me' (Lichtenberk 1983: 552)

The idea that the distinction between realized and unrealized states of affairs plays a role in the world's languages has been repeatedly criticized in the work of Bybee (1998) and Bybee, Perkins, and Pagliuca (1994), based on the fact that there usually is no one-to-one correspondence between the realized vs. unrealized status of particular types of states of affairs and the use of particular constructions. Typically, as will also be clear from the data discussed in the next sections, languages use different constructions to encode different types of unrealized states of affairs. In particular, some types of unrealized states of affairs, as found for example in questions, negation, and some types of commands, may be encoded by means of the same constructions used for realized states of affairs (see Mithun 1995 and Elliott 2000 for extensive discussion and exemplification). Conversely, constructions used to encode various types of unrealized states of affairs are often also used to encode particular types of realized states of affairs, typically habitually occurring states of affairs and states of affairs corresponding to presupposed information, or information that is already known or inferable from the context anyway. In English, for example, the *will* form of the verb can be used to encode both futures and habituality in the present ((3)). Likewise, in Kayardild (Evans 1995: 258-60), the potential inflection is used to express obligation, future, prescriptions, desire, ability, commands, purpose, and habituality in the past ((4)). In Ancient Greek (Humbert 1986; personal data), optatives are used to encode both various types of unrealized states of affairs, including possibilities, wishes, purpose, and counterfactual conditions ((5a-d)), and presupposed, already known, or inferable information ((5e)). In Tondi Songway Kiini (Heath 2005), subjunctives are used to encode various types of unrealized states of affairs, including for example commands, requests for instructions, purpose, exhortations, and obligations ((6a-b)), as well as realized states of affairs about which the speaker expresses an evaluation, and which represent therefore presupposed information ((6c)). A similar pattern is attested in Caddo, where the prepronominal prefix set that Chafe (1995) calls the 'irrealis' set may be used both in contexts involving several types of unrealized states of affairs (including questions, negation, prohibitions, conditions, obligations: (7a)), and in contexts where somebody expresses surprise about some state of affairs ((7b)). Although Chafe (1995) does not address this point, this state of affairs apparently represents presupposed information, because the sentence is used to express surprise about it, rather than to assert it.

- (3) "One can never have enough socks," said Dumbledore. "Another Christmas has come and gone and I didn't get a pair. People will insist on giving me books." (J. K. Rowling, 'Harry Potter and the Philosopher's Stone', chap. 12)

Kayardild (Australian)

- (4) (a) *ngurruwarra-wan-da yakuri wungi-i-nangku*
 fishtrap-ORIG-NOM fish:NOM steal-MDL-NEG:POT
 'Fish from fishtraps must not be stolen' (Evans 1995: 259)
- (b) *barnkaldi-ju jurbu-lu-thu*
 sit.down.cross.legged-POT sharp-FAC-POT
 'They would sit down to sharpen up (their spears) again' (Evans 1995: 581)

Ancient Greek

- (5) (a) *ouk àn dé moi ephoplísseias apénēn;*
 not PTCL PTCL to.me prepare:AOR:OPT:2SG wagon
 'Could you make ready for me a wagon?' (Homer, Odyssey 6.57)
- (b) *àì gár pōs autón me ménos kai thumòs*
 if PTCL in.any.way self me wrath and fury
aneíē *óm' apotamnómenon kréa édmenai*
 urge:OPT:PRES:3SG raw severed flesh eat
 'Would that in any wise wrath and fury might bid me carve your flesh and myself eat it raw' (Homer, Iliad 22.346)
- item[(c)]
- ēélios d' anórouse [...] hín' athanátoisi*
 sun PTCL leapt to immortals
phaeínoi
 give.light:OPT.PRES.3SG
 'the sun sprang up [...] to give light to the immortals' (Homer, Odyssey 3.2)
- (d) *kai nú ken énth' apólito [...] Aineías, ei mē*
 and now PTCL there die.AOR:OPT:3SG Aeneas if not
ár' oxù nóēse [...] Afrodítē
 PTCL sharply noticed Aphrodite
 'And now would the king of men, Aeneas, have perished, had not [...] Aphrodite been quick to mark' (Homer, Iliad 5.311)
- (e) *ou gár ēngélthē autoîs hótì tethnēkótes*
 not PTCL was.announced to.them that die.PERF:PTCPL
eíēn
 be.OPT.PRES:3PL
 'The news of the men's death had of course not arrived' (Thucydides 2.6.3)

Tondi Songway Kiini (Nilo-Saharan)

- (6) (a) *ǎy †ná †é děnté †é mà bòr'odíy"à dèy*
 1SG.S TR 3PL.OBJ send 3PL.S SUBJN banana buy
 'I sent them (on an errand), to buy some bananas' (Heath 2005: 230)
- (b) *ǎy Φmà kà: àlá*
 1SG.S SuBJUCT come yes-no?
 'Should I come now?' (Heath 2005: 231)
- (c) *è mà kín ně:, à w Φbô:rí*
 3PL.S SUBJN build here 3SG.S IMPFV be.good
 'That they (might) build here, is good (=a good thing)' (Heath 2005: 231)

Caddo (Caddoan)

- (7) (a) *hí-t'a-yi=bahw*
 COND-1AG.IRR-see
 'If I see it' (Chafe 1995: 356)
- (b) *hús-ba-ʔa=sa-yi=k'awih-saʔ*
 ADMIR-1BENEF.IRR-name-know-PROGR
 'my goodness he knows my name!' (Chafe 1995: 357)

Bybee (1998) and Bybee, Perkins, and Pagliuca (1994) argue that these facts show that languages make no binary distinction between realized and unrealized states of affairs, because not all types of realized or unrealized states of affairs are encoded in the same way, and the same constructions can be used to encode both realized and unrealized states of affairs. In fact, they suggest, most of the grammatical patterns involving unrealized states of affairs are probably based on notions other than that of unrealized state of affair as such, for example intentionality or lack of assertiveness.

In contrast to this position, several typologically oriented studies, particularly over the past few years, have defended the theoretical relevance of the notion of unrealized state of affairs, and the corresponding term 'irrealis' (Givón 1994, Mithun 1995, Elliott 2000, Palmer 2001, Verstraete 2005, MacGregor and Wagner 2006). These studies appear to share a basic assumption that, if the various uses of some particular construction in a language can be described in terms of the notion of unrealized state of affairs, this means that this notion plays some role in these uses.

In fact, since there is no need to assume that all of the uses of a construction should be accounted for in terms of the same notion, the fact that a construction can be used to encode realized states of affairs does not exclude that at least some of its other uses may originate from the notion of unrealized state of affairs. For example, a possible explanation for the use of the same constructions for both future and habitual states of affairs is that a prediction about future action may trigger an inference that this prediction is based on knowledge that the action is a habitual one, that is, a statement of the type 'X will do Y' may trigger an inference that the statement is based on the fact that X

habitually does Y, and the verb form may thus acquire habitual meaning (though see Bybee, Perkins, and Pagliuca 1994: 156-8 for a different account of the English pattern exemplified in (3) above). Also, Bybee, Perkins, and Pagliuca (1994: 157) suggest that habitual markers originate from markers of intentionality because what one wants to do one is usually inclined or disposed to do, and will do habitually (see also Palmer 2001: 190-1). Both of these hypotheses imply that the extension of a construction from some types of unrealized states of affairs to habitual ones is based on contextual inferences that are independent of the notion of unrealized state of affairs as such. These inferences do not tell us anything about why the construction is also used to encode particular types of unrealized states of affairs, so it may well be the case that these uses are indeed based on some general notion of unrealized state of affairs².

Similar observations apply to the use of the same constructions to encode unrealized states of affairs and presupposed, or already known information. This pattern has been argued to originate from the fact that unrealized states of affairs are not asserted (Bybee, Perkins, and Pagliuca 1994: 236), or from the fact that both unrealized states of affairs and states of affairs corresponding to presupposed, or already known information have low communicative value, in that the development of the communicative process is crucially based on asserted, new information (Lunn and Cravens 1991, Wandruszka 1991, Cristofaro 2008). These mechanisms are independent of the notion of unrealized state of affairs, but this does not exclude that this notion plays a role in the use of the constructions in contexts involving particular types of unrealized states of affairs.

A more serious challenge to the idea that the distinction between realized and unrealized states of affairs plays a role in the world's languages is posed by Bybee, Perkins, and Pagliuca's hypothesis that the grammatical patterns involving unrealized states of affairs are actually based on notions other than that of unrealized state of affairs as such (Bybee 1998, Bybee, Perkins, and Pagliuca 1994). If this is the case, then it is not clear that this notion is a significant one for speakers, and one that should be reflected at the grammatical level. However, since Bybee (1998) and Bybee, Perkins, and Pagliuca (1994) provide no systematic discussion of the various patterns that have been described in terms of 'irrealis' in the literature, a detailed understanding is still missing of what factors exactly are actually involved in many of these patterns.

²Other explanations have been proposed for the association between unrealized states of affairs and habituality that are not directly relevant to the present discussion. First, it has been argued that habitual states of affairs can be conceptualized as unrealized because they do not correspond to any specific realized instance of the relevant states of affairs (Lazard 1975 and 1998, Chung and Timberlake 1985: 221, Givón 1994, Elliott 2000, Cristofaro 2004, among others). In this case, the use of the same construction to encode unrealized and habitual states of affairs is unproblematic, because it originates exactly from the notion of unrealized state of affairs. Second, Bybee, Perkins, and Pagliuca (1994: chap. 6) and Haspelmath (1998) have shown that the development of progressive constructions in a language may lead older imperfective constructions to be confined to the contexts that are less compatible with progressiveness, including habitual and unrealized states of affairs. This process is not relevant to the issue of what mechanisms determine the extension of individual constructions from one type of states of affairs to another, because in this case different types of states of affairs come to be encoded by the same constructions independently of each other.

This paper discusses various facts pertaining to the encoding of unrealized states of affairs cross-linguistically, with a focus on the possible origin of the relevant grammatical patterns. These facts, it will be argued, show that there are three issues that have generally failed to be kept distinct in the debate on ‘irrealis’: the fact that the notion of unrealized state of affairs can be used to describe particular grammatical patterns, the fact that this notion plays a role in the mechanisms that bring about these patterns, and the fact that this notion corresponds to a grammatical category of particular languages.

This failure may affect hypotheses about ‘irrealis’ at several levels. First, it may lead to an inaccurate representation of the distributional properties of the categories identified as ‘irrealis’ in particular languages, either in the sense that these categories may be assumed to be manifested in grammatical domains other than those in which they are actually manifested, or in the sense that they may be assumed to encompass states of affairs other than those that they actually encompass (section 2). Second, a grammatical category of ‘irrealis’ may be posited for particular languages based on patterns that encompass various types of unrealized states of affairs, but are arguably independent of any general distinction between realized and unrealized states of affairs as such (section 3). Finally, a number of grammatical patterns may be missed that may actually have originated from this distinction (section 4).

These problems are representative of a widespread approach in linguistic analysis, one where one where the description of observed grammatical patterns and the formulation of explanatory hypotheses about these patterns are combined together. As has been emphasized in the ongoing typological debate about the cross-linguistic validity of grammatical categories (Dryer 1997, Croft 2001, Haspelmath 2004 and 2007, Cristofaro 2009a), these two levels are independent of each other, and mixing the two may lead linguists to address the wrong theoretical issues.

2 The distributional properties of ‘irrealis’

Several domains in different languages have been argued to provide evidence for a grammatical category of irrealis. In addition to domains directly pertaining to the status of individual states of affairs in terms of actuality, such as the marking of TAM, polarity (positive vs. negative sentences), and illocutionary force (declarative vs. imperative and interrogative sentences), irrealis has been assumed to be manifested in person marking (personal pronouns, clitics, and affixes: see e.g. Lichtenberk 1983 for Manam, Chafe 1995 for Caddo, or François 2002 for Araki), switch-reference (Roberts 1987, 1988a, 1988b, 1990, and 1994, Mithun 1995, Miller 2001), and the selection of particular conjunctions (Berry and Berry 1999). Within these domains, the distribution of particular grammatical phenomena may be associated with whether the sentence encodes realized or unrealized states of affairs, and this has been taken as evidence that the language has a grammatical category that is based on the notion of unrealized state of affairs and is manifested in these domains.

In at least some cases, however, closer inspection of the relevant distributional pat-

terns suggests a different picture, either in the sense that these patterns may define a category that is not actually manifested in the grammatical domain under investigation, or in the sense that they may not actually define a class encompassing the relevant types of unrealized states of affairs. In what follows, this will be illustrated with regard to some phenomena related to person marking, including person marking in switch-reference systems.

A number of languages have been claimed to have person marking systems that reflect a category of irrealis, in that different sets of person markers (pronouns, clitics, or affixes) are used depending on whether the clause encodes realized or unrealized states of affairs. This claim has been made, in particular, for a number of Austronesian languages, including Araki (François 2002), Manam (Lichtenberk 1983), Sinaugoro (Tauberschmidt 1999), Sursurunga (Bugenhagen 1993), and Toqabaqita (Lichtenberk 2008).

From a conceptual point of view, the notion of person is completely independent of the realized vs. unrealized status of the state of affairs being described, so there is no obvious reason why the distinction between realized and unrealized states of affairs should be encoded at the level of person marking. The morphological structure of some of the relevant forms suggests in fact that this may not actually be the case.

For example, as is illustrated in table 1, Sinaugoro has three sets of personal pronouns, which Tauberschmidt (1999: 23) calls the realis, the intentive/imperative, and the irrealis set respectively.

	Realis		Intentive/imperative		Irrealis	
	IMM.	REM	IMM.	REM.	IMM.	REM.
1SG	a b-a	n-a	b-a-na	b-a-ra	b-a-ra	
2SG	o	b-o	n-o	b-o-no	b-o-ro	b-o-ro
3SG	e	b-e	n-e	b-e-ne	b-e-re	b-e-re
1PL.INCL.	ta	bi-ta	ta-na/si- ni	bi-ta-na	ta-ra	bi-ta-ra
1PL.EXCL	ḡa	ba-ḡa	ḡa-na	ba-ḡa-na	ḡa-ra	ba-ḡa-ra
2PL	ḡo	bo-ḡo	ḡo-no	bo-ḡo- no	ḡo-ro	bo-ḡo-ro
3PL	ḡe	be-ḡe	ḡe-be	be-ḡe-ne	ḡe-re	be-ḡe-re

Table 1: Personal pronouns in Sinaugoro (Tauberschmidt 1999: 23)

The use of each set is determined by the type of state of affairs being described. The realis set is used for completed actions, futures, and conditions. The intentive/imperative set is used for intentions, commands, obligation, wishes, and purpose. The irrealis set is used for actions that have not taken place yet, frustrated actions, polite requests or wishes, and counterfactual conditions (Tauberschmidt 1999: 23-8). In the three sets, the same elements, *-a-l-ta-l-ḡa-*, *-o-l-ḡo-*, and *-e-l-ḡe-*, are used for first, second and third person singular and plural respectively, and the difference between the various sets (as well as between the remote vs. immediate constructions within each set) is determined by additional morphological material. This suggests that it is this material which encodes the

distinction between different types of states of affairs, and that the various pronominal constructions may have originated from the combination of this material with person markers proper.

A number of Austronesian languages, such as Araki (François 2002), Sursurunga (Bugenhagen 1993), and Toqabaqita (Lichtenberk 2008), display pronominal systems that are similar to that of Sinaugoro, and lend themselves to be analyzed in the same way (cf. Elliott 2000: 65 for similar observations). In other languages using different person forms for realized and unrealized states of affairs, these do not appear to be as readily segmentable into person markers proper and other elements. This is for example the case with personal pronouns in Manam (Lichtenberk 1983) and person affixes in Caddo (Chafe 1995) and Takelma (Sapir 1990). The Sinaugoro system and similar ones show however that the use of different sets of person forms to encode realized vs. unrealized states of affairs does not imply that the distinction between these two types of states of affairs is relevant to the expression of person. This pattern, therefore, is not per se evidence for a grammatical category of irrealis that is manifested within the domain of person. Whether or not person forms as such encode a distinction between realized and unrealized states of affairs has to be evaluated on a case-by-case basis, based on the possible origin of the forms.

A comparable problem is posed by some switch-reference patterns. In a series of publications, Roberts (1987, 1988a, 1988b, 1990, 1994; see also Stirling 1993) has argued for a grammatical category of irrealis in Amele based on the distribution of person affixes on medial verb forms. When the states of affairs encoded by medial and final verbs are simultaneous, and the linked clauses have different subjects, different sets of person affixes are used on the medial verb depending on whether the final verb encodes a realized state of affairs or is one of various forms encoding unrealized states of affairs, including future, imperative, prohibitive, prescriptive, hortative, apprehensive, and counterfactual forms. This, Roberts argues, is evidence that these forms are treated alike for the purposes of switch-reference marking, and hence that the states of affairs that they encode form a class corresponding to a grammatical category of irrealis. The use of ‘irrealis’ person affixes on medial verbs is illustrated in (8) below.

Amele (Trans-New Guinea)

- (8) (a) *Ho bu-busal-eb age qo-qag-an.*
 pig SIM-run.out-3SG.DS.IRR 3PL hit-3PL-F
 ‘They will kill the pig as it runs out’
- (b) *Ho bu-busal-eb age qo-ig-a.*
 pig SIM-run.out-3SG.DS.IRR 3PL hit-3PL-IMP
 ‘Kill the pig as it runs out’
- (c) *Ho bu-busal-eb ege q-oc nu*
 pig SIM-run.out-3SG.DS.IRR IPL hit-INF HORT
 ‘Let us kill the pig as it runs out.’
- (d) *Ho bu-busal-eb cain qo-wain.*
 pig SIM-run.out-3SG.DS.IRR PROH hit-NEG.F.3PL

‘Don’t kill the pig as it runs out.’

- (e) *Ho bu-busal-eb* *age qo-wain* (*dain*).
pig SIM-run.out-3SG.DS.IRR 3PL hit-NEG.F.3PL lest

‘Lest they kill the pig as it runs out.’

- (f) *Ho bu-busal-eb* *age qo-u-b*
pig SIM-run.out-3SG.DS.IRR 3PL hit-CTF-3PL

‘They would/should have killed the pig as it ran out.’ (Roberts 1990: 372)

In Robert’s analysis, the distribution of ‘irrealis’ person affixes on medial verbs is a function of the unrealized status of the state of affairs encoded by the final verb. The semantic properties of switch-reference sentences with ‘irrealis’ person affixes suggests however an alternative hypothesis, namely that this distribution is actually determined by the state of affairs encoded by the medial verb itself.

The function of the medial verb is to indicate a simultaneity relationship between the state of affairs that it encodes and the state of affairs encoded by the final verb (Roberts 1987: 100; 238-9). When the latter is one that may possibly take place in the future, as in (8a-e), this relationship implies that the state of affairs encoded by the medial verb is also one that may take place in the future, and is therefore not realized. When the state of affairs encoded by the final verb is one that failed to take place in the past, as in (8f), the simultaneity relationship implies that it might have taken place at the same time as the state of affairs encoded by the medial verb, which may or may not have taken place (for example, in (8f), the sentence implies that, if the men had killed the pig, this would have been while the pig was running out, but the pig may or may not have run out). In this case too, then, the state of affairs encoded by the medial verb is not presented as positively realized. In fact, Roberts (1994) suggests that ‘irrealis’ medial verb forms in Papuan languages, including Amele, may have originated as futures. This is consistent with the uses of these forms exemplified in (8). In (8a-e), the forms encode states of affairs located in the future. In (8f) the state of affairs encoded by the medial and the final verb can be conceived as ones that could have occurred at a future time with respect to some past time selected as a reference point, that is, ‘At some past time X, there was a possibility that the pig would run out and the men would kill it (but this did not take place)’.

All this raises an issue of whether Amele really has a grammatical category of irrealis encompassing the various final verb forms that cooccur with ‘irrealis’ medial verb forms. If the state of affairs encoded by the medial verb is not presented as realized, this per se provides a motivation for the use of ‘irrealis’ medial verb forms, particularly if this use is close to the original use of the forms anyway. In this case, although ‘irrealis’ medial verb forms cooccur with various types of final verb forms, their occurrence is independent of the final verb forms as such. As a result, there is no direct evidence that the various final verb forms are treated alike for the purposes of switch-reference marking, and that the states of affairs that they encode form a class in the grammar of the language.

This analysis is supported by what is known about the development of switch-reference systems (Winter 1976, Haiman 1983, Jacobsen 1983). Switch-reference originates from

the fact that languages may use different constructions depending on whether or not the subject of the clause is the same as that of some other clause. In some cases, switch-reference is signaled by the alternance between verb forms inflected for person and verb forms not inflected for person. In other cases, specific switch-reference morphemes develop from the reanalysis of conjunctions or case markers that are used in the relevant clause types. In none of these cases does the clause usually make any reference to the realized vs. unrealized status of a state of affairs encoded by some other clause, so it is not clear how this distinction could arise.

The idea that switch-reference marking reflects this distinction has been put forward for other languages besides Amele, such as Jamul Tiipay (Miller 2001). In this language, ‘irrealis’ switch-reference markers cooccur with verb forms encoding unrealized states of affairs in another clause, such as forms bearing the ‘irrealis’ or imperative affixes, or the desiderative, inferential, promised future, or hortative clitics ((9)). In this case too, however, the clause marked for switch-reference also encodes an unrealized state of affairs, so this provides a motivation for the occurrence of ‘irrealis’ switch-reference markers independently of the realized vs. unrealized status of the state of affairs encoded by the other clause³.

Jamul Tiipay (Hokan)

- (9) (a) *'-aa-k* *kwa'kuy-pu* *'-iny-x-s*
 1-go-IRR.SS old.woman-dem 1-give-IRR-EMPH
 ‘I will go and give it to the old woman’ (Miller 2001: 230)
- (b) *k-aa-k* *sa'kay-lly* *k-cha*
 IMP-go-IRR.SS basket-in IMP-put
 ‘Go put it in the basket’ (Miller 2001: 231)
- (c) *nya'wap* *ny-xaakwaall-pe-ch* *w-shaay* *pu'yu-k*
 our.ABS AL-children-DEM-SUBJ 3-be.fat.PL 3.be.thus-IRR.SS
xan-lly-a
 be.good-DES-Q
 ‘... so that our children might be nice and fat like him?’ (Miller 2001: 231)
- (d) *toor-pech* *cha'saw* *wiich-km* *w-saaw-kex-a*
 bull-DEM-S food give.PL-IRR.DS 3-eat-INFER-EMPH
 ‘... that bull must be giving him food and he must be eating it’ (Miller 2001: 231)
- (e) *nya-chaw-km* *saw-ma*
 when-finish-IRR.DS 1.eat.PL-PROM.FUT
 ‘When I finish, we can eat’ (Miller 2001: 231)

³Apparently, the reason why Miller (2001) argues that ‘irrealis’ switch-reference markers in Jamul Tiipay refer to the unrealized status of the state of affairs encoded by a cooccurring clause is that these markers are not used when this state of affairs is a realized one. However, this is because switch-reference constructions cannot be used at all in this case (Miller 2001: 230-2), so this provides evidence about the distribution of switch-reference constructions in general, not ‘irrealis’ switch-reference markers as such.

- (f) *k-akway* *k-aa-k* *k-kuuttu-ya-pek*
 IMP-turn IMP-go-IRR.SS IMP-kick-too-HORT
 ‘Go back and kick him too (just as he kicked you)!’ (Miller 2001: 231)

The facts discussed so far do not exclude that the relevant person marking patterns may reflect a grammatical category of irrealis, that is, a category based on the notion of unrealized state of affairs. These patterns show that the occurrence of particular forms, e.g. particular sets of personal pronouns or particular medial verb forms, is related to the realized vs. unrealized status of the states of affairs being expressed. To the extent that this phenomenon originates from a general distinction between realized and unrealized states of affairs (a point to be taken up in section 3 below), it may be taken as evidence for a grammatical category of irrealis (though see the discussion in section 4). The distributional properties of this category, however, should be defined independently of the fact that the contexts of occurrence of the relevant forms can be described in terms of the notion of unrealized state of affairs. For example, this notion provides an adequate characterization of the contexts of occurrence of particular sets of personal pronouns, but this does not mean that a corresponding grammatical category of irrealis is manifested at the level of person marking within these pronouns. Likewise, the fact that the final verb forms that cooccur with particular types of medial verb forms all encode unrealized states of affairs does not mean that a grammatical category of irrealis defined by the medial verb forms is manifested at the level of final verb forms.

These facts point to a need to distinguish between the possibility to use particular notions, such as that of unrealized situation, to describe observed grammatical patterns, and the specific role of these notions in the shaping of these patterns. Failure to make this distinction may lead to an inaccurate picture of the distributional properties attributed to particular grammatical categories. In the next section, a number of facts will be discussed showing that this failure also has consequences for the assumptions that may be made about whether particular notions really play a role in observed grammatical patterns, and whether the language has a grammatical category based on these notions.

3 ‘Irrealis’ and multifunctionality patterns

In most of the cases where the notion of unrealized state of affairs has been argued to play a role in particular languages, this has been because the language displays a multifunctionality pattern whereby various types of unrealized states of affairs are encoded by means of the same construction. This has been regarded as evidence that the grammar of the language makes a general distinction between realized and unrealized states of affairs, or at least that the notion of unrealized states of affairs plays a role in specific diachronic processes that lead to the extension of particular constructions from one type of unrealized states of affairs to another.

When these patterns have been investigated in a diachronic perspective, however, doubts have been raised that they actually originate from a general notion of unrealized

state of affairs. In particular, based on data from grammaticalization studies, Bybee (1998) and Bybee, Perkins, and Pagliuca (1994: 236-40) have argued that individual patterns might actually originate from properties of specific types of unrealized states of affairs other than their being unrealized. For example, Bybee, Perkins, and Pagliuca (1994: chap. 7) suggest that the widespread multifunctionality patterns whereby the same constructions are used to encode both futures and desire or obligation originate from the fact that, in many contexts, expressions of desire and obligation are used to convey an intention to perform some action, and hence it may be inferred that the speaker is making a prediction about the future occurrence of that action.

Research on the possible origins of the multifunctionality patterns involving unrealized states of affairs has however been limited to a restricted number of cases so far, as most studies have focused on the patterns most directly related to the notions of possibility, necessity, and future (see e.g. van der Auwera and Plungian 1998, Traugott and Dasher 2005: chap. 3, Verstraete 2005, or Eckardt 2006: chap. 4). As a result, the exact mechanisms responsible for individual patterns are still unclear in many cases, and it is not clear that the analysis advocated by Bybee, Perkins, and Pagliuca can be generalized to all of the cases that have been accounted for in terms of ‘irrealis’ in the literature.

While a comprehensive investigation of these cases is beyond the scope of this paper, a number of general facts pertaining to the multifunctionality patterns involving unrealized states of affairs will now be discussed, based on the data provided in the literature on irrealis as well as data from languages selected for the purposes of this paper. These facts, it will be argued, provide specific evidence against the assumption that the world’s languages encode a general distinction between realized and unrealized states of affairs, or at least they point to a number of theoretical issues that should be taken into account before making this assumption.

A major fact to be considered, and one that has generally been disregarded in the literature on irrealis, is that individual multifunctionality patterns do not usually involve just any type of unrealized states of affairs. Rather, the types of unrealized states of affairs encoded by a single construction form recurrent clusters cross-linguistically, and two major patterns are attested.

The first, and most widespread pattern is one involving states of affairs that are not presented as positively realized at some reference point, but may possibly take place at a later time, as is the case for example with futures, conditions, wishes, obligations, commands, and prohibitions. These states of affairs may be encoded by both main and dependent clauses, such as for example complements of ‘want’ and ‘order’ verbs, purpose, and ‘when’ clauses. Sometimes, the relevant constructions are also used in past contexts to encode counterfactual states of affairs, that is, envisioned, imagined states of affairs that did not take place and whose contraries took place instead (see e.g. (8e) above).

In Manam, for example, the construction that Lichtenberk (1983: 187-9) labels ‘definite irrealis’ (characterised by the presence of special person affixes on the verb) is used to encode future and possible states of affairs, commands, permission, negative purpose, the protases and apodoses of counterfactual conditionals, unfulfilled wishes, and comple-

ments of ‘want’ and ability verbs (in addition to that, the construction can also be used to encode habituality, in accordance with the pattern described in section 1).

Manam (Austronesian)

- (10) (a) *ʔáti téʔe-Ø i-púra-ŋe bogía n-láʔo*
 boat one-3SG.AD 3SG.arrive-RES.PRO B. 1SG.IRR-go
 ‘If a boat comes, I will (definitely) go to Bogia’ (Lichtenberk 1983: 531)
- (b) **go-moanáʔo**
 2SG.IRR-eat
 ‘Eat!’ (Lichtenberk 1983: 188)
- (c) *i-bóadu ʔaitútextglotstopa da-púra*
 3SG.be.possible now 3PL.IRR-come
 ‘They may come now’ or ‘They are able to come now’ (Lichtenberk 1983: 444)
- (d) *éwa go-téa=te-Ø ʔa-zimbóro táʔana*
 fire 2SG.IRR-RPL-look.at-3SG.OBJ 3SG.IRR-darken CAV
 ‘Look after the fire so that it doesn’t go out (lest it should go out)’
 (Lichtenberk 1983: 187)
- (e) *ʔáiʔo nóra-be go-ra-yá-be*
 2SG.IP yesterday-FOC 2SG.IRR-talk.to-1SG.OBJ-and
n-duma-íʔo
 1SG.IRR-help-2SG.OBJ
 ‘If you had told me yesterday, I would have helped you’ (Lichtenberk 1983: 189)
- (f) *ŋáu u-rére nóra boʔaná-be go-púra*
 1SG.IP 1SG-want yesterday SIM.FOC 2SG.IRR-come
 ‘I wish you had come yesterday’ (Lichtenberk 1983: 189)
- (g) **go-ra-í-be** **ŋa-mái**
 2SG.IRR-talk.to-3SG.OBJ-and 3SG.IRR-come
 ‘Tell him to come! (lit talk to him and let him come!)’ (Lichtenberk 1983: 423)
- (h) *tamóata di-bóadu dram da-tóba-di*
 man 3PL-be.able drum 3PL.IRR-pierce-3PL.OBJ
 ‘The men are able to make holes in the drums’ (Lichtenberk 1983: 439)
- (i) *i-bóadu ʔaitútextglotstopa da-púra*
 3SG.be.possible now 3PL.IRR-come
 ‘They may come now’ or ‘They are able to come now’ (Lichtenberk 1983: 444)

- (1) *ŋáu u-rére madán-lo sausáu téʔe-Ǿ*
 1SG.IP 1SG-want M.-in net one-3SG.Ad
ŋa-dóʔ-Ǿ-a-n-a
 3SG.IRR-get-3Sg.OBJ-BF-BEN-1SG.OBJ
 ‘I want him to get me a net in Madang (lit. I want he will get a net for me in Madang)’ (Lichtenberk 1983: 553)

In Mojave (Munro 1976), the ‘irrealis’ suffix *-θ/h* is used for complements of ‘want’ verbs, conditions, and obligations.

Mojave (Hokan)

- (11) (a) *manʸ nʸ-iyu-θ ʔ-ar:-k*
 you 2OBJ/1S-see-IRR 1-want-TENSE
 ‘I want to see you’ (Munro 1976: 52)
- (b) *huwalʸəpay ya+ʔ-aʔ:av-θ ʔ-ʔahot-e*
 Walapai VAUG-understand-IRR 1-good-AUG[FUT]
 ‘If I learn Walapai, I’ll be all right’ (Munro 1976: 54)
- (c) *ʔ-yiem-θ-č idu:-m*
 1-go-IRR-S be-TENSE
 ‘I must go’ (lit. ‘My unaccomplished going is’ or perhaps ‘My unaccomplished going should be’) (Munro 1976: 54)

Abun (Berry and Berry 1999) displays an opposition between the two temporal conjunctions *sa* and *yo*. The former is used when the linked states of affairs have already occurred, while the latter is used to link states of affairs that may take place in the future, including intents or plans, conditions, procedures and compulsory consequences of hypothetical states of affairs.

Abun (Isolate)

- (12) (a) *Men kem mo kampung sa Rahel bu ai farkor an*
 1PL stay in village when Rachel POSS father teach 3SG
 ‘When we stayed in the village, Rachel’s father taught her’ (Berry and Berry 1999: 194)
- (b) *A so a bi suk it yo, a gwat more kret*
 2SG buy 2SG POSS things CAM when 2SG bring here wait.for
ji
 me
 ‘When you (will) have bought (all) your things, then bring them here and wait for me’ (Berry and Berry 1999: 198)
- (c) *Ye syesyar pa mo nu yo, ye mwa ma*
 people go.out youths LOC huse when people many come
 ‘When they take the young man out of the house (then) many people come’ (Berry and Berry 1999: 199)

- (d) *Nggon git nok it yo be ben nggon i*
 women eat wild pig when FUT make women sick
 ‘Whenever women eat wild pig (this) causes them to become sick / If a woman eats wild pig (this) will make her get sick’ (Berry and Berry 1999: 199)
- (d) *Ye-to gwa yewon dabe yo, ye ne bi denda su*
 person-REL hit shaman ear when person that pay fine with
mbre
 eastern.cloth
 ‘Whenever a person hits a shaman on the ear, that person must pay a fine with antique cloth’ (Berry and Berry 1999: 201)

Another major type of multifunctionality pattern involves states of affairs that failed to take place, including unsuccessful attempts, unfulfilled obligations and desires, and counterfactual conditions. This pattern is well illustrated, for example, by the distribution of the ‘irrealis’ inflection in Bininj Gun-wok (Evans 2003). This inflection is used to encode negated states of affairs in the past, states of affairs that were about to take place but didn’t, unsuccessful attempts, counterfactual conditions, and unfulfilled wishes. It is also found in complements of ‘want’ and ‘order’ verbs, but only when these refer to past states of affairs which are known not to have taken place (when the complements of these verbs have present time reference, as in ‘X wants to do Y’, the relevant states of affairs fall within the realm of possibility).

Bininj Gun-wok (Australian)

- (13) (a) *Minj njale mak bene-bekka-yi*
 not what too 3UA.P-hear-IRR
 ‘They did not hear anything’ (Evans 2003: 373)
- (b) *Yimarnek nga-rrulubu-yi, la ǝ-bid-deyhmeng, minj ǝ-dowkme-ninj*
 CTF 1/3-shoot-IRR but 3-hand-click not 3P-go.off-IRR
 ‘I tried to shoot but the trigger just clicked without it (the gun) discharging’ (Evans 2003: 373)
- (c) *A-rrowkme-ninj/ a-bu-yi*
 1/3-shoot-IRR 1/3-hit-IRR
 ‘I nearly shot it / nearly hit it’ (Evans 2003: 373)
- (d) *A-djare-ni a-by-yi*
 1-want-PI/ 3-kill-IRR
 ‘I wanted to kill him’ (Evans 2003: 374)
- (e) *Nga-djawa-n al-ege daluk ngan-bunjhma-yi/ bi-bunjhma-[yi]*
 1/3-ask-PP FE-DEM woman 3/1-kiss-IRR 3-3P-kiss-IRR
 ‘I asked that woman to kiss me/him’ (Evans 2003: 641)

- (e) *Nga-bongu-yi*
 1-drink-IRR
 ‘I wish I could have a drink’ (Evans 2003: 374)
- (f) *Yi-rruluby-yi*
 2/3-shoot-IRR
 ‘You should have shot it’ (Evans 2003: 374)
- (g) *Kunukka korroko-ni kunubewu ngandi-kom-dadjke-meninj, dja*
 IV:DEM before-P maybe 3a/1-neck-cut-IRR CONJ
bolkkine man-kerrnge man-karre
 now VE-new III-law
 ‘Under the old-time law I would have been hanged, but this was the new law’ (Evans 2003: 375)

Systems similar to that of Bininj Gun-wok have been described for other Australian languages, such as Kayardild (Evans 1995) and Nyulanyulan languages (MacGregor and Wagner 2006), as well as for languages from other families, such as Erromangan (Crowley 1998).

The very existence of these patterns suggests that they do not originate from some general notion of unrealized state of affairs. If this were the case, one would expect that just any type of unrealized states of affairs could be included in a single multifunctionality pattern. The fact that individual multifunctionality patterns are typically restricted to specific types of unrealized states of affairs suggests that these patterns originate from properties of these particular types of states of affairs other than their being unrealized, which need to be investigated on a case-by-case basis.

One case that provides a particularly clear illustration of this is a multifunctionality pattern whereby constructions used to encode various types of unrealized states of affairs in positive clauses are also used in negative clauses. While this pattern does not appear to be very widespread cross-linguistically (it is attested, for example, in approximately only one eighth of the languages taken into account in the cross-linguistic study of negation carried out in Miestamo 2005a), it has generally been accounted for in terms of the unrealized status of negated states of affairs, and it has been taken as evidence for a grammatical category of irrealis in the relevant languages (see e.g. Van den Berg 1989, Bugenhagen 1993, Chafe 1995, Elliott 2000, or Miestamo 2005a).

Contrary to what has been reported for languages such as Caddo (Chafe 1995) or Muna (Van den Berg 1989), however, it is often not the case that these constructions are used for all types of negative clause. Rather, the languages examined in Miestamo 2005a, 2005b, and 2005c (the most complete sources of data on this issue to this date) show that individual constructions are typically restricted to particular types of negative clauses, and that constructions encoding different types of unrealized states of affairs in positive clauses are used in different types of negative clauses.

In some cases, constructions used for possible states of affairs or intentions are also used in future negative clauses, while present and past negative clauses display the same

constructions used in the corresponding positive clauses. This pattern is attested, for example, in Cuiba and Nivkh (Miestamo 2005a: 104; 271). In other cases, past negative clauses take the same construction used for counterfactual states of affairs, while present and future negative clauses take either the same constructions used in the the corresponding positive clauses, or some other construction, possibly used to encode other types of unrealized states of affairs in positive clauses.

In Burarra, for example, past negative clauses take the same verb forms used to encode counterfactual states of affairs, while present and future negative clauses take the same forms used in the corresponding positive clauses ((14); a similar pattern is attested in Bininj Gun-wok, as can be seen from (13) above). In Maŋarayi, past negative clauses take the same verb forms used for counterfactual states of affairs, while non past negative clauses take a form characterized by the absence of the so-called first-order prefixes that occur with the forms used in the corresponding positive clauses ((15)). In Alambak, the verb forms used in past negative clauses display morphemes that can also be used to encode counterfactual states of affairs, while the forms used in present negative clauses take morphemes that can also be used to express commands ((16)).

Burarra (Australian)

- (14) (a) *jimarna a-na-bo-ya-rna*
 supposedly toward-go-CONT-CTF
 ‘I supposed he would have come today’
- (b) *gala japalana nyi-na-ga-nja-rna*
 NEG drum 2SG.3SG-toward-take-CONT-CTF
 ‘You didn’t bring the drum today’
- (c) *a-boy-barra*
 3SG-go-FUT
 ‘He will go’
- (d) *gala a-boy-barra ngika*
 NEG 3SG-go-FUT no
 ‘He is not going to go , no siree’ (quoted in Miestamo 2005a: 165)

Maŋarayi (Australian)

- (15) (a) ‘*yulgmiŋ ɲa-ma-m*
 sugar 1SG-say-PAST.NEG
 ‘I should have said ‘sugar’ (Merlan 1982: 150)
- (b) *ɖayi buy? ñanbur-wu-ya-b*
 NEG show 3DU/2SG-AUX-AUG-PAST.NEG
 ‘They didn’t show you’ (Merlan 1982: 150)
- (c) *jilg ja-way-(y)i-n*
 rain PREF-AUX-MP-PRES
 ‘It’s raining’ (Merlan 1982: 144)

unrealized states of affairs to different types of negative clauses⁴. Once a construction has been extended to particular types of negative clauses, it is possible that it is further extended to all types of negative clauses, which provides a possible explanation for the pattern found in languages such as Caddo (Chafe 1995) or Muna (Van den Berg 1989).

This scenario highlights another issue that has generally been disregarded in the literature on irrealis, that of the precise nature of the cognitive mechanisms responsible for individual multifunctionality patterns. The idea that languages make a general distinction between realized and unrealized states of affairs implies that speakers establish some connection between various types of states of affairs, and that this connection is based on the fact that these states of affairs share some property, such as the fact of being unrealized. Yet, the patterns just described for negative clauses suggest different mechanisms.

For example, if individual constructions are extended from negated intentions and possibilities to negated futures because of contextual inferences, this does not point to any specific connection that speakers establish between negated intentions, possibilities, and futures as such. What happens is rather that, in some of the contexts involving negated intentions and possibilities, an additional meaning component (the fact that the relevant state of affairs will not take place) may be inferred that becomes associated with the specific construction used in the context, and leads to the extension of that construction to negated futures. This extension is based on a process of form-meaning recombination in specific contexts, not any association between negated intentions, possibilities, and futures as such (see Croft 2000 and Cristofaro 2009b for detailed discussion of this type of process).

Similar observations apply to the case of counterfactuality and past negation. Counterfactuality involves two meaning components, the fact that it was possible for some state of affairs to take place in the past, and the fact that it didn't take place. The extension of counterfactual constructions to negative past clauses may be determined by the fact that the former component may be deactivated in some contexts, and the construction is extended to contexts involving the second meaning component only. This is the process that Bybee, Perkins, and Pagliuca (1994: 81-7; 289-93) call generalization (see also Cristofaro 2009b and 2009c). What happens in this case is that speakers reinterpret the meaning associated with particular constructions by eliminating some aspects of this

⁴In discussing counterfactuality in the non-Pama-Nyungan languages of Northern Australia, Verstraete (2005) proposes a slightly different account of the connection between negation and counterfactual contexts. This connection, he argues, involves negation in general, not just negated past states of affairs. Since counterfactual contexts imply that the relevant states of affairs did not take place, the constructions used in these contexts, which are originally used to encode possible or future states of affairs, come to be associated with a general meaning of unrealized state of affairs (rather than with a meaning of state of affairs that did not take in the past, as assumed here). As a result, these constructions are extended to negative contexts. Hence, Verstraete argues, the reason why the constructions used in negative clauses may also be used to encode some types of unrealized states of affairs is that these constructions are also used in counterfactual contexts. If this were the case, however, one would expect that the constructions used in counterfactual contexts would be extended to just any type of negative clause, not just past negative clauses. The examples discussed here also show that some constructions may be used for nonpast negation and possible, rather than counterfactual states of affairs. All this suggests that there are separate developments paths from clauses involving different types of unrealized states of affairs to different types of negative clauses.

meaning, rather than establishing specific connections between different meanings.

Other multifunctionality patterns involving unrealized situations are also plausibly accounted for in terms of processes of contextual inference. For example, as is shown by (10), commands may be encoded by the same constructions used for obligation, possibility, and desires. In principle, this could be due to the fact that all of these uses involve states of affairs that may take place in the future. Another possibility is however that this is because, in some contexts, a statement that some entity must, may or will perform some action may trigger an inference that the speaker is conveying an indirect request that the action be performed. This analysis is supported by the fact that constructions used for obligation, possibility and desires tend to be used for polite, rather than direct commands. For example, Jamul Tiipay has a dedicated verb form for direct imperatives, while polite imperatives take the affix *-x-* (which Miller (2001) labels ‘irrealis’ in the grammar), also used to encode futures and possible states of affairs, obligation, inferences, purpose, conditions, and complements of ‘want’ verbs.

Jamul Tiipay (Hokan)

- (17) (a) *ke-naw*
2-run
‘Run! (basic imperative)’ (Miller 2001: 136)
- (b) *nya-m-mápa-pu m-rar-x-s*
INDEF-2-want-DEM 2-do-IRR-EMPH
‘Do whatever you want (polite imperative)’ (Miller 2001: 187)

Bybee, Perkins, and Pagliuca’s (1994) aforementioned analysis of the development of futures also implies that this development is based on contextual inference, and so does Verstraete’s (2005) account of why constructions used to encode possible states of affairs can also be used in counterfactual contexts (see e.g. the examples in (10)). Counterfactual states of affairs are states of affairs that could have occurred in the past, but didn’t. Since the occurrence of past states of affairs is inherently verifiable, Verstraete argues, if a form encoding a possible state of affairs is used in a past context this triggers an inference that that the state of affairs did not take place, because otherwise a more informative expression of certainty would have been used.

All this does not exclude that particular multifunctionality patterns may originate from specific connections that speakers establish between different types of unrealized states of affairs, based on the fact that these states of affairs share some property. This could be the case for at least some multifunctionality patterns, even if the relevant property may not be the fact that the various states of affairs are unrealized. For example, some languages use the same constructions (not used in positive declarative clauses) for negative and interrogative clauses. While this has been accounted for in terms of the unrealized status of the states of affairs being encoded (see e.g. Miestamo 2005a), these constructions often display morphemes that are in complementary distribution with morphemes indicating degree of certainty, authority for assertion, and the like. In Imbabura Quechua, for example, negative and interrogative clauses take the morpheme *-chu* ((18)),

which is one of a set of morphemes that Cole (1985: 164) calls validators, that is, morphemes used to express authority for assertion and degree of certainty. This suggests that the use of these constructions could be based on the non-declarative character of negative and interrogative clauses, rather than the fact that they encode unrealized states of affairs. This too, however, would originate from the fact that speakers establish an association between different contexts involving unrealized states of affairs based on some shared property of these contexts⁵.

Imbabura Quechua (Quechuan)

- (18) (a) *ñuka wawki mana jatun wasi-ta chari-n-chu*
 my brother not big house-ACC have-3-VAL
 ‘My brother does not have a big house’
- (b) *kan-paj wawki jatun wasi-ta chari-n-chu*
 you-POSS brother big house-ACC have-3-VAL
 ‘Does your brother have a big house?’ (Cole 1985: 64)

Thus, once again, the specific mechanisms responsible for different multifunctionality patterns involving unrealized states of affairs should always be investigated on a case-by-case basis. If particular patterns do not point to any connection that speakers establish between different types of states of affairs, however, these patterns provide no evidence that the various types are part of the same class in a speaker’s mental representation. In this respect, the fact that some patterns may be based on contextual inference or generalization weakens the hypothesis that the language has a grammatical category of irrealis, not so much in the sense that the notion of unrealized state of affairs plays no role in these patterns, but rather in the sense that there is no evidence that the relevant types of unrealized states of affairs are included within the same grammatical category at all.

A final point about the idea that individual multifunctionality patterns are based on the notion of unrealized state of affairs is that this idea is based on an underlying assumption that all of the uses of a particular construction are motivated in the same way, that is, they originate from the unrealized status of the relevant states of affairs. This assumption is also found in some analyses that have been proposed to account for the fact that, cross-linguistically, the multifunctionality patterns involving unrealized states of affairs may or may not include particular types of states of affairs, as found for example in imperative and habitual contexts. This has been argued to be due to the fact that these states of affairs may or may not be conceptualized as unrealized (Givón 1994, Mithun 1995, Elliott 2000, Palmer 2001), which implies that the use of the relevant constructions is always motivated in terms of the unrealized status of the states of affairs that they encode. Yet, the literature

⁵In other cases, the structural similarities between negative and interrogative clauses are due to highly particularized grammaticalization phenomena. For example, Miestamo (2005a: 108; 225) reports that in Egyptian Arabic negated perfectives take a suffix that is sometimes used as an interrogative marker. This suffix goes back to a lexical item meaning ‘thing’, and it may have given rise to the interrogative and the negative function through separate grammaticalization patterns.

on semantic maps (see e.g. Haspelmath 1997 and 2003, among many others) has long shown that different mechanisms may lead to different uses of the same construction, and this appears to be the case also for the patterns discussed in this section. For example, the notion of intentionality may account for the extension of particular constructions from the expression of desire and obligation to that of future, but other mechanisms may be involved in the extension of future forms to other contexts (e.g. commands, as proposed above). Thus, for each multifunctionality pattern involving unrealized states of affairs, the precise connections should be investigated between each of the uses of the relevant constructions, even when a single motivation (e.g. the fact that the relevant states of affairs all share some particular property) could in principle hold for all of these uses. Just like the mechanisms of contextual inference and generalization discussed above, the fact that there may be different motivations for different uses means that these uses provide no evidence that the relevant states of affairs form a single class in a speaker's mental representation, nor, therefore, that these states of affairs are included within the same grammatical category.

The hypotheses presented in this section by no means exhaust the range of possible mechanisms that may give rise to multifunctionality patterns involving unrealized states of affairs. A general theoretical point about the relevant data is however that, just like those presented in section 2, they basically reveal that particular notions that can be used to describe observed grammatical patterns may not provide an adequate characterization of the grammatical categories instantiated in these patterns, or the processes from which these patterns arise. In this case, the characterization is inadequate insofar as a number of patterns that can be described in terms of the notion of unrealized state of affairs do not provide evidence that the language has a grammatical category (*irrealis*) based on this notion, nor that this notion plays a role in the language anyway. This holds in two senses. First, the notion of unrealized situation may play no role in the diachronic mechanisms that give rise to individual patterns. Second, these mechanisms may provide no evidence that different types of unrealized states of affairs are included within the same grammatical category in the language. It may still be the case that a speaker's synchronic use of the relevant constructions is determined by some generalization based on the notion of unrealized state of affairs, but this should be demonstrated independently of the fact that the distribution of these constructions can be described in terms of this notion.

4 'Irrealis' as a conceptual notion and as a grammatical category

Cross-linguistic investigation suggests that there actually are cases in which the notion of unrealized state of affairs provides a plausible explanation for the origin of some multifunctionality patterns. For example, as can be seen from (5) above, in the Homeric stage of Ancient Greek optatives are used in main clauses expressing possibilities and wishes, in purpose clauses, and in counterfactual conditions. At a later stage of the language,

optatives come to be used in two major types of complement clauses. One type, as was mentioned in section 1, involves cases where the complement clause conveys presupposed, already known, or inferable information. The other type involves contexts where the speaker is not committed to the propositional content of the complement clause, for example because it is somebody else’s opinion ((19a)). Sometimes, the sentence may explicitly specify that the propositional content of the complement clause is in fact false ((19b)).

Ancient Greek (Indo-European)

- (19) (a) *légontes hōs ouk epì tōi kakōs páschein ekpémphtheian*
saying that not to the badly suffer send:PASS:OPT.AOR:3PL
‘Saying that they were not sent out to be ill-treated’ (Thucydides 1.38.1)
- (b) *kai akoúsantes [...] tá te álla epagōgà kai ouk alēthē kai*
and hearing the PTCL other alluring and not true and
perì tōn chremátōn ōs eīē hetoîma én te toîs
about the money that be.OPT.PRES.3SG ready in PTCL the
hierōis pollá
temples much
‘After hearing [...] a report, as attractive as it was untrue, upon the state of affairs generally, and in particular as to the money, of which, it was said, there was abundance in the temples’ (Thucydides 6.8.2)

In these contexts, optatives are used to raise doubts about the truth of some propositional content, that is, to indicate that the corresponding state of affairs may or may not be the case. There does not seem to be any obvious way in which this specific meaning can be directly related to the previous contexts of occurrence of optatives, in that these involve states of affairs that are positively presented as not occurring, either in that they may possibly take place at some later point, as in (5a-c), or in that they failed to take place in the past, as in (5d). The one feature that makes it possible to relate the old and the new contexts of occurrence of optatives is, however, that the relevant states of affairs are not presented as positively realized. It is then possible that the new uses originated from a process of extension based on this property.

Vida and Manelis Klein (1998) suggest another possible diachronic process which may be based on the notion of unrealized state of affairs. Pilagá and Toba have a system of three particles, coming/proximal, going away/past, and absent/distal. These can be attached to nouns, proforms, and demonstratives. The absent/distal particle is used whenever the referent is unknown or out of sight, which may refer to indefinite referents (for example, ‘somebody fainted’, ‘someone goes’), or to referents involved in unrealized states of affairs, because these referents too may be out of sight. For example, in a sentence with future meaning, such as ‘I will give you the bread’ the object of the verb may be out of sight, in which case the distal classifier is used. Vida and Manelis Klein (1998) argue that this may trigger an inference that the distal particle indicates that the

state of affairs is unrealized, which may lead to the grammaticalization of this particle into an 'irrealis' marker.

The pattern described by Vida and Manelis Klein (1998) is found in a number of languages of the Americas. For example, Shuswap (Kuipers 1974) has a system of three particles, present, absent and hypothetical-indeterminate, which are used with nouns depending on whether the entity meant is uniquely determined for the speaker, that is, whether the speaker could conceivably point it out. The hypothetical-indeterminate particle is also found on the nominalized forms of the verb used in interrogative, negative, imperative, conditional, and future clauses. In this case too, this use of the particle might have originated from the fact that entities that cannot be pointed out by the speaker are often involved in unrealized states of affairs, and the particle has therefore be reanalyzed as a general marker for such states of affairs. The present particle, by contrast, is found in nominalized verb forms encoding strings of realized sequential states of affairs, of the type 'and then this happened, and then that happened'.

Alternative analyses of these data are also possible. For example, particles originally designating out-of-sight referents could be reanalyzed not as general markers of unrealized states of affairs, but as markers of the specific states of affairs that involve out-of-sight referents, that is, futures, conditions, etc. In this case, the notion of unrealized state of affairs would play no role in the process. Also, as far as nominalized verb forms in Shuswap are concerned, it could be the case that the hypothetical-indeterminate particle is used in clauses encoding unrealized states of affairs because the whole state of affairs is out of sight, rather than because it is unrealized. Analyses such as that by Vida and Manelis Klein (1998) differ however from other proposals on 'irrealis' in that they postulate specific diachronic processes based on the notion of unrealized state of affairs, rather than assuming that this notion plays a role in the language just because different types of unrealized states of affairs are encoded in the same way. The idea that languages make no general distinction between realized and unrealized states of affairs has led linguists to overlook the possible existence of these processes. Linguists arguing that languages do make this distinction have not tried to identify these processes either, because they have mainly been working in a synchronic perspective.

It is however important to stress that, even if the notion of unrealized state of affairs plays a role in the development of particular grammatical patterns, this does not mean that the language has a grammatical category of irrealis. The fact that individual constructions are typically used only for particular types of unrealized states of affairs (section 3) suggests that a speaker's mental representation of the distribution of these constructions cannot be based on a general notion of unrealized state of affairs, and must include some specification of the particular types of unrealized state of affairs involved in the distribution. More generally, even if the notion of unrealized state of affairs determines the diachronic extension of particular constructions from one context to another, this does not mean that this notion plays any role in a speaker's mental representation of the corresponding constructions at the synchronic level. It is quite possible that, synchronically, speakers have some knowledge of the various contexts in which a particular construction can occur without making any further generalization based on the properties that these

contexts share.

The patterns described in this section suggest that, at least in some cases, the notion of unrealized state of affairs, or ‘irrealis’, is not just a descriptive notion, but a conceptual notion that is significant for speakers insofar as it determines a speaker’s novel uses of particular constructions. This, however, provides no evidence of what grammatical category are part of a speaker’s mental representation at the synchronic level. In this sense, the notion of unrealized state of affairs is indeed theoretically useful, but in the sense that it provides an adequate characterization of particular diachronic processes, rather than a characterization of the grammar of the language as presumably represented in a speaker’s mind.

5 Concluding remarks

Most of the debate on ‘irrealis’ has been characterized by an underlying assumption that, since particular grammatical patterns can be described in terms of a general notion of unrealized state of affairs, this notion plays a role in a speaker’s uses of the relevant constructions. This implies that either the language has some grammatical category based on the notion of unrealized state of affairs, which determines a speaker’s uses of the relevant constructions at the synchronic level, or at least this notion plays a role in the diachronic processes that give rise to the various patterns, even if it may not be part of the synchronic representation of these patterns in a speaker’s mental grammar.

In this respect, the debate on ‘irrealis’ is representative of a widespread approach in linguistic analysis. Linguists use particular notions because these notions provide an effective way to describe and classify some observed grammatical patterns, and they assume that these descriptive notions correspond to grammatical categories of the language, or play a role in the grammar of the language anyway. The descriptive notions are in fact used for explanatory purposes, that is, it is assumed that the reason why languages have grammatical patterns that can be described in terms of some particular notion is that this notion plays a role in the shaping of these patterns.

This approach is most closely associated with generatively oriented theories of grammar, where the categories used to describe observed grammatical patterns are assumed to provide an explanation for these patterns insofar as they are part of the general architecture of clause structure that is presumably represented in a speaker’s mind. Linguists working within the functional-typological approach, on the other hand, are often ambiguous as to whether the notions that they use to describe particular patterns are just classification devices, or they are also assumed to play some role in the grammatical organization of the relevant languages. In this approach too, however, linguists often wonder about whether or not some category should be assumed to have some particular property, whether or not some construction instantiates some particular category, or whether or not some category is present in some particular language (see Haspelmath 2007 and Cristofaro 2009a for detailed discussion of this point). These questions imply that the relevant categories are part of the grammar of particular languages independently

of a linguist's description of that grammar, and they have also been raised in the debate on 'irrealis', e.g. linguists have raised the issue of whether or not 'irrealis' includes notions such as negation, questions, or habituality, and whether or not particular constructions in particular languages involve 'irrealis'.

Yet, as has been repeatedly emphasized in the typological literature (Dryer 1997, 2006a and 2006b, Haspelmath 2004 and 2007), the description of observed grammatical patterns should be kept distinct from the formulation of hypotheses about the grammatical categories instantiated in these patterns, and, more generally, the formulation of explanatory generalizations about these patterns. This emerges most clearly from the cross-linguistic patterns pertaining to unrealized states of affairs. Although particular patterns can be described in terms of the notion of unrealized state of affairs, it is possible that this notion plays no role in the relevant grammatical domains (such as person marking), either in the sense that these domains may not actually reflect the realized vs. unrealized status of the states of affairs being described, or in the sense that they may not reflect specific groupings of unrealized states of affairs that originate from this notion. Also, although particular constructions encode different types of unrealized states of affairs, this distribution may originate from mechanisms independent of the notion of unrealized state of affairs as such. In fact, as has also been observed by Bybee (1986) with regard to grammatical categories in general, the available evidence suggests that in many cases the relevant constructions may be extended from one type of unrealized state of affairs to another due to processes of inference or generalization that take place in highly particularized contexts, rather than because of some general notion that leads speakers to establish a connection between the various contexts of use of the constructions. This weakens the hypothesis that the various types of unrealized states of affairs are included in a single class in a speaker's mental grammar. It is however also possible that the notion of unrealized state of affairs does play a role in the diachronic processes that give rise to specific multifunctionality patterns cross-linguistically, even if it plays no role in a speaker's synchronic uses of the relevant constructions.

In many cases, the failure to distinguish between the possibility to use the notion of unrealized state of affairs for descriptive purposes and the fact that this notion plays a role in the processes that give rise to particular grammatical patterns has introduced unnecessary theoretical problems in the debate on 'irrealis'. In particular, linguists have tried to account for the fact that individual multifunctionality patterns may not include the same range of unrealized states of affairs cross-linguistically, and that they may also include particular types of realized states of affairs. They have assumed that this is because the grammatical category of irrealis may have different properties from one language to another, and they have tried to define what these properties are for individual languages (see e.g. Bugenhagen 1993). It has also been argued that particular types of states of affairs (as found for example in commands, questions, negation, and habitual contexts) may actually be nonprototypical instances of an unrealized state of affairs, which leads to their being conceptualized as either realized or unrealized in different languages (Givón 1994, Mithun 1995, Elliott 2000, Palmer 2001: 188-91). Factors such as scope have also been assumed to interfere with the realized/unrealized distinction (Mithun 1995). While

these analyses may account for particular cases in particular languages, the theoretical problems that they address disappear once the idea is abandoned that the grammatical patterns that can be described in terms of the notion of unrealized state of affairs should also be accounted for in terms of this notion, and it is recognized that this notion may possibly play a role only in highly specific diachronic processes.

List of abbreviations

ABS	absolutive	IMPFV	imperfective
ACC	accusative	IND	indicative
ADMIR	admirative	INDEF	indefinite
AG	agent	INF	infinitive
AL	alienable	INFER	inferential
AOR	aorist	INIRR	intensive irrealis
AUG	augment	IP	independent pronoun
AUX	auxiliary	IRR	irrealis
BEN	benefactive	M	masculine
BENEF	beneficiary	MDL	middle
BF	buffer	MP	mediopassive
CAV	caveat [lest, negative purpose]	NEG	negation
COND	conditional	NOMLZ	nominalization
CONJ	conjunction	OBJ	object
CTF	counterfactual	OPT	optative
DEM	demonstrative	ORIG	origin
DES	desiderative	P	patient
DL	dual	PASS	passive
DS	different subject	PAST	past
EMH	emphatic	PERF	perfect
F	female	PHR.TERM	phrase terminal marker
FAC	factive	PL	plural
FUT	future	POSS	possessive
HORT	hortative	POT	potential
IMM	immediate	PRES	present
IMP	imperative	PROGR	progressive
		PROH	prohibitive
		PROM	promised
		PTCL	particle

PTCPL	participle	SS	same subject
Q	question	SUBJN	subjunctive
REL	relative conjunction	TR	transitive
REM	remote	UA	unit augmentative
RPL	reduplication	VAL	validator
S	subject	VAUG	verb augmentative prefix
SG	singular	VE	vegetable
SIM	simultaneous		

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