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'Realis' and 'irrealis' in Wogeo: A valid category?

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Finite verb forms in Wogeo, an Austronesian language of New Guinea, are obligatorily marked with a portmanteau prefix denoting person and number of the subject on the one hand, and a grammatical category that is conventionally glossed in the literature as realis–irrealis, on the other. In similar languages, the latter category is usually described as modal, with a certain range of meanings which is, in many cases, only vaguely defined. A more in-depth investigation of the verbal system of Wogeo and the functional distribution of the respective categories shows, however, that the language is quite different from a postulated prototypical realis–irrealis language. Central attributes of the supposed realis–irrealis semantics are not realized by the obligatory prefixes but by other morphosyntactic means, while the prefixes are restricted to only a small part of the assumed realis–irrealis domain.

1. INTRODUCTION.[1] In the linguistic literature, 'realis' and 'irrealis' have most often been discussed under the more general heading of *mood* and *modality*. These in turn are terms which are almost universally used in linguistics (with or without difference in meaning), yet a satisfactory definition is largely a matter of ongoing debate. The problem with many existing definitions is that they are either too vague and leave too much to implicit assumptions, as is often the case in purely descriptive contexts; or, if they attempt to be explicit, they frequently resort to disjunctive characterizations, involving statements like

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"A is X *or* Y *or* Z." A full discussion of the terms mood and/or modality is well beyond the scope of this paper; however, a working definition is needed to investigate the issue of realis–irrealis in a meaningful way.

In the following section, therefore, such working definitions are discussed, and the position of realis–irrealis with respect to the category of mood (or modality) is discussed. Then, a brief review of proposed 'realis–irrealis' categories across languages is given and the comparability of those categories is discussed. Finally, an overview of the verbal morphosyntax of Wogeo is given and the usefulness of the *realis–irrealis* terminology is reassessed in the light of the evidence that can be gained from the Wogeo data.

2. TERMINOLOGICAL ISSUES. As a first step, as observed by Cristofaro (2012), it is important to distinguish between the semantic (or conceptual) domain we are dealing with, on the one hand, and any grammatical categories that *realize* that domain, on the other. For the former, the term *modality* is often used, whereas the term *mood* is commonly reserved for the latter. The distinction between semantic domain and grammatical category will be taken as fundamental in the discussion that follows.

Palmer (2001:1) defines modality as being "concerned with the status of the proposition that describes the event." This is an example of what has been referred to above as a vague definition, since it is left implicit what exactly is meant by *concerned with* and, especially, the *status of the proposition – status* in relation to what? Somewhat more explicit is the definition given by Portner (2009:1), who suggests that "modality is the linguistic phenomenon whereby grammar allows one to say things about, or on the basis of, situations which need not be real." As Portner himself points out, it is not immediately obvious how to define the term *real*; yet, the definition is more useful in practice than Palmer's.

Further differences can be found in the ways in which different researchers subdivide the modal semantic domain. Givón (2001), e.g., views the division between *presuppositions* and *assertions* as primary; assertions are then divided into *realis* and *irrealis*; and realis assertions are classified as *positive* or *negative*. Palmer (2001), on the other hand, takes a more traditional position, distinguishing *propositional modality* (subdivided into *epistemic* vs. *evidential*) from *event modality* (subdivided into *deontic* vs. *dynamic*[2]). Finally, Bybee (1998) distinguishes four subdomains: *agent-oriented*, *speaker-oriented*, *epistemic*[3] and *subordinating* modality. The most striking way in which Bybee's approach differs from the former two, though, is that she argues that the supposed subdomains of modality are really four independent semantic domains, the connection between which is mainly diachronic, not synchronic. The subdivisions within the domain of modality that Givón, Palmer and Bybee propose are summarized in table 1.

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[2]   In Palmer's terminology, dynamic modality subsumes ability and willingness.

[3]   Agent-oriented modality (in Bybee's terms) includes, but need not be restricted to: obligation, permission, volition, ability; speaker-oriented: imperative, permissive; epistemic: uncertainty, possibility, probability.

Givón	Palmer	Bybee
Presupposition	Propositional modality:	Agent-oriented modality
Realis assertion:	Epistemic	Speaker-oriented modality
Positive	Evidential	Epistemic modality
Negative	Event modality:	Subordinating modality
Irrealis assertion	Deontic	
	Dynamic	

TABLE 1. Subdivisions of modality according to Givón (2001), Palmer (2001) and Bybee (1998)

A different approach is taken by van der Auwera & Plungian (1998). They choose to restrict the use of the term *modal* to those categories whose functions can be described by reference to the concepts of *possibility* and *necessity*, explicitly excluding categories like volition, evidentiality, etc., from the realm of modality. The classification of van der Auwera & Plungian is summarized in table 2.

Possibility			
Non-epistemic			Epistemic
Participant-internal	Participant-external		Epistemic
	Non-deontic	Deontic	
Participant-internal	Non-deontic	Deontic	Epistemic
	Participant-external		Epistemic
Non-epistemic			
Necessity			

TABLE 2. Subdivisions of modality according to van der Auwera & Plungian (1998)

Obviously, Givón, Palmer, Bybee and van der Auwera & Plungian subdivide the semantic domain of modality on the basis of different criteria. These should, therefore, be seen as complementary approaches which can very well be applied independently to arrive at cross-cutting classifications. The question that poses itself is, then, which of the strategies (if any) is (or are) most fruitful in solving the realis–irrealis issue we are currently concerned with. For reasons which will become clear in sections 4 and 5 below, I will adopt the restrictive approach of van der Auwera & Plungian (1998) as a working hypothesis for the domain of modality.

   As will become clear in section 3, the semantic domain that a putative realis–irrealis domain has been claimed to subsume overlaps to a large degree with what different authors assume to be within the realm of modality, plus other areas that would not traditionally be

viewed as modal, such as, e.g., future (tense) or habitual (aspect). It is therefore instructive as a starting point to look at different proposals as to what realis–irrealis really is. Mauri & Sansò (2012) provide a very good overview of the current debate. The main positions that are relevant to the present discussion can, according to them, be summarized as follows:

1. Irrealis is a kind of 'mega-modality' subsuming a number of modal subdomains.
2. Realis–irrealis is the same as modality.
3. Realis and irrealis are themselves modal categories.
4. Realis and irrealis are the values of a category 'reality status' which is independent of modality.

If the last position, advocated e.g. by Elliott (2000), is correct, it should be possible to identify the semantic content that is expressed by such a category. Pietrandrea (2012:186) argues in a top-down approach in favor of a category of 'reality status' as distinct from modality. For her, irrealis states of affairs are *non-actualized*, meaning they are "presented as not grounded in perceivable reality."

The task of identifying the meaning expressed by 'reality status' is taken up in a very different way by de Haan (2012). In his bottom-up typological study, he sets out to investigate the claim that there is a prototypical semantic core that can be assigned to those cases that have been analyzed as instances of realis–irrealis. His conclusion, however, is negative: Many alternative core meanings can be found, none of which can convincingly be argued to have priority over the others. Thus, it is completely open what should be the core and what should be the periphery of the category 'reality status'. Therefore, de Haan argues, it cannot at present be shown to be a typologically valid category.

3. Previous Typological Studies.   Having been sensitized to the complexity of the issues involving modality and reality status as well as the relationship between the two, we are now in a position to give a concise overview of previous typological studies relating to the issue of the elusive 'realis–irrealis' category in various languages, language families and geographical areas. We will focus on three studies: Bugenhagen (1993), Elliott (2000) and van Gijn & Gipper (2009).

Bugenhagen's (1993) paper is particularly interesting in the present context because it investigates the semantics of what is called 'irrealis' in seven Austronesian languages of New Guinea. The languages in his sample are therefore both genetically and geographically comparable to Wogeo.[4] On the basis of his database, he identifies what can be described as a *prototypical semantic core* for the realis and irrealis categories (for the given language family and area): prototypical realis semantics is associated with positive polarity, non-future tense, perfective aspect and declarative speech acts,[5] while irrealis semantics is associated with future tense, hypothetical conditional clauses, counterfactual conditional

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[4]   In Bugenhagen (1993), as almost everywhere else (including this paper), *irrealis* is taken to be the category in need of explanation, with *realis* left as the unmarked member of the dichotomy. The relationship between the two terms is thus fundamentally *asymmetrical*.

[5]   A slightly different core meaning for realis is assumed by van der Auwera & Devos (2012:172), namely a "main clause affirmative declarative referring to the present time sphere".

clauses, complements of 'want', and negative purpose clauses ('lest'). Bugenhagen's prototypical uses of realis and irrealis are summarized in table 3.

Realis	Irrealis
Positive polarity	Future tense
Non-future tense	Hypothetical conditional clauses
Perfective aspect	Counterfactual conditional clauses
Declarative speech acts	Complements of 'want'
	Negative purpose clauses ('lest')

TABLE 3. Prototypical uses of realis and irrealis in Austronesian languages of New Guinea according to Bugenhagen (1993)

The characterization of the (supposed) irrealis semantic domain by means of a number of notions reminds us of Bybee's (1998) view of the domain as a set of notions linked by partial similarities (family resemblances) as discussed above. This view is augmented by Bugenhagen (again, for his data set only) by explicitly postulating a semantic *focal area* within the broader domain where the languages are largely in agreement, and more peripheral areas where individual languages show specific patterns. (Looking at Bugenhagen's list, one would have to state more precisely that it represents *several interconnected focal areas* rather than one, as proposed by de Haan 2012.) Bugenhagen explicitly points out, however, that despite the relatedness and close proximity of the languages, "no two of them exhibit a completely identical range of uses for their irrealis forms" (1993:35). We shall see below whether Wogeo fits Bugenhagen's generalizations.

Elliott, too, investigates a number of languages with an alleged realis–irrealis distinction, with the aim to "arrive inductively at a typological description of this category" (2000:56). The number of languages included in her database (16) is slightly larger than the number of languages investigated by Bugenhagen, and she uses a different sampling strategy, with languages drawn from widely different families and geographical areas.

Elliott arrives at a result which is completely different from Bugenhagen's (1993): She argues for a grammatical category *reality status* (the term originating in Whorf 1938) with the values *realis* and *irrealis*, and she claims that it is in fact possible to identify a common semantic component in all uses of the category. For Elliott, the common semantic core of irrealis is that "irrealis events or states are perceived as being located in an alternative hypothetical or imagined world, but not the real world" (2000:81). The semantic area thus covered by 'irrealis' is, however, extremely broad and includes potential events, conditionals, events qualified by modality, and commands; additionally, negations, habituals, and interrogatives may also be subsumed by 'irrealis' (2000:70).

I see two problems in Elliott's approach: First, the distinction (if any) between modality on the one hand and her 'reality status' on the other is not defined systematically; and second, the large cross-linguistic differences in the semantics of 'irrealis' are left unexplained.

Van Gijn & Gipper (2009) use a third approach, providing an in-depth analysis of the

realis–irrealis system of a single language (Yurakaré, an unclassified South American language) and comparing it to six other languages from different families and areas. They arrive at the conclusion that the semantic domain underlying the alleged realis–irrealis distinction is best described not in binary terms, but in terms of a *continuum* (from *counterfactual* via *possible* to *factual*) – with the endpoints typically marked by irrealis on the one hand and realis on the other hand, and a 'grey area' in between – which languages divide in specific ways. Particular areas on the continuum are then again subdivided: possible events into events *with* and *without speaker commitment*, and factual events into *temporal* and *atemporal* events. These findings are then expressed in terms of an *implicational hierarchy* (2009:176; SC = 'speaker commitment'; TS = 'temporally specific'):

counterfactual < possible [−SC] < possible [+SC] < factual [−TS] < factual [+TS]

Van Gijn & Gipper thus introduce the idea of an empirically based implicational hierarchy (and subhierarchies) into the discussion. Unfortunately, however, as we will see below, Wogeo constitutes a clear counterexample to the generalization expressed in that hierarchy. It seems likely that the data base that van Gijn & Gipper base their proposal on is much too small to adequately capture a phenomenon as complex as the one under discussion here.

In my view, what van Gijn & Gipper's (2009) approach does not adequately explain is the fundamental asymmetry between the alleged endpoints of the continuum (on the one hand, 'realis' as a cross-linguistically fairly well-defined category covering a rather narrow semantic area; and on the other hand, 'irrealis' as an extremely wide, vague, and fuzzy category with large cross-linguistic variation and no clearly discernible semantic core). Moreover, 'factuality' is usually (if not always) not the *only* semantic component of the relevant grammatical categories; therefore, the supposed continuum may be better described as the result of cross-classification by different independent categories.

4. Realis and Irrealis in Wogeo. We will now turn to Wogeo and the formal and semantic properties of its 'realis–irrealis' morphological category. Wogeo is an Austronesian language spoken by at most (and probably less than) 1600 people on Vokeo and Koil Islands off the north coast of New Guinea. Previous anthropological studies on Wogeo include Hogbin (1970, 1978) and Anderson (2011). Exter (2003) is an analysis of the phonology of the language, and Anderson & Exter (2005) is a collection of traditional Wogeo texts for the speech community as well as a mainly anthropological academic audience. Exter (2012), still work in progress, is intended to be a comprehensive grammatical description. The data presented here are based on my own fieldwork, conducted in 1999 and 2000.

Finite verbs in Wogeo (i.e. all verb forms except verbal nouns / gerunds) are marked with an obligatory portmanteau prefix that denotes the person and number of the subject as well as realis or irrealis.[6] That means that none of the values of the dichotomous realis–irrealis category is formally unmarked in Wogeo. It also means that every sentence with a

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[6] Imperative and prohibitive forms are the only exceptions to this generalization (see below). – To facilitate the discussion below, I will continue to use the terms *realis* and *irrealis* for the time being.

verbal predicate in Wogeo is marked either as realis or as irrealis; there are no unmarked sentences (and by the same token, no unmarked events). No other part of the verb in Wogeo (apart from the stem) is formally obligatory. Thus, it is fair to say that in all respects the Wogeo verbal system is organized around the realis–irrealis category.

   As can be seen from the template in table 4, slots −6 and −5 (optional) and slot −4 (obligatory) all contain information related to tense, aspect, and/or mood: Slot −6 contains the *counterfactual* prefix; slot −5 contains the *future*, *tentative*, *proximal imperfective* and *distal imperfective* prefixes; and slot −4 contains the *person/number/realis–irrealis* portmanteau prefixes.[7]

CNTF	TAM	**PNM**	INCH	CAUS	IPFV (RDP)	**Stem**	IPFV (RDP)	DIR	APPL	P	N	BEN	P	N
−6	−5	**−4**	−3	−2	−1	**0**	1	2	3	4	5	6	7	8

TABLE 4. Schematic morphological structure of the verb in Wogeo (obligatory slots are bold; slots that show higher internal coherence are shaded grey)

Table 5 gives an overview over the PNM prefixes (slot −4) in Wogeo. As can be seen, there are four number categories (singular, plural, dual, paucal); tildes indicate synonymous forms. Inspection of the paradigm immediately shows that it is quite 'messy': There are many homonymous forms (e.g. 1PL.RLS and 1PL.IRR, 1DU.RLS and 1PAU.RLS) and partly homonymous forms (e.g. 2SG.RLS and 2SG.IRR) without a clearly discernible pattern (although conspicuously, the distinction between realis and irrealis is neutralized in the plural). Not surprisingly, corresponding realis and irrealis forms appear to be diachronically related; synchronically, however, the two categories cannot be reduced to a simpler analysis.

   The table only shows the so-called *plain* realis–irrealis paradigm (i.e. with slots −6 and −5 remaining empty). If the complete PNM paradigms of all complex categories are taken into account, an extremely complex picture emerges, which includes multiple complicating factors such as vowel assimilation; idiosyncratic fusions, vowel changes, and vowel deletions; and even more complex patterns of synonymy and homonymy. For the point made in the present paper, therefore, this morphophonological and morphological complexity will not be dealt with further.

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[7]   Abbreviations used in this paper: A='aspect'; APPL='applicative'; BEN='benefactive'; CAUS='causative'; CNTF='counterfactual'; DIR='directional'; DIST='distal'; DU='dual'; FOC='focus'; FUT='future'; INCH='inchoative'; IPFV='imperfective'; IRR='irrealis'; M='mood'; N='number'; NEG='negative'; NMLZ='nominalizer'; P='person'; PAU='paucal'; PL='plural'; PROH='prohibitive'; PROX='proximal'; RDP='reduplication'; RECP='reciprocal'; RLS='realis'; SG='singular'; T='tense'; TENT='tentative'; TOP='topic'.

Person/number	(Plain) realis	(Plain) irrealis
1SG	*o-lako*	*go-lako*
2SG	*go-lako ~ ko-lako*	*go-lako*
3SG	*e-lako*	*de-lako*
1PL	*ta-lako*	*ta-lako*
2PL	*ka-lako*	*ka-lako*
3PL	*da-lako*	*da-lako*
1DU	*to-lako ~ te-lako*	*tog-lako ~ teg-lako*
2DU	*kad-lako ~ kod-lako*	*kad-lako ~ kod-lako*
3DU	*do-lako ~ de-lako*	*dog-lako ~ deg-lako*
1PAU	*to-lako ~ te-lako*	*tog-lako ~ teg-lako*
2PAU	*koto-lako*	*koto-lako*
3PAU	*doto-lako*	*doto-lako*

TABLE 5. The PNM prefixes in (plain) realis and irrealis forms of Wogeo *lako* 'go'

Slots other than −6, −5, and −4 in table 4 (namely slots −3, −1, and 1) contain TAM-related information, too, but it is argued here that the aforementioned slots (i.e. slots −6, −5, and −4) form a unit of their own. Formally, they are a unit because they display morphological idiosyncrasies between each other, such as fusion, vowel assimilation, and a number of other irregularities. Functionally, they are a unit in showing a number of combinatory interdependences (obligatory, optional, and excluded combinations). The same does not apply to the other slots, where agglutination and a large degree of combinability predominate. The resulting combinations of slots −6, −5 and −4 form complex TAM categories[8] which are given convenient summary labels (which I will call *complex-category* labels) here. Those TAM combinations that are well-formed, along with their complex-category labels, are shown in table 6. Where more than one form is given for any complex category, those forms are synonymous.[9]

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[8] 'Complex' should here be taken to mean formally, not semantically, complex.

[9] Note that the so-called *tentative* forms express the meaning 'to try it with X-ing' (or 'to X and see what happens'), not 'to try to X'. – As will become obvious from a closer inspection of table 6, the *tentative* and *counterfactual* markers are homonymous. Two lines of argument are put forward here to justify their analysis as different morphemes: (1) Forms such as *s-o-lako* 'I try it with going' (tentative) and *s-o-lako* 'I would have gone' (counterfactual) show a contrast in meaning that I consider fundamental enough to exclude an analysis with a single polysemous morpheme. (2) The description of the distributional facts is simplified if one assumes that the tentative morpheme is in slot −5 (along with the future morpheme), while the counterfactual morpheme is in slot −6 (cf. table 4): The tentative and future markers (being in the same slot) show identical morphophonological behavior in every detail; the counterfactual marker can then be prefixed to the future + PNM complex. The conspicuous non-combinability of the counterfactual and tentative markers (cf. table 8) might have phonological reasons (haplology leading to a change of **se-s-o-lako tabo > s-o-lako tabo*), thus rendering the negative tentative form homonymous to the

Complex category	Example	Range of meanings
(Plain) realis	*o-lako* 1SG.RLS-go	'I go', 'I went'
(Plain) irrealis	*go-lako* 1SG.IRR-go	'I must go', 'I want to go', 'I will go (now)'
Future	*m-o-lako* FUT-1SG.RLS-go	'I will go', 'I can go', 'I may go'
	mo-go-lako FUT-1SG.IRR-go	
Tentative	*s-o-lako* TENT-1SG.RLS-go	'I try it with going'
	so-go-lako TENT-1SG.IRR-go	
Counterfactual	*s-o-lako* CNTF-1SG.RLS-go	'I would have gone'
Proximal imperfective	*k-o-lako* PROX.IPFV-1SG.RLS-go	'I am going (nearby)', 'I was going (nearby)'
Distal imperfective	*o-lako* DIST.IPFV;1SG.RLS-go	'I am going (further away)', 'I was going (further away)'

TABLE 6. Complex TAM categories encoded on Wogeo *lako* 'go'

As mentioned above, imperatives and prohibitives are exceptions to the pattern illustrated in table 6. The imperative is formed by the bare stem without the otherwise obligatory PNM prefixes; the prohibitive is formed by a combination of a verbal noun and a free grammatical morpheme. The formation of imperatives and prohibitives is summarized in table 7.

Complex category	Example	Range of meanings
Imperative	*lako* go	'Go!'
Tentative imperative	*se-lako* TENT-go	'Try it with going!'
Prohibitive	*lako~lako dol* go~NMLZ PROH	'Don't go!'

TABLE 7. Imperative and prohibitive forms of Wogeo *lako* 'go'

negative (plain) realis form.

Negations in Wogeo (with the exception of prohibitives) are formed analytically by a combination of the *counterfactual* prefix, a *realis* PNM prefix, and the negator *tabo*. Table 8 presents the negative forms of the corresponding non-negative forms found in table 6.[10] Several interesting facts can be noted: firstly, the obligatory combination of the counterfactual with the realis is unusual and surprising. Secondly, in the only complex category where realis and irrealis prefixes can be used interchangeably in the non-negative form (namely the future), the presence of the counterfactual plus negator *precludes* the use of the irrealis prefix (the other non-negative category compatible with both realis *and* irrealis prefixes, the tentative, does not have a specific negative form, as explained above.) And thirdly, there is one category (the future) where the counterfactual prefix is optional.

Corresponding complex category	Example			Range of meanings
(Plain) realis	*s-o-lako* CNTF-1SG.RLS-go	*tabo* NEG		'I do not go', 'I did not go'
(Plain) irrealis	[No negative form exists]			—
Future	*se-m-o-lako* CNTF-FUT-1SG.RLS-go	*tabo* NEG		'I will not go', 'I cannot go', 'I may not go'
	m-o-lako FUT-1SG.RLS-go	*tabo* NEG		
	Not possible:			
	se-mo-go**-lako* CNTF-FUT-**1SG.IRR**-go	*tabo* NEG		
	mo-go**-lako* FUT-**1SG.IRR**-go	*tabo* NEG		
Tentative	[No negative form exists]			—
Counterfactual	*s-o-lako* CNTF-1SG.RLS-go	*tabo* NEG		'I would not have gone'
Proximal imperfective	*se-k-o-lako* CNTF-PROX.IPFV-1SG.RLS-go		*tabo* NEG	'I am not going (nearby)', 'I was not going (nearby)'
Distal imperfective	[No negative form exists]			—

TABLE 8. Negation of complex TAM categories encoded on Wogeo *lako* 'go'

[10] Three of the categories in table 8 have no specific negative form: *(plain) irrealis*, *tentative*, and *distal imperfective*. To express the meaning of a negative (plain) irrealis, the *prohibitive* is used (cf. table 7), while the meanings of negative tentative and negative distal imperfective are both expressed by the *negative (plain) realis*.

This brief exposition of the verbal morphology of Wogeo shows that in the majority of forms, the language employs a system where the realis and irrealis morphemes co-occur with other grammatical markers in complex categories, forming a *joint* system in Palmer's (2001:145–146) terminology. But while the realis and irrealis morphemes *can* also occur independently in the so-called *(plain) realis* and *(plain) irrealis* categories, the more peripheral markers, such as future etc., are obligatorily bound to the realis and irrealis morphemes and cannot occur without the latter.

To sum up: the so-called 'realis' prefixes are involved in the formation of the following complex morphological categories in Wogeo: *(plain) realis*, *counterfactual*, *proximal imperfective*, *distal imperfective*, *future* and *tentative* (in the latter two, optionally – they are alternatively formed with the 'irrealis' prefixes without change in meaning). The so-called 'irrealis' prefixes, on the other hand, are used in the formation of the following categories: *(plain) irrealis*, *future* and *tentative* (again, in the latter two, their use is optional and alternates with the 'realis' prefixes). Seen from the opposite perspective, the following complex categories are formed *exclusively* with the 'realis' prefixes: *(plain) realis*, *counterfactual*, *proximal imperfective* and *distal imperfective*. It is thus only the *(plain) irrealis* that is formed exclusively and obligatorily with the 'irrealis' prefixes.

Having looked at the formal distribution of the 'realis/irrealis' morphemes in Wogeo, we will now turn to the range of meanings that is associated with each of the respective forms.[11] First, the 'realis' morphemes are associated with the following meanings:

1. General:

    a) Present, past (obligatorily)
    b) Counterfactual; proximal imperfective; distal imperfective (obligatorily, but always in combination with the respective markers)
    c) Future, ability, permission; tentative (optionally; always with the respective markers)

2. Specific syntactic constructions:

    a) Negations (obligatorily)
    b) Protasis and apodosis of simple conditional clauses (obligatorily)
    c) Protasis of counterfactual conditional clauses (obligatorily; always with the counterfactual marker)
    d) Protasis and apodosis of hypothetical conditional clauses, apodosis of counterfactual conditional clauses (optionally; always with the future marker)

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[11] 'Associated with' is a deliberately vague term: while the attribution of certain meanings to individual morphemes is straightforward in the case of the (plain) realis and irrealis categories, it is not at all clear what the contribution of the respective morphemes is in the case of the complex categories. In some, the 'realis/irrealis' prefixes may contribute to the resulting grammatical meaning, while in others, they may merely be *compatible* (synchronically) with those meanings. This question is not trivial and beyond the scope of this paper.

The semantic associations of the 'irrealis' morphemes, on the other hand, are as follows:

1. General:

    a) Obligation, volition, immediate future (obligatorily)
    b) Future, ability, permission; tentative (optionally; always with the respective markers)

2. Specific syntactic constructions:

    a) Complements of 'want' (obligatorily)
    b) Protasis and apodosis of hypothetical conditional clauses, apodosis of counterfactual conditional clauses (optionally; always with the future marker)

Some typical examples will serve as illustrations of the kinds of contexts in which the various forms occur. Example (1) shows the use of the (plain) realis form, in this case expressing *past tense*. This is a prototypical example in the sense of Bugenhagen (1993) in that it illustrates the use of a realis form to express positive polarity and non-future tense in a declarative speech act.

(1)   (Plain) realis

        *va,   ilo-g   **e**-la-muta~muta-k-iko*
        I   inside-1SG   **3SG.RLS-**INCH-be.tired.of~IMPV-APPL-2SG

        'Me, I became tired of you.'

Turning to the 'irrealis' prefix, we can observe that in (2), one of the core meanings of (plain) irrealis in Wogeo, *obligation*, is expressed.

(2)   (Plain) irrealis

        *iko   **go**-la-boalé   va   na   o-taval=te*
        you   **2SG.IRR-**INCH-tell.3SG   I   FOC   1SG.RLS-die=TOP

        'You must tell him that I did die.'

Another typical, construction-specific use of the (plain) irrealis is shown in (3), namely as a complement of 'want'. Like the example given in (2), this use is exclusive to the irrealis.

(3)   (Plain) irrealis as complement of 'want'

        *do-boré   **dog**-va   gon-iak,   vaine   boe   ramata*
        3DU.RLS-want   **3DU.IRR-**RECP   play-APPL.PL   woman   and   man

        du-rú   ma
        they-DU   FOC

        'They wanted to sleep with each other, that woman and man.'

In the examples we have seen so far, there was a biunique relationship between the formal markers and the meanings they expressed. Examples (4) and (5), in contrast, show the indiscriminate use of the 'realis' and 'irrealis' prefixes in combination with the future prefix.

(4)   Future (formed from the realis base)

vavá	*iko*	*va*	*m-u-kila-k-an-iko*	*udemtaregá*
name.3SG	you	I	FUT-1SG.RLS-call-APPL.3SG-BEN-2SG	Udemtaregá

'Its name, which I will call it for you, is Udemtadegá.'

(5)   Future (formed from the irrealis base)

va	*kat*	*va*	*mo-go-jale-k*	*oageva*
I	canoe	I	FUT-1SG.IRR-go.down-APPL.3SG	Vokeo

'I will bring my canoe down to Vokeo.'

The somewhat unexpected exclusive association of the counterfactual with the 'realis' prefixes is illustrated in (6), where it is used in the protasis of a counterfactual conditional.

(6)   Counterfactual

s-e-vá	*iko*	*sa-k-lako,*	*katé*	*mo-la-moet*
CNTF-3SG.RLS-happen	you	CNTF-2SG.RLS-go	thus	FUT.2SG.RLS-INCH-disappear

'If you had gone, you would have been lost.'

Example (7), finally, illustrates what is by far the most common use of the counterfactual category in Wogeo, namely as the negated counterpart of the (plain) realis category (the so-called 'negated realis'). As in (1) and (6) above, this form and function is exclusively associated with the 'realis' prefix.

(7)   Counterfactual as negated counterpart of (plain) realis

natú	*e-ot*	*taumdabí,*	*e-ot,*	*e-t-dom~doma,*
child.3SG	3SG.RLS-come	afternoon	3SG.RLS-come	3SG.RLS-INCH-look~IPFV[3PL]

tabo	*tiná*	*s-i-mia*	*tabo*
but	mother.3SG	CNTF-3SG.RLS-stay	NEG

'Her son came in the afternoon, he came, looked around, but his mother was not there.'

Summing up, several observations suggest themselves. What seems to be especially interesting is that van Gijn & Gipper's (2009) implicational hierarchy is not valid for Wogeo, since counterfactuals – crucial to their claim – are always formed from the *realis* base, not the irrealis base. That exclusive association of the counterfactual semantics

with the 'realis' prefix in Wogeo is also one of the two main discrepancies between Bugenhagen's (1993) generalizations and the Wogeo data, the other one being the fact that his list in fact does not include what can be said to constitute the semantic core of the (plain) irrealis morphological category in Wogeo: *obligation* and *volition*. Other than those two (rather substantial) discrepancies, however, the functional range of the 'realis' and 'irrealis' morphemes in Wogeo can be described as largely consistent with Bugenhagen's (1993) results.

To be sure, such a purely negative characterization of the category is not satisfactory. As could be observed in the description of the semantic range covered by forms involving the 'irrealis' prefix in Wogeo (either alone or in combination with other prefixes), that range is largely coextensive with the domain of *non-epistemic necessity* in the sense of van der Auwera & Plungian (1998):[12] irrealis in Wogeo can be said to express non-epistemic necessity. Wogeo is therefore arguably a good example of a *mood-prominent language* in the sense of Bhat (1999).

As we have observed above, Wogeo is not untypical in showing such 'aberrations' from a supposed prototypical realis–irrealis system. On the contrary, judging from the typological studies available, Wogeo seems to represent the rule rather than the exception. What can one do with such a situation? Two basic possibilities readily present themselves, neither of which, in my view, is desirable. One possibility would be to say that if Wogeo does not fit the expected (or predicted) pattern, then it follows that the Wogeo category is not an instance of that pattern in the first place. Such an approach might make sense if one has good a priori reasons to assume that the predicted category is indeed valid and useful. The main problem that I see with that approach, however, is that a common semantic denominator can usually be 'constructed' for any subdomain of modality (in fact, that is what constitutes the semantic basis for the observed pattern of 'family resemblances' within the domain). So, if Wogeo is not a good example of the supposed category – which of the many other observed types of systems should be taken as a better example?

The second possibility would be to make the claim more general. However, that may not be a very helpful suggestion when it comes to characterizing individual grammatical systems. Precisely as Bybee (1998) points out: such a concept is too broad to be of practical descriptive use because it glosses over, and fails to explain, the very large differences that exist between individual languages in this respect.

The solution to the problem that I propose is that, as Bybee (1998) suggests, a language-specific, narrower category might be more helpful here than the wide category *realis–irrealis*; and what applies to Wogeo would likewise apply to other languages, too. Observed differences between languages are then best understood as (diachronic) relations of grammaticalization within the semantic domain of modality, and between that domain and its neighboring domains. The terms *realis* and *irrealis* may still be useful for comparative and historical purposes, where precisely such grammaticalization processes and semantic shifts need to be captured – keeping in mind that in that usage they are no more specific (rather, even less specific) than the terms *modal* and *non-modal* themselves.

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[12]   Note, however, that *volition* would have to be explicitly included, e.g. as a special case of van der Auwera & Plungian's (1998) *participant-internal necessity*.

As for Wogeo, the language seems to be in the middle of a grammaticalization process, with the original 'realis/irrealis' markers on the way to being semantically bleached, while the partly fused morphs (combinations of slots −6, −5 and −4 in table 4) are on the way to becoming new portmanteau morphs. On the other hand, in the majority of cases, the old 'realis/irrealis' markers are still more or less formally and/or functionally transparent in the formation of parallel sets of what I have called *complex categories* (cf. table 6).[13]

5. Conclusion. In this paper, I have tried to assess the conceptual relevance of the terms realis–irrealis, their relationship with the domain of modality (itself a controversial area), and their appropriateness as descriptive grammatical terms.

It was shown that languages that have been claimed to make use of a realis–irrealis category show extremely large variation in the semantic content of that category; indeed, not even a prototypical core meaning can be identified cross-linguistically. Neither a top-down nor a bottom-up (typological) approach has, in my view, so far been able to provide convincing evidence that there is indeed a need to postulate such a category.

It is of course conceivable that something like non-factuality is a valid concept in the minds of speakers, and that all the partial resemblances and diachronic developments that can be seen in the data are actually grounded in such a concept. However, I see a danger of circularity in the analysis here: it is equally possible that parallel, overlapping and interacting diachronic developments of neighboring (but in principle independent) domains could create the *illusion* of an underlying 'supercategory' like reality status. Does a putative concept of reality status *bring about* the observable facts, or do the observable facts (which really arise through independent developments) *look as though* they instantiate some concept?

Different typological studies were assessed that try to characterize *realis–irrealis* either as a well-defined (yet abstract) category, as a category with a prototypical core and fuzzy boundaries, or as an implicational hierarchy. However, it has been argued in this paper that all those attempts fail to solve the basic problem: namely, that the supposed category is either too vague (so that practically any language may fit in it), too narrow (so that language-specific idiosyncrasies outweigh any generalizations), or too language-specific (so that the category itself becomes arbitrary, and not comparable from a typological point of view). Data from Wogeo was presented to illustrate this point.

Taking into account the theoretical difficulties with the concept *reality status*, the lack of unequivocal linguistic evidence in favor of it, and the facts that can be learned from Wogeo, my view is that it is probably wisest at this point to side with Bybee (1998) and de Haan (2012). I agree with them in saying that, until evidence to the contrary is presented, what we are dealing with is not one large, highly abstract domain but rather many smaller, independent domains. The connection between those smaller domains is mainly *diachronic* via common paths of grammaticalization (van der Auwera & Plungian 1998). *Synchronically*, the domains are characterized mainly by partial resemblances.

As to the nature of the smaller domains that, as a whole, take the place of 'reality

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[13] Practically, this creates the problem of glossing morphs, like in Examples (1)–(7), that are arguably in some contexts semantically empty, but not in others, like the 'realis/irrealis' prefixes in the complex morphological categories of Wogeo.

status', it is probably best to stick to fairly well-defined domains, like the (rather reduced) domain of modality as defined by van der Auwera & Plungian (1998) alongside domains like evidentiality, illocutionary force, polarity, etc. It is the language-specific interaction between them that accounts for the type of 'reality status' system characteristic of any given language.

Finally, it was suggested that *realis–irrealis* may nevertheless sometimes be useful as a pair of terms to capture certain formal diachronic processes and relationships within and between languages (e.g. in the historical-comparative study of Austronesian or New Guinea area languages), but that different terms that more accurately capture the semantics of a given language-specific category may be more helpful in many, if not most, descriptive contexts.

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