Squibs
and
Discussion

THE PAST, THE POSSIBLE, AND
THE EVIDENT
Sabine Iatridou,
MIT

Across a number of languages (including English, Russian, Greek, Turkish, Rumanian, German, Dutch, Spanish, French, Catalan, Hindi, and Bengali) adjectives taking propositional complements appear to separate into two classes with respect to the frame in (1):

(1) It was/will be AP that S.

There are predicates like *evident* and *obvious* that are fully acceptable in this context:

(2) It was/will be evident/obvious that John stole the tapes.

But there are predicates like *possible* and *probable* that are not:[1]

(3) #It was/will be possible/probable that John stole the tapes.

Intuitively, the oddness in (3) can be located in the presence of the future or the past tense; compare (3) with (4):

(4) It is possible/probable that John stole the tapes.

It seems that the second group of predicates is incompatible with past or future temporal reference in a way that the first is not.[2]

    [1] There is a context in which (3) can, in fact, appear. This is when the past tense on the matrix predicate is not a "real" tense but a tense imposed by the "sequence of tenses" phenomenon characteristic of indirect speech, among other contexts:

(i) Columbo said that it was possible that John had stolen the tapes.

The past tense on *was possible* is irrelevant to anchoring that clause in time and so does not contradict the descriptive generalization in the text.
    [2] Moreover, verbs like *become* that refer to a temporal process can combine with one type of predicate but not with the other:

The past or future tense can appear when items like *possible* are predicated of an individual:

(5) It is/was/will be possible for John to steal the tapes.

The same holds when the entity predicated of is not expressed overtly but is PRO_{arb}—whatever the analysis of the latter:

(6) It is/was/will be possible to buy a book for one dollar.

The adjective *possible* in (6) is predicated not of the embedded clause but of any arbitrary individual.

More specifically, *possible* in the above sentences predicates capacity, and capacities can change over time. It follows that the minimal clause containing *possible* will be sensitive to time; in other words, it will contain a tense variable. As a result, all tenses are permissible. So the modal in (5)–(6) describes a relation among individuals, propositions, and time and is a three-place predicate:

(7) $C(x, x$ to VP, $t)$
     where C represents *possible* in the sense of 'can'

The generalization, then, seems to be that the phenomenon that is responsible for (3) is limited to one-place predicates of propositions and specifically to modal predicates.

Modal predicates are divisible into predicates of epistemic and predicates of metaphysical modality (or in Lyons's (1977, chap. 17) terminology, into subjective and objective epistemic modality). Roughly, to say that something is epistemically possible is to say that it could be so, for all one knows. In effect, epistemic modality is about knowledge and beliefs. Metaphysical modality, on the other hand, is supposed to represent the way the world could or must have been; to say that something is metaphysically possible is to say that it could have been so, even if it wasn't.[3]

(i)   It becomes obvious that John stole the tapes.
(ii) #It becomes possible that John stole the tapes.

[3] A reviewer has pointed out that modals like *possible* admit modification by adverbials like *as far as x knows* and can be understood as relative to the knowledge of the speaker even if the adverbial is not explicit. This indicates that the modals can be interpreted relative to an epistemic conversational background (Kratzer (1981)). This observation, however, does not undermine the thesis of this squib, because the kind of context-sensitivity that the modals thus exhibit reflects not the presence of a temporal argument in the modal but instead its indexicality.

Consider the case of explicit adverbials, where x says *It is possible for all y knows that S*. As I understand it, the function of the adverbial is to limit the possible worlds to those compatible with what y knows as of the time of utterance: if S is true in one of these, then x speaks truly, and x speaks falsely otherwise (even if there are possible worlds not compatible with what y knows such that S).

Suppose that x asserts *It is possible that S*. Then x speaks truly if

I would like to suggest that the contrast between (2) and (3) might be linked to the distinction between epistemic and metaphysical modality, even though we might not have an exact understanding of this distinction at present. I argue that the APs accepting future or past tense are epistemic; they express the knowledge and beliefs of individuals and are thus time-sensitive just as states of knowledge are. This position is supported by the fact that all such predicates admit or imply an experiencer argument:

(8)   It was evident/obvious (to Max) that John stole the tapes.

Predicates incompatible with the future or past tense are uniformly metaphysical; they express the knowledge-independent state of the world. Such predicates do not accept an overt experiencer, nor do they imply a covert one:

(9)   *It is possible (to Max) that John stole the tapes.

Let us assume that the metaphysical modalities are predicates of propositions and are temporally independent; that is, they can be said to lack a time variable (10). This hypothesis would explain why they are incompatible with tense. Epistemic predicates, on the other hand, are sensitive to time; that is, they do have a time variable (11):

(10) $P(p)$:   It is possible that p.
(11) Obvious(x,p,t) :   It is obvious to x at time t that p.

I would like to emphasize that what I am concerned with in this squib is the tense of the modal predicate, not the tense of the proposition embedded under the modal predicate. In other words, the time variable t in (11) belongs to the higher clause; the proposition p can by itself contain a time variable, but this is not expressed in (10) or (11). The time variable of the embedded sentence p is specified not by the modal but by the embedded tense.

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and only if, in some world compatible with what x knows as of the time of assertion, S is true. The operator *possible* is indexical, because the possible worlds in its range are restricted to those compatible with what the speaker knows as of the time of utterance. But there is no need to give this operator a temporal argument, and indeed, endowing it with one would seem to conflict with the fact that *It was often possible that S* is ungrammatical and does not admit the interpretation 'There are many times in the past when, for all I knew at those times, S'.

A more general way of rebutting the objection that can seem to lie in the reviewer's correct observation is afforded by thinking of the modals as restricted quantifiers over possible worlds, so that *It is possible that S* is taken as 'For some possible world such that X, S', where X is a condition on worlds. Because the conditions can be expressed by indexical, and in particular time-dependent, sentences, different assertions of the possibility that S can express different propositions. But there is no temporal argument in the modals themselves.

This characteristic of metaphysical modality can also be expressed with the notation of possible-world semantics. For example, suppose "$\lozenge S$ in world w' at time t'" is true if and only if there is at least one combination of world $w^\wedge$ and time $t^\wedge$ such that S is true at $(w^\wedge, t^\wedge)$. In other words, the temporal reference of the original expression is irrelevant since the possibility operator abstracts away from the time of evaluation.

When the operator is that of necessity, the following situation holds. "$\square S$ in world w' at time t'" is true if and only if for all $(w^\wedge, t^\wedge)$, S is true at $(w^\wedge, t^\wedge)$. Again we see that the temporal reference of the original formula is irrelevant since the necessity operator abstracts away from the time of evaluation.

So far we have seen that whereas the frame in (7) attributes a "capacity" to x and contains a time variable, the one in (10) expresses a metaphysical modality and lacks a time variable. One might argue that the two frames can generate sentences that appear to be nearly synonymous:

(12) It is possible that this seed will become a gigantic oak tree.

(13) It is possible for this seed to become a gigantic oak tree.

But if (12) expresses a modality, it might be said, then any synonymous sentence would also. This would mean that (13) is able to express metaphysical modality, contrary to what I have argued. However, the synonymy of (12) and (13) is only apparent. Plausibly, (13) implies (12), since an individual can be said to have a capacity only if it is at least possible that that capacity should be exercised. But (12) does not imply (13), because some things that are possible do not involve the capacities of individuals. Observe the contrast between the (a) and (b) sentences in (14)–(16):

(14) a. It is possible that John resembles his father.
     b. #It is possible for John to resemble his father.
(15) a. It is possible that Sibyl is mortal.
     b. #It is possible for Sibyl to be mortal.
(16) a. It is possible that this gigantic oak tree has grown from a graft.
     b. #It is possible for this gigantic oak tree to have grown from a graft.

The unacceptability of the (b) sentences shows that the frames in (7) and (10) do not yield equivalent sentences and that the synonymy of (12)–(13) is only apparent.

Language, then, reflects that certain modality predicates abstract over time. A number of crosslinguistic facts follow from and can be explained by this observation.

In Modern Greek a sentence whose subject is third person singular and that contains the modal *bori* is ambiguous between

the metaphysical modality reading and the reading given by what has been called "root" modality, which predicates capacity of an individual. So (17) can mean either (18a) or (18b):

(17) O Costas bori   na erthi.
      Costas can/3/Sing/Pres   comes
(18) a. It is possible that Costas will come.
     b. Costas is able to come.

If sentence (17) is put in the past (19a) or future (19b) tense, the metaphysical modality reading is excluded and the sentence can only mean that Costas had or will have the ability to come:

(19) a. O Costas boruse   na erthi.
         Costas can/3/Sing/Past   comes
         'Costas had the ability to come.'
     b. O Costas tha boresi   na erthi.
         Costas Fut can/3/Sing   comes
         'Costas will have the ability to come.'

The unacceptability of (3) is contingent upon there not being any available reading for the sentence. The exclusion of the metaphysical modality in (19a–b) still leaves an acceptable sentence.[4]

The presence of a time variable in epistemic but not in metaphysical modalities also explains the contrast between (20a) and (20b):

(20) a. It is often obvious (to me) that you don't study enough.
     b. *It is often possible that you don't study enough.

Adverbs like *often* are predicated of a time variable. Such a variable is available in (20a) but not in (20b). In other words, (20b) is unacceptable due to vacuous quantification.

In English, if *seems* replaces *is* in (4), past tense is acceptable; contrast (3)–(4) with (21a–b):

(21) a. It seems possible that John stole the tapes.
     b. It seemed possible that John stole the tapes.

The acceptability of (21b) can be explained by the fact that *seem* introduces one more argument, namely, an experiencer. This argument can be implicit, as in (21a–b), or expressed overtly, as in (22):

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[4] In Iatridou (1988) I discuss the Greek modals in more detail. Among other things, I argue there that sentence (17) can be derived from either (i) or (ii), which reflect the metaphysical and root modality, respectively:

(i) pro(expl) bori [o Costas na erthi]
(ii) o Costas bori [PRO na erthi]

The relatively free word order of Modern Greek can produce the same linear order from either structure, leading to the fully ambiguous (18).

(22) It seemed possible to Max that John had stolen/stole the tapes.

The experiencer argument, and therefore the verb *seem*, makes the predicate epistemic and once again sensitive to time. As a result, temporal reference and past tense are possible.

If metaphysical modality predicates are temporally independent, then the apparent present tense in examples like (23) is not interpreted semantically and is essentially pleonastic.

(23) It is possible that John stole the tapes.

This is not unlike another analysis common for the copula in predicate sentences, namely, that it is semantically empty and just appears there because in some languages sentences must always have a verb (see Frege (1892) and, for a more recent account, Enç (1981)).

It is not obvious, however, that the pleonastic tense should always be homomorphous with the present tense. Based on the behavior of other expletives, one would predict that there will be a language where the pleonastic tense does not appear overtly—where, in other words, the metaphysical modality predicate, though verbal, will not be tensed at all. Basque is such a language.

In Basque there is a three-way distinction in tense morphology: there is past tense, present tense, and irrealis. The irrealis form is distinguishable from the infinitival in that it is inflected and can be a matrix predicate (Laka (1988), and references therein). However, it lacks temporal reference.

We have seen that epistemic modality is sensitive to time and that these modalities can be tensed. As a result, the prediction for Basque would be that epistemic modals take both tenses but not irrealis:

(24) a. Argi zegoen (Patxi-ren-tzat) Miren
         clear be-Past (Patxi-Gen-for) Miren-Abs
         aberatsa   zela.
         rich-Det-Abs was-Comp
         'It was clear (to Patxi) that Miren was rich.'
     b. Argi dago   (Patxi-ren-tzat) Miren
         clear be-Pres (Patxi-Gen-for) Miren-Abs
         aberatsa   dela.
         rich-Det-Abs is-Comp
         'It is clear (to Patxi) that Miren is rich.'
     c. #Argi legoke (Patxi-ren-tzat) Miren
         clear be-Irr (Patxi-Gen-for) Miren-Abs
         aberatsa   dela.
         rich-Det-Abs is-Comp
         'It could be (to Patxi) clear that Miren is rich.'

The status of (24c) is predicted since epistemic modality needs

temporal reference; therefore, the (tenseless) irrealis form is not possible.[5]

Now let us look at metaphysical modality in Basque. When the modality predicate is metaphysical, it can carry only the irrealis morphology. The past and present tenses are excluded:

(25) a. Baliteke lamiak   erreketan   bizitzea.
         be-Irr   fairy-Pl-Abs river-Pl-Loc live-Inf
         'It is possible that fairies live in rivers.'
     b. #Badaiteke lamiak   erreketan   bizitzea.
         be-Pres   fairy-Pl-Abs river-Pl-Loc live-Inf
     c. #Bazitekeen lamiak   erreketan   bizitzea.
         be-Past   fairy-Pl-Abs river-Pl-Loc live-Inf

The contrast between (25a) and (25b–c) confirms the prediction that metaphysical modality predicates lack temporal reference. In Basque the present tense is "real" and is not used as a default case as in English and the languages mentioned at the beginning of this squib. Since the language makes available a form that does not anchor a sentence in time, that form must be used in metaphysical modality.

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[5] (24c) is acceptable only as part of a conditional. Note, however, that conditionals are irrealis by nature anyway.

FREE-CHOICE *BILO* IN SERBO-
    CROATIAN: EXISTENTIAL OR
    UNIVERSAL?
*Ljiljana Progovac,
    Indiana University*

This squib will briefly describe the distribution of Serbo-Croatian *bilo*, the item that closely corresponds to free-choice *any* (FC-*any*) in English, propose a tentative analysis of its distribution, and suggest a fresh way of looking at FC-*any* in English.

1. Serbo-Croatian Data

In Serbo-Croatian FC-*bilo* is not homophonous with its polarity counterpart, which makes it easier to observe its distribution than to observe the distribution of FC-*any*. First, *bilo* is licensed by modals, just like FC-*any*, and receives the same interpretation as FC-*any*:

(1) Bilo ko   može istući malo dete.
     be-it who can   beat small child
     'Anyone can beat a child.'

Usually, on this reading, English *any* is semantically represented as a universal quantifier taking wide scope over its trigger, the modal (see, for example, Hintikka (1977), Ladusaw (1979), Linebarger (1981), Quine (1960), and Vendler (1967), but see also Davison (1980) for a different view):

(2) $\forall x$ POSSIBLE (x beat a child)
     For every x, it is possible for x to beat a child.

Second, *bilo* is never licensed in the corresponding sentences without modals (excluding generic tense, which also seems to be a licenser):

(3) *Bilo ko   je istukao malo dete.
      be-it who is beaten little child
      '*Anyone beat a small child.'

Bilo can also appear in so-called polarity contexts, such as negative sentences, yes/no questions, *if*-clauses, and complements of adversative predicates:

(4) Milan nije   video bilo ko-ga već predsednik-a.
     Milan not-is seen be-it who-m but president-Acc
     'Milan did not see (just) anyone, but the president.'
(5) Milan ne tvrdi da je bilo ko došao.
     Milan not claims that is be-it who come
     'Milan does not claim that anyone has come.'
(6) Da li je bilo ko   došao?
     that Q is be-it who come
     'Did anyone come?'
(7) Ako je bilo ko došao, počnite!
     if   is be-it who come   start-Imp
     'If anyone has come, start!'

(8) Sumnjam da je bilo ko došao.
     doubt-1Sg that is be-it who come
     'I doubt that anyone has come.'

In all these contexts except clausemate negation, substituting
the polarity item *iko* 'anyone' for *bilo ko* produces no difference
in meaning. In both cases the meaning is that usually attributed
to polarity *any*:

(9) Milan ne tvrdi da je iko   došao.
     Milan not claims that is anyone come
     'Milan does not claim that anyone has come.'

(10) Da li je iko   došao?
     that Q is anyone come
     'Has anyone come?'

(11) Ako je iko   došao, počnite!
     if   is anyone come   start
     'If anyone has come, start!'

(12) Sumnjam da je iko   došao.
     doubt-1Sg that is anyone come
     'I doubt that anyone has come.'

It seems, therefore, that whatever is responsible for licensing
iko in these contexts also licenses FC-*bilo* and gives it the same
interpretation that *iko* would have. It should also be noted that
sentences with *bilo* show the same negative implicature as those
with *iko*:

(13) Milan nije   ukrao knjig-u   zato-što ga je
     Milan not-is stolen book-Acc because him is
     iko/bilo   ko   nagovorio.
     anyone/be-it who persuaded
     'Milan has not stolen the book because anyone per-
     suaded him to.'

Both cases give rise to the following implicature:

(14) No one persuaded Milan to steal the book.

Though it may not be completely clear whether *bilo* receives a
universal or existential interpretation with superordinate ne-
gation (5) and with adversative predicates (8), it is obvious that
in yes/no questions (6) and conditionals (7) it has to be inter-
preted existentially. The only readings ascribed to (6) and (7)
are the following:

(15) Was there at least one person such that that person
     came?

(16) If there is at least one person, such that that person
     came, start.

These are existential rather than universal readings.[1]

[1] M. Authier (personal communication) informs me that the same
facts are duplicated in French. The lexical item *qui que ce soit* 'whoever
it may be' appears in the same polarity contexts and receives the same
existential interpretation in these contexts.

With clausemate negation, however, no existential inter-
pretation of *bilo ko* is possible and it cannot be replaced by the
corresponding polarity item *niko*:[2]

(17) *Milan nije   video niko-ga,   već predsednik-a.
     Milan not-is seen   no-one-Acc but president-Acc

Since the existential reading of *bilo* is unavailable, let us assume
for the moment that the contrastive reading assigned to FC-*bilo*
in the context of clausemate negation (see (4)) is a universal
reading.

To summarize, *bilo* can receive either universal or exis-
tential interpretation. It is interpreted universally when ap-
pearing with clausemate triggers: modals or negation. It is in-
terpreted existentially with superordinate negation, yes/no
questions, conditionals, and adversative predicates. In other
words, its existential/universal interpretation does not seem to
be an intrinsic property but seems instead to depend on the type
of trigger.

2. A Possible Solution for *Bilo*

What is it that distinguishes between these two types of trig-
gers? Notice that universal readings are forced only when the
trigger is in the closest possible Ā-position, that is, negation
and modals in Infl. However, if triggers are farther away (su-
perordinate negation or Comp, where, presumably, question
and conditional operators are situated), *bilo* receives an exis-
tential interpretation. More precisely, the existential/universal
reading of *bilo* depends on the distance of the trigger. Let us
now propose that the existential reading of *bilo* is actually its
bound reading. Suppose that *bilo* can be *bound* by an operator
in Comp or by superordinate negation. This makes sense in the
light of the analysis for polarity items given in Progovac (1988),
where it is argued that all negative polarity items (NPIs) are Ā-
anaphors that have to be bound by a certain Ā-binder. Since
in these contexts *bilo* receives the same interpretation as the
corresponding NPIs, one can assume that *bilo* is also bound in
these contexts. So, whenever *bilo* is interchangeable with an
NPI, we will take it to be bound by a trigger, thus receiving an
existential, narrow-scope interpretation. But why is it that *bilo*
cannot be bound by a clausemate modal or a clausemate ne-
gation, the way polarity items can? The only generalization that
emerges is that *bilo* is some kind of pronominal, possibly a
bound pronominal (for a definition and examples, see, for ex-
ample, Aoun and Li (1988)), which has to be free from its trigger
in its opaque domain. Since the free reading of *bilo* differs from

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[2] *Niko* 'no one' is the polarity item that appears only with clause-
mate negation. The corresponding form *iko* occurs in all the other po-
larity contexts (for details, see Progovac (1988)).

its bound reading (the reading that would result if we substituted an NPI for *bilo*), I will take this to be the universal wide-scope reading. Notice that saying that *bilo* in certain contexts has a bound reading does not necessarily commit us to the view that *bilo* is an anaphor, since pronominals can also have bound readings, provided the binder is outside their opaque domain:

(18) Mary$_i$ did not realize that Peter wanted to leave her$_i$.

If the first potential antecedent creates an opaque domain in the case of *bilo* and polarity items (see, for example, Aoun (1985), Chomsky (1986), and Progovac (1988)), then negation and modals in Infl will be the first potential antecedents for *bilo*. Its governing category in that case is the first maximal projection containing *bilo* and its first potential antecedent, namely, IP. Consequently, operators in Comp and superordinate negation fall outside of its governing category and are able to bind the pronominal *bilo*. In other words, as a pronominal, *bilo* has to be free only from potential antecedents within its governing category, and this reading is interpreted as a wide-scope, universal reading. When bound, *bilo* has to be interpreted as having narrow scope with respect to its binder, because the binder must c-command its bindee. An important advantage of this approach is that the problem of the equivalence between wide-scope universal and narrow-scope existential readings does not seem to arise. Wide- versus narrow-scope interpretation is taken to be a semantic reflection of a syntactic distinction: free versus bound status.

   This sketchy proposal accounts for the distribution and interpretation of *bilo* in Serbo-Croatian. It remains for future research to see whether it can carry over to other *bilo* environments (such as comparatives and imperatives), to determine how *bilo* triggers form a natural class, and to explain why *bilo* needs a trigger if it is a pronominal (for some ideas, see Progovac (1988)).

3. English FC-*Any*

One might finally wonder whether the discussion in this squib has any bearing on the analysis of FC-*any* in English. As established, *bilo* can receive either universal or existential interpretation. Notice that a similar phenomenon has been observed for FC-*any*, hence the current debate about whether it is universal or existential. Carlson (1981), for example, claims that both FC-*any* and polarity *any* are present in some contexts (such as comparatives and adversative predicates), with no ambiguity between a universal and an existential reading. Instead, existential readings are assigned to both *any*'s:

(19) Bob ran faster than anyone did.

From these data he concludes the following: "f-c *any* is in fact

a universal, and . . . it must, somehow, appear equivalent to an existential under certain circumstances" (p. 20). Strikingly, Carlson wonders why, according to his tests (see, for instance, his (1981) modification by *nearly* and *almost*), FC-*any* does not appear with negation, questions, and certain conditionals, given that they do not commit one to existence of objects (for details, see Carlson (1981)):

(20) *Did almost anyone just walk into the room?

Interestingly, *bilo* in Serbo-Croatian appears in exactly these contexts. The null hypothesis would be that this is also true for FC-*any* in English. So, what if it, too, could appear in these contexts? And what if it received the same existential interpretation in these contexts as *bilo* does? First, it would be impossible to distinguish it from polarity *any* because they would receive the same existential interpretation. Second, all the usual tests for FC-*any* would fail here (for example, modification by *nearly* and *almost*) because what they detect is universal interpretation, rather than FC-*any*, given that they are also valid for other universal quantifiers such as *every*:

(21) Almost everyone passed that exam.

So, if FC-*any* is existential in some contexts, it cannot be detected by the above-mentioned tests in these contexts.

In sum, it has been proposed in this squib that FC-*bilo* in Serbo-Croatian is a pronominal that can receive either a bound (narrow-scope existential) reading or a free (wide-scope universal) reading, depending on the distance of the trigger. On the other hand, polarity items, as anaphors (see Progovac (1988)), have only one option, namely, to be bound by their trigger, thus receiving narrow-scope interpretation. If the same is true for FC-*any* and polarity *any* in English,[3] it would suggest, as also assumed by Carlson, that there can be no unified account of polarity *any* and FC-*any* in English, either in existential or in universal terms, just as there can be no unified account of anaphors and pronominals.

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[3] English differs from Serbo-Croatian in that Serbo-Croatian has two polarity items in complementary distribution (see footnote 2), both translated as *any* in English. So, for example, the distribution of *iko* + *niko* exhausts that of polarity *anyone*. This parallelism should be sufficient to make comparison between English and Serbo-Croatian possible.

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THE LOCATION OF NONACTIVE VOICE IN ALBANIAN AND MODERN GREEK
María-Luisa Rivero, University of Ottawa

Some recent analyses of the Passive place this Voice morpheme under Infl (Baker (1988, chap. 6), Baker, Johnson, and Roberts (1989)). Based on Modern Greek (MG) and Albanian (A), I argue instead that Voice heads its own maximal projection, in line with current proposals for other inflectional phrases such as Tense and Agr (Pollock (1989), Chomsky (1988)). In addition, Voice must be structurally adjacent to the VP/V that has argument structure, not necessarily next to Agr and/or Tense, and this condition must be met by S-Structure. It seems reasonable that such a locality requirement derives from the fact that Voice affects argument structure; that is, if V assigns Case and/or θ-role to Voice, as suggested in the recent literature, such an assignment applies under adjacency and sisterhood, an area I do not explore.

Modern Greek and Albanian have parallel syntactic structures for their tenses. In this respect, consider the Future Perfect and Future Pluperfect in (1)–(2). Both languages use invariable modal particles similar to English *will*: A *do të*, MG

tha, glossed Fut(ure). Such particles must precede the clitics (MG *tous to*, A *u a*), which in Perfect tenses appear before the finite Aux, followed by the nonfinite V. Unlike English, whose [±Past] feature appears on the Modal, Modern Greek and Albanian attach Tense/Agr to *have*, as can be seen by comparing (1)–(2) and their English translations (and see Rivero (1988) for analysis). Therefore, the syntax of Albanian and Modern Greek tenses is similar.

(1) a. A: Gjoni   do të u   a ketë   dhënë.
         John-the Fut   them it have-Pres-3S given
         'John will have given it to them.'

   b. MG: O Giánnis tha tous to éXei   dósei.
         the John   Fut them it have-Pres-3S given
         (same)

(2) a. A: Gjoni   do të u   a kish   dhënë.
         John-the Fut   them it have-Past-3S given
         'John would have given it to them.'

   b. MG: O Giánnis tha tous to eíXe   dósei.
         the John   Fut them it have-Past-3S given
         (same)

Also, Modern Greek and Albanian share a nonactive (NAct) Voice for Passive, Middle, Reciprocal, and Reflexive constructions, as in (3), with the readings 'The men are washed', 'The men wash themselves', or 'The men wash each other'.

(3) a. A: Burrat lahen.
         men-the wash-NAct-Pres-3Pl

   b. MG: Oi ánthropoi plénontai.
         the men   wash-NAct-Pres-3Pl

In (3) Voice is an Affix. As we shall see, Albanian has two other means to express NAct, depending on tense and mood. I argue that adjacency between Voice and main V is maintained in either case.

My account is based on views on the relationship of (inflectional) morphology and syntax such as those most recently proposed in Baker (1988).

1. Voice in Modern Greek

I first examine Modern Greek, showing NAct exclusively through affixation to the V that has argument structure, as in (3b). I return to the more complex situation in Albanian in section 2.

In a simple tense such as the Aorist/Definite Past in (4a), *th* signals the Passive; in the compound tense in (4b), *th* appears on the main V with the same role, and the Aux *éXoun* '(they) have' fails to reflect Voice.

(4) a. Ta paidiá plúthikan   apó ton Giánni.
        the children were-washed by the John

b. Ta paidiá   éXoun plutheí   apó tòn Giánni.
   the children have   been-washed by the John

I propose a unified treatment for the pattern in (4a–b), as follows. First, Voice is always an Affix heading a phrase immediately above the VP whose V has argument structure. Second, Aspect is morphologically expressed in Modern Greek, so I assume that all tenses have an Aspect layer, as already proposed by Koutsoudas (1962). In simple tenses Aspect is an Affix, as in the Future Perfective *tha agapíso* '(I) will love', with the *-s-* adjacent to the V-stem as Perfective morpheme, versus the Future Imperfective *tha agapó* '(I) will be loving', with a ∅-affix. In Perfect tenses Aspect is the Stem *eX-* 'have', rather than an Affix. In my analysis, the Aspectual Aux of a compound tense occupies the same syntactic position as the Perfective/Imperfective Affixes of the simple tenses. Under such assumptions, the structures of (4a–b) are as shown in (5a–b), respectively, with the Voice Phrase headed by an Affix adjacent to VP, and the Aspect Phrase, as Stem or Affix, immediately above it. If V-Raising applies, the V with argument structure in (4a) (= (5a)) will move to amalgamate with Voice and then, successively, with Aspect, Tense, and Agr; the procedure provides the appropriate morpheme order, as Voice and Aspect are internal, and Agr external, within the word. In (4b) (= (5b)) the same principle ensures that Aspect as stem raises to Tense and Agr, while the main V surfaces with the Passive affix, within a two-word sequence. If the proposed analysis is correct, the Voice Phrase is characterized by its adjacency to V, not by a local relation with other inflectional categories. The structural relation of Voice and V is similar to the one in Baker, Johnson, and Roberts (1989) for θ-role/Case assignment in the English passive.
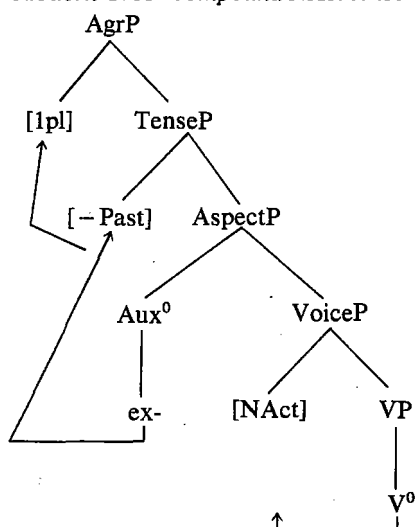
(5) a. *Modern Greek simple NAct tense*
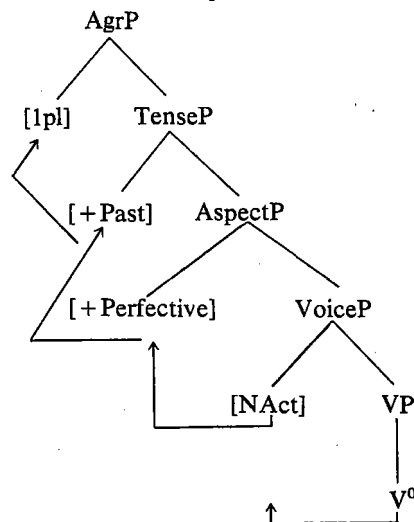
b. *Modern Greek compound NAct tense*

Table 1 presents a list of Modern Greek tenses.[1] Those with the auxiliary 'have' (that is, tenses 8–11 in the table) fall under analysis (5b). The remaining forms fall under (5a). In addition, Futures and Subjunctives display an extra layer of structure above AgrP labeled I, as shown in (10) for the Albanian future, parallel in the relevant respect. In Modern Greek I^0 is filled by the modal particle *tha* in the futures (4A–7A and 10A–11A) and by *na* in the subjunctives (B tenses).

2. Voice in Albanian

I first show how Albanian complies with the locality requirement on Voice and then propose an explanation for the different morphosyntactic manifestations of this category.

2.1. Three Ways to Express Voice

The treatment for Modern Greek (5a) extends to the Albanian simple tenses where Voice is expressed through affixation as well. These are the Present Indicative, as in (3a), the Imperfect

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[1] Table 1 lists more tenses than traditional grammars (Triandafillidis (1949)) or recent surveys (Joseph and Philippaki-Warburton (1987)) and is consonant with inventories in Albanian grammars such as Newmark, Hubbard, and Prifti (1982), the source for the terminology in tables 1 and 2. For instance, the Modern Greek tradition omits Future Anterior and Pluperfect from the Indicative inventory; from a morphosyntactic perspective, such constructions show Indicative properties, including agreement with Indicative complementizers in the sense of Rivero (1987). Glosses are approximate.

Table 1
Modern Greek nonactive conjugation

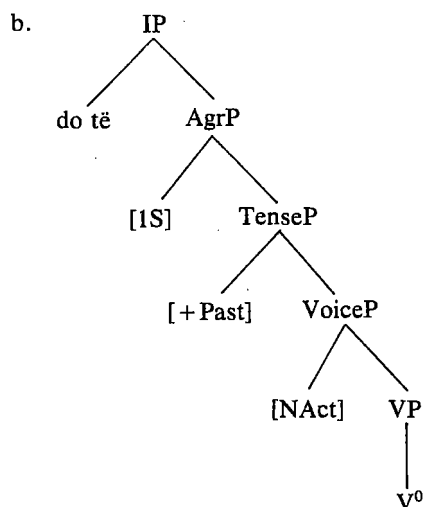| Tense	Mood	
	A. Indicative	B. Subjunctive
1. Present	plénomai 'I am washed'	na plénomai
2. Imperfect	plenómoun 'I was being washed'	na plenómoun
3. Aorist	plúthika 'I was washed'	na pluthó
4. Future Perfective	tha pluthó 'I will be washed'	——
5. Future Imperfective	tha plénomai 'I will continue to be washed'	——
6. Future Anterior Perfective	tha plúthika 'I would be washed' (completed)	——
7. Future Anterior Imperfective	tha plénomoun 'I would continue to be washed'	——
8. Present Perfect	éXo plutheí 'I have been washed'	na éXo pluthéi
9. Past Perfect	eíXa plutheí 'I had been washed'	na eíXa pluthéi
10. Future Perfect	tha éXo plutheí 'I will have been washed'	——
11. Future Pluperfect	tha eíXa plutheí 'I would have been washed'	——

Indicative, and corresponding Futures and Subjunctives, for a total of six of the traditional tenses in table 2 based on the description in Newmark, Hubbard, and Prifti (1982): that is, tenses 1A–B, 2A–B, 4A, and 5. In this respect, consider the NAct Imperfect in (6a)–(7a) and its corresponding Future, formed by adding a layer with the particles *do të*, as in (6b)–(7b); as mentioned above, I assume that modal markers head I, parallel to English modals (and see Pollock (1989) for recent discussion, and Rivero (1988) for Balkan particles). In addition to Future/Subjunctive particles, Albanian I^0 may contain the invariable progressive *po* with Present and Imperfect Indicatives: *po lahen* 'they are being washed'. A difference between Modern Greek (5a) and Albanian (7) is the presence/absence of

Table 2
Albanian nonactive conjugation

Tense	Mood			
	A. Indicative	B. Subjunctive	C. Admirative	D. Optative
1. Present	lahem 'I am washed'	të lahem	u lakam 'So I am washed!'	u lafsha
2. Imperfect	lahesha 'I was being washed'	të lahesha	u lakesha	
3. Aorist	u lava 'I was washed'	——	——	
4. Future	do (të) lahem 'I will be washed'	——	do të u lakam	
5. Future Anterior	do (të) lahesha 'I would be washed'	——	——	
6. Present Perfect	jam larë 'I have been washed'	të jem larë	qenkam larë	qofsha larë
7. Past Perfect	isha larë 'I had been washed'	të isha larë	qenkësha larë	
8. Future Perfect	do (të) jem larë 'I will have been washed'	——		
9. Future Pluperfect	do (të) isha larë 'I would have been washed'	——		

Aspect, and this plays an important role in the account for the various expressions of Voice in Albanian in section 2.2.

(6) a. La-he-sh-a.
        wash-NAct-Past-1S
        'I was washed.'
    b. Do të la-he-sh-a.
        Fut   wash-NAct-Past-1S
        'I would be washed.'

(7) a.

```
                    AgrP
                   /    \
               [1S]    TenseP
                       /    \
                  [+Past]   VoiceP
                           /    \
                      [NAct]    VP
                                 |
                                V⁰
```

b.

```
                     IP
                    /  \
               do të    AgrP
                        /   \
                    [1S]    TenseP
                            /    \
                       [+Past]   VoiceP
                                /    \
                           [NAct]    VP
                                      |
                                     V⁰
```
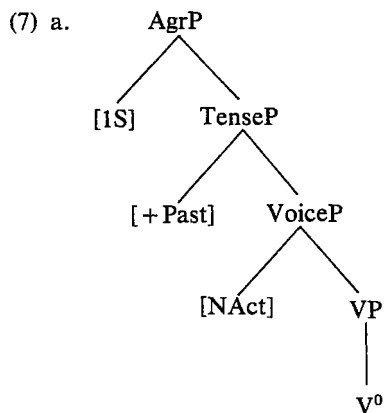
In (7a) inflectional phrases are headed by Affixes, and Voice is adjacent to VP. V-Raising ensures the right order of morphemes, as for Modern Greek (5a). In (7b) the I-layer contains a particle, so the V raises to Agr and exhibits Tense and Voice as well. The same treatment serves for Modern Greek Futures, such as *tha pluthoún* '(they) will be washed' and *tha plénontai* 'lit.: (they) will be being washed', with the addition of Perfective/Imperfective Aspect, as in section 1 (and see table 1).

There are two additional ways to express Voice in Albanian. First, in the remaining simple tenses (the Aorist/Definite Past, tense 3A in table 2, and non-Perfects of the Optative and Admirative Moods, tenses 1C, 2C, 4C, and 1D), the clitic *u* indicates NAct and occupies the same relative position as the pronominal clitics in (1)–(2). This is shown in more detail in

(8a), for the simple Optative (for wishes), and in (8b), for a Future Admirative (for surprise). In both tenses [− Past] labeled Pres is a ∅-affix, as shown in the tree in (15).

(8) a. U   la-fsh-a.
        NAct wash-Opt-Pres-1S
        'May I be washed.'
    b. Do të u   la-kam.
        Fut NAct wash-Adm-Pres-1S
        'I will actually be washed!'

Second, compound or Perfect tenses indicate Voice through the Auxiliary, regardless of mood, as in tenses 6–9 in table 2 and example (9) for Future Perfects. *Kam* '(I) have' is Active, and *jam* '(I) have + been' NAct.

(9) a. Do të kam   larë.
        Fut have-Pres-1S washed
        'I will have washed (something).'
    b. Do të jam   larë.
        Fut have + been-Pres-1S washed
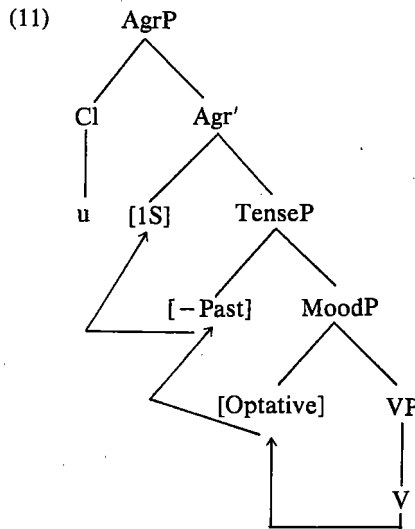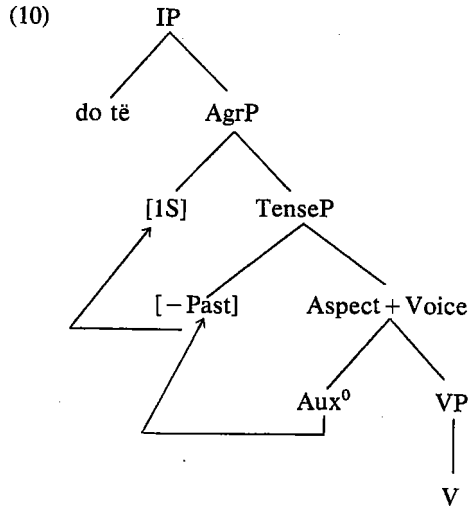   'I will have been washed.'

The three expressions of NAct in Albanian share what characterizes Modern Greek too: Voice, as affix (6), clitic (8), or Aux (9b), is adjacent to the VP/V with argument structure.

In (9b) Aux manifests Aspect and Voice, moving to Tense and Agr. Then the order of inflectional phrases in Modern Greek (5b) and Albanian (9b) is similar, once *jam* is seen as a portmanteau item for Perfect and NAct, as shown in (10).

Depending on the treatment of clitics, (8) can be viewed from two perspectives. If clitics attach to the main V, *u* 'NAct' may be adjacent to V in D-Structure and later. If clitics are in Spec of Agr (as in Rivero (1988)), *u* is adjacent to V after V-Raising; then θ-role/Case assignment by the moved V^0 affects the Spec of the X^{max} that serves as landing site, when structural adjacency obtains by S-Structure, as in (11) for (8a).[2] In Rivero (1988) I provide several arguments for placing Balkan clitics in AgrP. For instance, Modern Greek and Albanian gerundives differ with respect to the relative order of V and Cl. The Modern Greek sequence is V + Cl: *Éphuge kratóntas TO sphiXtá* 'He-left holding IT tightly'. The Albanian order is Cl + V: *Pashë Brixhiden duke E hanger* 'I-saw Brigitte Prt IT eating (I saw Brigitte eating it)'. The contrast follows if Modern Greek *-ontas* is an aspectual affix in I^0, so that V^0 raises to it, bypassing the clitic in the lower AgrP (and see (10)). The Albanian gerundive

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[2] An anonymous reviewer makes the interesting observation that an S-Structure adjacency condition would permit Voice to dominate Aspect and Tense in D-Structure in a language where the Aspect and Tense would be prefixes and Voice would be a suffix. Such a situation does not arise in Albanian.

contains an aspectual particle *duke* in I^0, preventing the V^0 from moving to a position that is higher than the node Cl in AgrP. In section 2.2 I provide an independent reason making the clitic option in (11) preferable from the perspective of NAct constructions as well.

(10)

```
              IP
             /  \
        do të    AgrP
                /    \
             [1S]    TenseP
                    /     \
             [−Past]    Aspect+Voice
                         /      \
                      Aux⁰       VP
                                 |
                                 V
```

(11)

```
          AgrP
         /    \
        Cl     Agr'
        |     /    \
        u  [1S]    TenseP
                  /     \
             [−Past]    MoodP
                       /     \
               [Optative]    VP
                              |
                              V
```

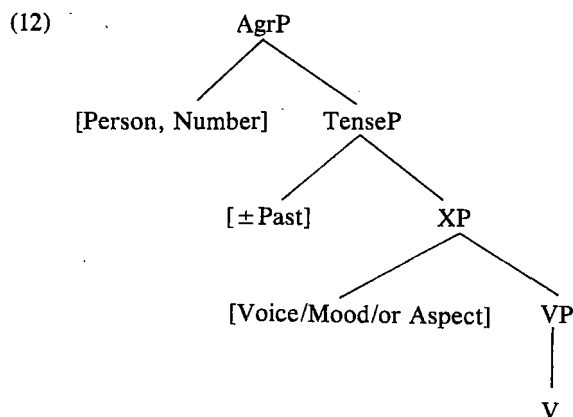## 2.2. Accounting for the Multiple Expression of Voice

Within the previous analysis, an account of why Albanian expresses NAct in different ways, depending on tense/mood, can be suggested.

I propose that the Albanian verb is restricted to carrying three suffixes only—an auxiliary hypothesis of a morphological

nature. This restriction forces Voice to satisfy the adjacency requirement with V in two ways in simple tenses.

First, the tenses showing NAct as affixation, as in (3a) and (6)–(7), have Agr, Tense, and Voice as Affixes, with the last adjacent to VP, as discussed. Thus, in contrast to Modern Greek, I propose no obligatory Aspect layer in Albanian. The difference can be justified from many perspectives, but suffice it to say that Albanian lacks the aspectual distinctions seen in the Modern Greek futures, as the contrasts in tables 1 and 2 indicate, the tradition being that Aspect is at the core of essential properties of Modern Greek but plays no major role in the Albanian conjugation.

Second, if IP contains three affixal layers, other than Voice, the last item satisfies adjacency with V by appearing as a clitic, as in (8). As we shall see, the clitic option is not viable for Perfect tenses, if adjacency is to be met. Under my approach, the Albanian V is formed as in (12), with the external layers necessarily filled by Agr and Tense and the layer adjacent to the stem, or XP, filled by either Voice, Mood, or Aspect, as the last affix. A fourth affix is disallowed.

(12)   AgrP
                          /   \
          [Person, Number]   TenseP
                                 /   \
                          [±Past]   XP
                                        /   \
                        [Voice/Mood/or Aspect]   VP
                                                  |
                                                  V

When XP contains NAct, Voice is an affix; see (3a) and (6). When XP is Mood, there are two possibilities. With the Optative Affix, the result is the Present (8a), with Voice as clitic. With the Admirative Affix, identical in shape to the Perfect Aux but different in meaning, the simple tenses of this mood are obtained, such as the Present in (8b); again, Voice must be a clitic. The Aorist/Definite Past represents the case where XP = Aspect; that is, it constitutes the only simple tense in Albanian that is inherently Perfective, so it behaves like (8) when expressing NAct, as in (13):

(13) U   lava.
      NAct wash-Aorist-1S
      'I was washed (completed).'

In brief, in simple tenses NAct occupies (a) the layer immediately superior to VP, counting as a third affix, or (b) the clitic layer, when three other affixes attach to the stem. In both cases Voice is adjacent to V once V-Movement applies, flanking the V-stem on the left as a clitic, or on the right as an internal affix.

In Perfect tenses Voice is on the Aspectual Aux; see (9b)–(10). An Affix on the main V is possible under my approach, and this is the adjacency option in Modern Greek, as discussed in section 1. However, NAct could not be a clitic in compound tenses, given the presence of Aux. This is because Albanian clitics always precede the finite V or Aux, that is, the stem with Tense and Agr, as in (1)–(2); in my terms, they attach to Agr, as in (11), rather than to V. Therefore, if u expressed NAct in Perfect tenses, this clitic would necessarily precede the Aspectual Aux and fail to be adjacent to the V with argument structure—the essential requirement. This provides independent motivation that Albanian clitics are Specifiers of AgrP, as in Rivero (1988).

Finally, Voice as Aux allows Perfect tenses in the Admirative and Optative to comply with the affix restriction too, as seen for the NAct Perfect Optative in (14), treated as in (15), with three affixes on the Aux.

(14) Qo-fsh-a   larë
      have + be-Opt-Pres-1S washed
      'May I have been washed!'

(15)
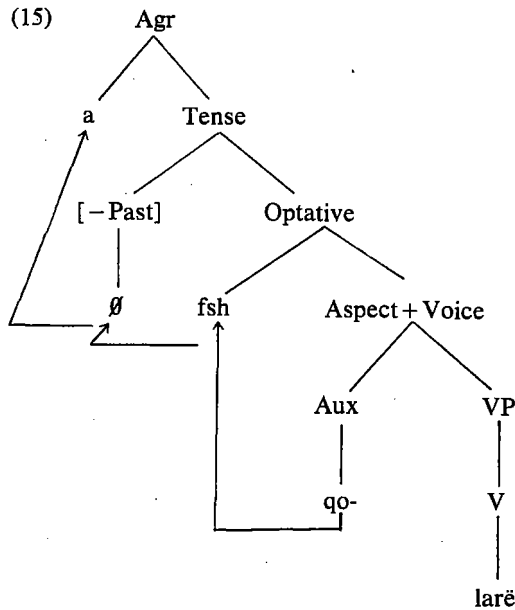
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