

THE EVOLUTION OF FUTURE MEANING

JOAN L. BYBEE AND WILLIAM PAGLIUCA

State University of New York at Buffalo

0. Introduction

In many languages, the morpheme or morphemes used to indicate future time have other uses that are not strictly temporal*. In recent work by Ultan 1978, comparing approximately 50 languages, and by Fleischman 1982, referring mainly to Romance and English, we find future morphemes described as indicating, along with their future meaning, one or more of the following: desire, intention, obligation, necessity, imminence, habitual, general truth, characteristic behavior, command, polite request, supposition. If we view this mad array in historical perspective, we would hope to find that some of these uses line up in historical sequence, with one leading to another, or that some of them represent retentions from earlier meanings. However, as Fries 1927 pointed out, it is often difficult to know which of the many uses of futures are retentions, or older meanings «glimmering through», and which are later derivatives that might be common to all future morphemes. We propose to present a solution to this problem based on cross-linguistic study of the development of future morphemes. We will argue that the lexical sources of futures are limited — verbs indicating desire, obligation and movement are the most common — and that futures having these flavors have retained them from their lexical sources, and that other uses are common extensions of future and can be found with future morphemes from any source.

The morphemes that will be treated here are those that have as one of their uses the expression of PREDICTION, i.e. the assertion by the speaker

* Work on this paper was carried out under a grant from the National Science Foundation (BNS 8318262).

that a proposition will be true in time subsequent to the moment of speech. Examples (1), (2) and (3) illustrate this use with the three future morphemes of British English, *will*, *shall* and *be going to*¹.

will

- (1) I think the bulk of this year's students *will* go into industry.
(Coates 1983:170)

shall

- (2) We *shall* no doubt live to see stranger things. (Wekker 1976:44)

going to

- (3) Within a few years at the present rate of development, Paris *is going to* look like London, and London like New York. (Wekker 1976:125).

Our choice of prediction as the identifying use of future morphemes fits well with general practice, and moreover, is theoretically significant. The development of the prediction use is a crucial stage in the diachronic sequence, since some of the other uses that futures have in common are derivable from prediction.

1. The lexical sources of future morphemes.

Ultan identified the etymological sources of future markers in many of the languages of his study. We have done the same with 50 languages of a stratified probability sample (Perkins 1980)², and in about twenty-five languages chosen for convenience. In the overwhelming majority of cases we find that future morphemes derive from main verbs having the same or very similar meanings.

The two most common sources for future markers are verbs indicating DESIRE and verbs of MOVEMENT. The languages in which we found a future marker deriving from a morpheme indicating the subject's desire are listed in (4):

¹ We choose British rather than American English because *shall* is rare or non-existent in most American dialects, and because of the availability of extensive corpus-based studies on British English.

² The languages of Perkins' sample were randomly chosen, controlling for genetic and areal bias. If one wants to arrive at valid statements concerning the relative frequency of a given linguistic phenomenon in the languages of the world, then only samples so constructed may be used; convenience samples, because they lack the controls, are inappropriate.

(4) DESIRE:

- Perkins' sample: Central Sierra Miwok, Serbo-Croatian, Karankawa.
- other languages consulted: English, Mandarin, Chukchi.
- listed by Ultan 1978: Danish, Norwegian, Rumanian, Gallo-Romance, Angevin French, Italian (occasionally), Old Church Slavic, Modern Greek, Arabic, Somali, Tagalog.
- Heine and Reh 1982: Swahili.

Verbs of movement used for futures include both motion toward the speaker (*come*) and motion away from the speaker (*go*), although the latter appears to be more common. Languages with movement-derived futures are listed in (5).

(5) MOVEMENT:

- Perkins' sample: Southern Sierra Miwok (*andative*), Sonay (*come*), Haitian, Logbara (*go and come*)
- other languages consulted: Abipon, Arabic, English, French, Hausa, Kru languages, Spanish, Tojolabal, Quechua.
- listed by Ultan 1978: Cuna, Kwara²ae, Bassa.
- Heine and Reh 1982: Ewe (*come*), Acholi (*come*), Lango (*come*), Lotuko (*go and come*), Duala (*go and come*).

The other verbal sources for futures are possession (*have*), existence (*be*) or come into existence (*become*), and verbs indicating obligation (such as *shall*). We believe that these sources are closely related. When predicates such as *have*, *be* or *become* are used to indicate future they must be accompanied by a form of the verb that contributes to the future sense: it is the infinitive in many cases, which represents the action of the verb in the abstract, as neither completed (as a past participle) nor in progress (as a present participle). In Korean, the verb has a suffix that means «in order to», which supplies part of the future sense. The role of the copula or marker of possession is to attribute the infinitival predicate to the agent. This yields the sense of OBLIGATION, so that forms derived in this way follow a path similar to verbs that originally meant «be obligated» or «owe».

Germanic languages are the only ones we have found that have a future developed from a verb with the meaning «obligation», but a number of languages have developed a future that originated in an obligation construction, as shown in (6):

(6) POSSESSION:

Perkins' sample: none

other languages consulted: Eastern Kru languages, Western Romance languages (e.g. French and Spanish), Ukrainian.

COPULA: Ecuadorian Quechua, Korean

BECOME: German, Gothic, Cuna.

A general pattern is observable in the way that morphemes expressing these three semantic notions gradually develop a sense of prediction. Both *DESIRE* and *OBLIGATION* require a willful and animate agent, for they predicate certain conditions on such an agent: *DESIRE* describes internal conditions and *OBLIGATION* external, social conditions, *MOVEMENT* verbs require a subject capable of movement. These original senses gradually weaken, and the marker comes to signal prediction, and to be applicable in propositions with any sort of subject. However, we would argue that the original sense of these verbs is not lost entirely, but is rather retained in certain contexts, and hence futures from different sources will have different shades or flavors of meaning. Thus a future derived from a verb meaning desire may have a sense of will or willingness in certain contexts, a future derived from obligation may give an obligation sense occasionally, and a future derived from movement may give the sense of being headed along a certain path, which gives a meaning often labelled, erroneously we believe, as *INTENTION*.

We claim that when a future morpheme has any one of these senses, it is a retention from the original lexical meaning of the verb from which the future developed, and not a secondary development from the future meaning. To argue for this hypothesis, we will examine the development of futures from each of the three sources in English to demonstrate how differences in their meanings are traceable to the sources from which they arose.

2. Evolution of future meaning.

Will in English.

As an example of a future developed from a verb originally meaning «want» or «desire» we take the history of English *will*. Examples (7) through (10) are from *Beowulf*. Example (7) shows *will* used to express *VOLITION* with an infinitival complement.

- (7) Beowulf is min nama, *wille* ic asecgan suna Healfdenes, mærum beodne, min ærende... (line 343).

Beowulf is my name. I wish to tell my errand to Healfdene's son, the great lord.

In (8) the sense is more of WILLINGNESS, which is slightly weaker than desire or volition:

- (8) gif he us geunnan *wile* þæt we hine swa godne gretan moton. (line 346)

If he will grant that we may greet him who is so gracious.

(9) is an example in which volition or intention is present in the meaning, but a sense of prediction is discernible as well:

- (9) Wen ic þæt he *wille*... Geotena leode etan unforhte (line 442)

I think that he wants to /will devour fearlessly the people of the Geats.

Also in Beowulf, there are examples such as (10) in which a prediction concerning a person is made on the basis of what is known about him:

- (10) Ic minne can glaedne Hroðulf þæt he þa geogoðe *wile* arum healdan. (line 1181).

I know my gracious Hrothulf that he will treat the young men honorably.

The most common use in later texts such as *Sir Gawain*, especially in the first person, is to make promises or state intentions, as in (11):

- (11) I *wyl* nauþer grete ne grone... (line 2157)

I will neither cry nor groan.

In (12) we see the shift to pure prediction devoid of any shades of volition. Such uses occur at first only when *will* is used with subjects that are inanimate objects, incapable of volition.

- (12) For þer hit onez is tachched twynne *wil* hit never. (line 2512)

For once it is attached, it will never come off.

The subject here is the lace Gawain took from the lady — figuratively, the symbol of his temporary fall from grace.

This sort of example is crucial to the development of future meaning, for it is in such cases that *will* is first used in a prediction sense without modal flavor. Of course, the use of *will* with human agents to indicate willingness and intention continues to the present day, but as examples such as (12) grow

more common, the prediction sense of *will* becomes more and more the central or dominant sense, and eventually this sense is possible even with human agents (see example [1]).

2.2 *Shall* in English.

The original main verb meaning of *shall* was «owe». When used with an infinitive (without *to*) as in (13) from Old English, it could indicate what is right or becoming, or as in the Middle English example (14), it could express necessity and what is appointed or settled to take place. These senses are related to obligation (cf. Bybee and Pagliuca 1985), as is the use of *shall* in commands or general decrees, also attested from Old English, and a 17th century example of which is (15).

(13) *Swa sceal geong guma gode gewyrcean...* (Beowulf, line 20)
So a young warrior must do good deeds...

(14) *Arte thou he that shall come...?* ((1526) Tindale, Luke 7.19)

(15) Scandalous persons *shall* be kept from the Sacrament.
(Ordinances of Lords, and Commons, with rules and directions, concerning suspension from the sacrament of the Lord's Supper in cases of ignorance and scandall, October 20, 1645).

A statement of obligation by a first person subject amounts to a promise to carry out the act, and, by implication, a statement of intention, as in (16), from Beowulf.

(16) *Ic þæm godan sceal, for his mod-þræce, madmas beodan.* (line 384)
I shall offer the good [man] treasures for his daring.

By the Middle English period, *shall* in first person expressions of intention such as (17) has become common, and approaches the sense of prediction:

(17) *And I schal ware alle my wyt to wynne me þeder.* (Gawain, line 402)
And I shall use all my wit to find my way there.

Shall is eventually restricted to first person, and the prediction sense gradually becomes central. For obligation-derived future markers generally, it is only when prediction has become prominent that the use of the marker with inanimate, non-agent subjects becomes common. But the modal flavor is not also extended — in fact, it is not extendable: Intent to carry out an obligation to perform an action cannot be attributed to inanimate objects, except in figurative language.

2.3 *Will and shall compared.*

Wekker 1976 and Coates 1983 have both argued that one of the more frequent uses of *shall* and *will* in contemporary British English is to express what Wekker calls «simple futurity» and Coates calls «prediction», often without attendant modal flavors. Both authors have also identified in the extensive corpora they have examined other uses in which *shall* and *will* express modal notions in addition to prediction. We claim that the contemporary modal nuances of *shall* and *will* are direct continuations of their original lexical meanings — those of *shall* are all related to obligation and those of *will* are related to desire. Coates' analysis shows this clearly. She cites *will* in examples such as (18) and (19) in which «willingness» and «intention» are expressed:

WILLINGNESS:

(18) Give them the name of someone who *will* sign for it and take it in if you are not at home. (p. 171).

INTENTION:

(19) I'll put them in the post today. (p. 170).

Wekker points out that in some contexts, the modal coloring of *will* is very frequent, if not obligatory. Consider (20), in which, in the temporal clause introduced by *if*, *will* has the sense of willingness, and (21), a negative sentence, in which *won't* has the sense of «refuses to» or «is not willing»:

(20) If he *will* meet us there, it will save a lot of time.

(21) The trouble is... the key *won't* go in the lock. (Coates 1983:173).

According to Coates, *shall* has the modal readings of «obligation», «addressee's volition» and «intention». The first is used only in the written language, and there primarily for the formal function of stating laws and decrees (example [22]). This is a direct continuation of the original meaning of *shall*:

OBLIGATION:

(22) A line of rails or tramway constructed under the powers of this Order *shall* not be used for the public conveyance of passengers unless it has been certified by the Minister to be fit for that purpose. (p. 191).

«Addressee's volition» as in (23) refers to cases where the interrogative *shall I* occurs with an active verb:

ADDRESSEE'S VOLITION:

(23) *Shall I* ring at 11 p.m. one night (English time) in the week after you get back?

The speaker is consulting with the wishes of the addressee, and, as Coates points out, substituting *will* in this case is not appropriate, since it would give the sense of questioning the speaker's own wishes. This use is also a derivative of the original obligation sense of *shall* — obligation has a source external to the agent (in this case the speaker) and the speaker here is checking this obligation with the person who is imposing it.

We noted above that an obligation verb was used to state the intentions of the speaker in earlier English, so the presence of many examples such as (24) in Coates' sample supports our hypothesis:

INTENTION:

(24) and I shall get to London as soon as I can. (p. 186)

2.4 *Be going to* in English.

The development of the meaning of the *be going to* construction and its range of uses differs from *shall* and *will* because its original meaning had to do with motion in space rather than the internal and external conditions of desire and obligation specific to humans. The *going to* construction in English is much younger than *shall* and *will* and has not undergone as much semantic change and development. Its range of use in Modern English, we will claim, is directly traceable to its original lexical meaning.

As Marchese points out in her discussion of *go*-futures in Kru languages, the construction almost always involves *go* in an imperfective aspect, the present progressive or continuous. Whatever sense of movement in time or space is conveyed by the construction must be viewed as already in progress. In addition, it is a common feature of such constructions in many languages to include an indicator of movement toward a goal, either inherent in the verb, or expressed by an adposition, such as the English *to* or Spanish *a* (of the *ir a* future). Thus, part of the original meaning of the construction involves movement towards a goal. Scheffer 1975 notes that the earliest uses of *be going to* in English involve actual movement, as in example (25) from *The Merry Wives of Windsor* (IV, 3.3):

(25) Sir, the Germans desire to have three of your horses; the Duke himself will be to-morrow at court, and they *are going to* meet him.

In the seventeenth century, the construction loses the notion of change of location and is used to express movement toward a goal of a more figurative

sort. The sense of prediction develops out of this meaning, and the modal flavors described as being part of this construction, we will claim, are all due to the original meaning «the subject is on a path moving toward a goal (which may be an event, state or activity)».

Contemporary descriptions of the *be going to* construction recognize that it is used in making predictions, but Wekker 1976 argues that *be going to* differs from *shall* and *will* in that it has a «present orientation» or that there are «indications in the present that something will happen» (p. 126) (Cf. also Fleischman's «present relevance» (Fleischman 1983)). Thus

(26) There's *going to* be a storm.

implies that clouds are building up in a way that

(27) There *will* be a storm.

does not. Similarly

(28) She's *going to* have a baby.

implies that she is already pregnant, while

(29) She *will* have a baby.

does not. The oft-cited «imminence» or near future sense of *be going to*, as in (30), is clearly subsumed under this description.

(30) That glass *is going to* fall.

This sense of *be going to* is also accurately covered by the more literal reading of «the subject is on a path moving toward a goal», as long as movement is not confined to spatial movement. Moreover, we would argue that this historically-motivated description also explains the salient sense of intention that *be going to* has with human subjects, as in example (31), since the mere decision to perform an act puts one on the path toward that act.

(31) I haven't yet decided what I'm *going to* do when I get to be a grown-up. (Wekker 1976:133).

In (31), the progressive aspect provides the present orientation sense: the subject is currently on the path, either by decision or by other situational factors.

2.5 We have argued in our discussion of *will*, *shall* and *be going to*, that the differences in the uses of these future markers can be understood as continuations of their original lexical meanings. Since obligation, desire and movement are commonly occurring sources for future morphemes in the languages of the world, we expect similar sequences of development to

be repeated across languages. Assuming this is so, we can apply the following reasoning to the reconstruction of the source of future morphemes whose history is not known: if the future marker has a sense of obligation in some context, then its lexical source was a verb that meant «to owe» or a marker of obligation constructed with the copula or a marker of possession. If the future has a sense of volition or desire, then its source is a verb of that meaning. The ability of a marker to express intention or prediction is not helpful in reconstruction, since these uses are shared by markers designated as futures whose origins differ.

Perhaps the most cogent illustration of the fact that these modal flavors do not develop from the future meaning, but rather, when present, must be interpreted as retentions, comes from Quechua. The inflectional future paradigm in Quechua is heterogeneous — the first person singular and plural exclusive inflections are based on an old movement morpheme (i.e. «going to»); the second person is identical to the present, and the third person suffix appears to have evolved from an obligation marker. The evidence for this is that in most dialects its reading is prediction, but in the dialect of Cajamarca, it is used for obligation («must»), probability and future (Felix Quesada, personal communication). The crucial point is that the movement-derived first singular and plural exclusive can have readings with prediction and intention but *not* readings with obligation or necessity. Only in the third person — that is, the form derived from an obligation source — can obligation or necessity be present as modal flavors.

3. Other uses of future markers.

In the preceding sections, we have discussed senses of future morphemes that may be divided into the two categories shown in (32):

- (32) 1. Senses which are original to the construction, or which are weakened versions of the original source meaning: desire (and derivative willingness), obligation (and necessity), and movement on a path.
 2. Senses or uses that develop along the way, but that are not source-specific: intention (for first person agents) and of course prediction, which we are using as the defining sense of futures.

One more use, which is restricted to obligation-derived futures, belongs in the first category.

Some futures are described as being used to state suppositions or imply probability or likelihood. Consider the French and Spanish examples (33) and (34)

(33) George n'est pas venu ce matin. Il *aura* oublié notre rendez-vous.
George didn't come this morning. He probably forgot our appointment. (Fleischman 1982:132)

(34) ¿Serán las cinco, no?
It must be five o'clock, don't you think?

Similarly, the Dutch *zullen* (Kirsner 1969), the Korean *be*-future and the Quechua third person future may all express probability. All of these futures are derived from obligation constructions, as are the English modals in (35) and (36) that can be used in this way:

(35) It must be five o'clock.

(36) He should be in Rome by now.

Notice that a substitution of *will* in these sentences introduces a stronger sense of prediction and certainty. For this reason we suggest that the probability reading of futures is specific to obligation-derived futures.

The other uses of futures that remain to be discussed constitute a third category as shown in (37):

(37) 3. Senses that develop out of prediction and are consequently not source-specific.

In this category fall the uses of futures as imperatives. Obligation-derived futures may develop directly into imperatives since informing a second person agent that he or she has a certain obligation is functionally equivalent in many cases to imposing that obligation, or issuing a command (as in the Biblical *thou shalt not*). But other types of futures may also develop imperative uses. Because commands necessarily refer to future acts and because commanding is imposing a prediction on a second person, the marker used for future prediction is semantically and pragmatically compatible with making commands.

The second group of uses in the third category are uses of the future to express what are called «general truths» by Ultan, «predictability» by Coates and «eternal truths» by Fleischman, as in examples (38) and (39):

(38) the antibodies are naturally occurring and over 95 percent of all recipients *will* have anti-A and/or anti-B in their serum. (Coates 1983:178)

(39) A l'égard des voleurs on ne *sera* jamais assez prudent.

When it comes to thieves, one can never be too careful. (Fleischman 1982:132).

These statements amount to predictions, though not necessarily predictions

about future time. They are predictions based on past experiences and thus apply to states of affairs that exist in the past, present and future. Coates relates these predictions to statements of characteristic behavior, also based on past experience, as in (40):

(40) It is a fairly safe bet that one of the guests *will* want to take the empty flask home; they make delightful lamp bases. (Coates 1983:178).

It is certainly a small step from prediction about future time to generalized prediction, but often the «timelessness» of such statements may derive more from the context than from the future marker. Note that the French sentence in (39) contains the adverb *jamais*, and that all of the sentences cited have indefinite subjects.

Occasionally, futures are cited as being used as indicators of habitual action. To the extent that we have been able to document such usage, we find that the future never constitutes the only, or even usual, means of indicating habitualness, and that the cases cited actually express predictability much as examples (38) and (40) do.

4. Conclusion.

What we have tried to show is that much of the meaning of grammatical markers — particularly that which appears to be idiosyncratic and difficult to analyze — may be attributable to the lexical sources from which they derive. Since we find strong cross-linguistic tendencies to use the same small set of lexical items to derive futures, and since the modal flavors of future morphemes are also similar across languages, we hypothesize that the semantic changes leading to grammaticization and the changes during grammaticization are similar across languages. If this is so, it means that we can specify common or frequently travelled paths of semantic change in much the same way that we recognize common paths of phonological change, and that these can be used to reconstruct the sources of grammatical markers.

LANGUAGE REFERENCES

ABIPON

Najlis, Elena Lidia. 1966. Lengua Abipona. Archivo de Lenguas Precolombinas, Volumen 1. Buenos Aires: Centro de Estudios Lingüísticos, Universidad de Buenos Aires.

ARABIC

Elbiad, Mohamed. Personal communication.

DAKOTA

Buechel, Eugene. S.J. 1939. A grammar of Lakota: The language of the Teton Sioux Indians. Saint Francis, SD: Rosebud Educational Society.

HAITIAN

Hall, Robert A., Jr. et al. 1970. Haitian Creole: Grammar, texts and vocabulary. *Memoirs of the American Folklore Society*, v. 43. Mamaroneck, NY: Kraus Reprint Corp.

KARANKAWA

Gatschet, Albert S. 1891. The Karankawa Indians. Peabody Museum of American Ethnology: Archaeological and Ethnological Papers, vol. 1, no. 2. Harvard University.

KOREAN

Martin, Samuel E. 1960. Korean reference grammar. *Research and Studies in Uralic and Altaic Languages*, Project no. 19. Cleveland: Bell and Howell.

Ramstedt, G.J. 1939. A Korean grammar. Helsinki: Suomalais-Ugrilainen Seura.

Choi, Soonja. Personal communication.

KRU languages

Marchese, Lynell. 1979. Tense/aspect and the development of auxiliaries in the Kru language family. Dissertation, UCLA.

LOGBARA

Crazzolaro, J.P. 1960. A study of the Logbara (Ma'di) language. London: Oxford University Press.

MANDARIN

Li, Charles N. and Sandra A. Thompson. 1982. A reference grammar of Mandarin. Los Angeles: University of California Press.

MIWOK

Freeland, L.S. 1951. Language of the Sierra Miwok. *Memoirs of IJAL or Indiana University Publications in Anthropology and Linguistics* VI.

QUECHUA

Quesada, Felix. Personal communication.

SERBO-CROATIAN

Partridge, Monica. 1972. Serbo-Croatian practical grammar and reader. Belgrade.

SONAY

Prost, André. 1956. La langue Sonay et ses dialectes. Mémoires, no. 47. Dakar, Senegal: Institut Documental D'Afrique Noire.

TOJOLABAL

Furbee-Losee, Louanna. 1976. The correct language: Tojolabal: a grammar with ethnographic notes. New York: Garland Press.

GENERAL REFERENCES

- Bybee, Joan L. and William Pagliuca. 1985. Cross-linguistic comparison and the development of grammatical meaning. Proceedings of the Conference on Historical Semantics and Word-Formation, Błazejewko, Poland, March 1984, ed. by J. Fisiak. Berlin: De Gruyter.
- Coates, Jennifer. 1983. The semantics of the modal auxiliaries. London: Croom Helm.
- Fleischman, Suzanne. 1982. The future in thought and language: Diachronic evidence from Romance. Cambridge: Cambridge University Press.
- Fleischman, Suzanne. 1983. From pragmatics to grammar: Diachronic reflections on complex pasts and futures in Romance. *Lingua* 60.183-214.
- Fries, Charles C. 1927. The expression of the future. *Language* 3.87-95.
- Heine, Bernd and Mechthild Reh. 1982. Patterns of grammaticalization in African languages. *AKUP* 47.
- Kirsner, Robert S. 1969. The role of *zullen* in the grammar of Modern Standard Dutch. *Lingua* 24.101-55.
- Marchese, Lynell. 1979. Tense/aspect and the development of auxiliaries in Kru dialects. Dissertation, UCLA.
- Perkins, Revere D. 1980. The evolution of culture and grammar. Dissertation, SUNY Buffalo.
- Scheffer, Johannes. 1975. The progressive in English. Amsterdam: North-Holland.
- Ultan, Russell. 1978. The nature of future tenses. In *Universals of human language, Volume 3: Word structure*, ed. by Joseph H. Greenberg, 83-123. Stanford: Stanford University Press.
- Wekker, H. Chr. 1976. The expression of future time in contemporary British English: An investigation into the syntax and semantics of five verbal constructions expressing futurity. Amsterdam: North-Holland.