Context Dependence in English Futures **Peter Klecha** **University of Chicago**

While modal subordination has been much discussed since its first description and analysis (Roberts, 1989), one aspect that has not yet been described is the fact that modals can be divided into two classes: those that undergo modal subordination obligatorily, and those that do so optionally. Consider data first noticed by Binnick (1971): The situation is that there is a bomb which the addressee is walking towards; the bomb may be a time bomb, in which case the addressee should flee, or it may be a landmine, in which case the addressee should simply stay away.

(1) a. Don't go near that bomb. It'll explode. (LANDMINE)
b. Don't go near that bomb. It's gonna explode. (TIME-BOMB OR LANDMINE)

While Binnick noticed that (1-a) has a conditional reading, (*If you go near the bomb, it will explode*) and (1-b) has a predictive reading (*The bomb is going to explode regardless*), (1-b) can also have a conditional reading as in (1-a). The crucial contrast, then, is whether there is an *obligatory* implicit conditional meaning, or and *optional* one.

Roberts (1989) analyzes implicit conditional readings (modal subordination, henceforth MS) in (1) as cases of contextual domain restriction, but there has been no discussion of whether MS is optional or obligatory. I argue that while the modal base of every modal is contextually determined (Kratzer, 1977), giving rise to MS (Frank, 1997), some modals, like *will* have a familiarity presupposition (Heim, 1982) on their modal base, giving rise to obligatory MS, while others like *gonna* have no such presupposition, giving rise to optional MS. This is a general property of modals, not just *will* and *gonna*, meaning there are two classes of modals, as shown below.

(2) Don't go near that bomb...
a. It {would, could, will} explode. (LANDMINE)
b. It {might, may, is gonna} explode. (TIME-BOMB OR LANDMINE)

Establishing Modality It first must be established that *will* and *gonna* are modals. Roberts, in her original analysis, assumes *will* to be a tense and suggests that some other strategy besides domain restriction is available for implicit conditional readings on bare tenses. However, as argued in Klecha (2010) this cannot be: observe that while MS is available in modals as seen in (2), it is never available in tenses:

(3) a. If Martina went to New York, she bought lots. # She had fun.
b. If it's four in the morning, Julia is awake. #She's making breakfast.

The second sentence in both (3-a) and (3-b) lack a conditional meaning. If there were a strategy for giving implicit conditional readings to bare tenses we should expect them to appear in (3). If *will* and *gonna* were tenses, we would expect them to behave like other tenses. Neither of these things hold. For more arguments for modal analyses of futures, see Klecha (2010), Condoravdi (2003), and Copley (2002).

It is often argued in the literature on modal subordination (for a recent example see Asher & McCready, 2007) that *will* is not a modal, supposedly explaining its apparent inability to undergo MS, suggested by the following data:

(4) a. A wolf$_i$ might come in here. It$_i$ would eat you first.
b. A wolf$_i$ might come in here. #It$_i$'ll eat you first.

However, the infelicity of (4-b) cannot be explained as due to *will*'s general inability to undergo modal subordination; clearly (1) demonstrates that *will* can in fact undergo modal subordination, as does the original data from Roberts (1989). The infelicity of (4-b) can be explained as due to something else: the restriction on *will* that it quantify over reasonably likely worlds, as opposed to *would* which is happy with unlikely possibilities (Iatridou, 2000). If we create a more realistic situation, *will* is felicitous.

(5) Stop dancing. Someone$_i$ might come in here. They$_i$'ll think you're crazy!

We can then conclude that *will* and *gonna* are modals, and take their implicit conditional readings to be due to contextual domain restriction.

Proposal I argue then that *will* and *gonna* both have a free variable for their modal base, which is contextually valued. However, in the case of *will* there is a presupposition that its modal-base-variable already be in the assignment function, i.e., it presupposes a familiar modal base, as the simplified denotations below show.

(6) a. $[\![\textbf{gonna}]\!]^c(\phi) = \lambda w.[1 \text{ iff } \forall v \in m \,.\, \phi(v)] \text{ iff } m \subset \textsc{Met}(w)$
b. $[\![\textbf{will}]\!]^c(\phi) = \lambda w.[1 \text{ iff } \forall v \in m \,.\, \phi(v)] \text{ iff } m \subset \textsc{Met}(w) \,\&\, m \in \text{Dom}(c)$

All utterances are interpreted with respect to c, a context. If a variable is in the context, it is familiar, as in Heim (1982). $\textsc{Met}(w)$ is the set of worlds metaphysically accessible to w, i.e., the modal base standardly assumed in the literature treating futures as modals; each modal is therefore presupposed to take a metaphysical modal base. If these expressions allow any other possible modal bases (e.g., epistemic), the denotation must be altered to allow for that. These denotations abstract away from ordering sources.

This analysis predicts that in *modal contexts*, or contexts where a set of worlds has been made salient, *will* will necessarily take an implicit conditional meaning, being restricted to that set of worlds. In the same context, *gonna* will be able to have the same implicit conditional meaning, or simply take the (non-salient) full set of metaphysical alternatives, giving the simple prediction reading.

Essentially this account says *will* and modals like it have an anaphoric modal base while *gonna* and modals like it do not. This makes another prediction: *will*-type modals should be infelicitous discourse initially, while *gonna*-type modals should not be. The prediction is borne out:

(7) Someone walks into a room and says:
a. #I'll fail my exams tomorrow.

b. I'm gonna fail my exams tomorrow.

Since there is no salient set of worlds in the discourse, *will* gives rise to a presupposition failure. But *gonna* bears no such presupposition, so it is acceptable. The same split holds for other modals:

(8) Someone walks into a room and says:
   a. #I {would, could} fail my exams tomorrow.
   b. I {might, may} fail my exams tomorrow.

A few things may need to be said about *will* – first of all, it sometimes appears without an implicit conditional reading; this isn't necessarily problematic since *will* should be licensed if the whole set of metaphysically accessible worlds is salient. Second, it sometimes appears in literary or high registers in discourse initial contexts.

(9) Obama will send 40,000 more troops to Afghanistan.

I exclude these cases from the analysis, since the facts are simply different in these registers; there is no *gonna*, so *will* subsumes the functions of *gonna* in those registers. Notice that (9) is bad in conversational spoken English. Therefore this is only an analysis of casual, colloquial, spoken American English. Finally, *will* can be used to make offers or commitments, as first discussed in Copley (2002). These offers can come discourse initially.

(10) Someone walks into a room where people are setting up for a party and says:
   a. I'll put out the chips. (OFFER)
   b. I'm gonna put out the chips. (#OFFER)

I assume that this offer use of *will* is a separate lexical item, owing to the fact that offers are not always made with futures, as shown in (10-b) and (11) from Spanish.

(11) a. Ya lo hago yo. (OFFER)
   "I'll do it." (Lit.: "I do it.")
   b. Ya lo haré yo. (#OFFER)
   "I'm gonna do it."

(11-a) shows that the simple present in Spanish is used for offers, while (11-b), the morphological future, is not. I therefore argue that offer-*will* is a separate lexical item which does not enter into the analysis. While the data on *will* may seem somewhat muddled due to these various caveats, the data in (1) and (7) is robust, as is data for other modals like *would*. While more perhaps needs to be said about *will*, the basic empirical claim is this: some modals undergo modal subordination obligatorily, some optionally.

Previous Accounts Other accounts have been made for the *will*/*gonna* split. Copley (2002) proposes that while both are necessity modals along the lines of what is proposed here, *gonna* is scoped over by a high imperfective operator which prevents its use in offers, as in (10-b). Copley claims that the high aspectual operator makes (10-b) mean something like "I was already planning to put out the chips". However, while (10-b) is consistent with the utterer's having already planned to do so, it is not required; (10-b) may be uttered by someone who has spontaneously decided to put out chips. Moreover, this analysis fails to capture the facts in (1) or (7); if anything, Copley predicts that in (7) *will* should be better than *gonna*, since there is no prior contextually salient temporal interval for the high aspectual operator to refer to.

Haegeman (1989) provides a non-formal reference time analysis, summarized below.

simple past	E,R $<$ S	*will*	S $>$ E,R
pres. perfect	E $<$ S,R	*gonna*	S,R $>$ E

Essentially *will* is analogized to the simple past while *gonna* is analogized to the present perfect; besides being a future-as-tense analysis, this again makes wrong predictions:

(12) a. John has walked into the bar. # Then he has taken off his coat.
b. John is gonna walk into the bar. Then he's gonna take off his coat.

(13) Someone walks into a room and says:
a. I failed my exam.
b. #I'll fail my exam.

As seen above, *gonna* does not behave like the present perfect, nor does *will* behave like the simple past. The analysis I propose therefore improves upon our understanding of the *will*/*gonna* distinction, while also illuminating more generally two classes of modals in English, based upon their modal subordination behavior.

References

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