Toward a Unified Treatment of will

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The fact that the modal will does not always have a future meaning has long been observed. Jespersen, for example, states that will may indicate volition, power, capacity, or habit as well as futurity (Jespersen 1931, part 4, 239-43). The goal of this paper is to present an analysis of will which includes all of these uses in one unified meaning. I will argue that the non-future use of will, far from being peripheral or exceptional, has exactly the same semantic structure as the future will, that the basic meaning of will is Potential rather than Future. Some examples of non-future will are given in 1.

1a. This jar { will hold } two gallons.
b. Her car { will go } 95 mph.
goes
c. The auditorium { will seat } 500.

In these examples, will and the simple present tense seem to be interchangeable. This is not true for all uses of the present tense, however. There are many instances in which the present is acceptable but will is not, at least not without a change of meaning.

We observe from these and similar sentences that the non-future will cannot be used in statements of categorical truth. Will implies the existence of a pathway from some set of conditions to S (the proposition asserted; the sentence without will). Thus, will can be used only when S is potentially true, not when S is conceived of as a present and constant truth, a fact about the organization of the world. A comparison of two apparently similar sentences may clarify this point.

3a. Six cups of flour { make(s) } two cakes.

b. Twelve inches { make(s) } a foot.

*will make

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Twelve inches do not have the potential to make a foot, they are by definition a foot. Six cups of flour, however, only potentially make two cakes; they could equally well make 100 biscuits or five jars of paste or not be used at all. There is no necessary definition or equation "6 cups flour = 2 cakes" which always holds true as "12 inches = 1 foot" does. Will is possible in the equational type of sentence only in the future sense, as in setting up a new system, for example:

- Under the proposed calendar there will be 18 weeks in a semester.
- b. The king has decreed that from now on cows will be reptiles.

The obligatory futurity of sentences such as:

5. The Grand will be the largest theater in town.

can be explained in much the same way. If the Grand already is the largest theater in town there is no potential involved, merely fact. Therefore, since will always implies a potentiality, the sentence must be future.

To return to our original three sentences in 1, it should be noted that they are actually all ambiguous or at least vague with respect to time reference. An unambiguous future reading, approximately paraphrasable as be going to, can easily be forced by adding future-time adverbial phrases.

6a. This jar { will } hold two gallons when it is finished.

b. Her car { will } go 95 mph when I get done working on it.

c. The auditorium { will } seat 500 after the new seats are added.

The non-future interpretation can be just as unambiguously marked with a non-future context.

- 7a. This jar holds only a quart, but I've got another one that will hold two gallons.
- b. On good days, her car will go 95 mph.
- c. Normally the auditorium will seat 500, but sometimes one section is full of boxes and can't be used.

In the same way, sentences in which will would normally be understood as future can be pushed to a non-future interpretation; compare 8 and 9.

- 8a. The lecture will take an hour,
 - b. Mary will give us a ride.
- 9a. Sometimes the lecture will take an hour, but usually it's shorter than that.
- b. Mary will usually give us a ride if she's not too busy.

Will, then, is neither inherently future nor inherently non-future. It merely asserts that S is potentially true, without stating when that potential may be realized. Since the potentiality of will is unspecified as to time, sentences including will can be interpreted either as future or as non-future depending on the context. The fact remains, however, that in some (perhaps most) cases the preferred reading of will is future while in others it is normally understood as non-future. This distinction is attributable to the difference between a specific single event and a group or class of events. Where S represents a single event (as in 8) the interpretation is future. Where S represents a class of events (repeated action, as in 9, or inherent capacity of an object, as in 1) the interpretation is non-future.

This follows logically from the definition of will as potential. If S is potential, it cannot have already been fully realized; if it has been, then it is no longer potential, but actual, and will cannot be used to refer to it. A single event must either have occurred fully or not have occurred at all. That is, it may be either nonpotential and past (or present), or potential and future, but not potential and non-future. Therefore, will in a single-event sentence can only be interpreted as future. An event class, by contrast, can be simultaneously potential and non-future in the sense that one or more instances of the event(s) may have occurred in the past, and more may occur in the future.

Thus in 10a the van may have held eight people in the past and may do so again; the potential to hold eight people is characteristic of it at all times. In 10b driving all night is characteristic of John "sometimes," presumably including some past occasions. However, in 10c the potential is purely future. It refers to a single event; there is no implication that driving all night is characteristic of Connie.

10a, Harry's van will hold eight people comfortably.

b. Sometimes John will drive all night without stopping.

 c. Connie will drive all night tonight and arrive in New York tomorrow.

The presence of will in a sentence means that S is potential, but not inevitable. This has been clearly demonstrated by Robert Binnick in two very interesting articles comparing the semantics of will and be going to. To repeat his argument briefly, will is dependent on the fulfillment of some hypothetical condition or conditions, while be going to has no such dependence. Thus 11a (Binnick's example 1 in the 1972 article) is elliptical as it stands; it could be completed with a conditional clause such as "if you pull the wedge out from under it." 11b is not elliptical; no presently unfulfilled conditions are necessary for the rock to fall.

11a. The rock'll fall.

b. The rock is going to fall.

In an even clearer example, 12a means that Mary is pregnant, the baby is inevitable, while in 12b some necessary conditions are obviously missing—perhaps "as soon as she gets married" or "if her doctor tells her to."

12a. Mary is going to have a baby.

b. Mary will have a baby.

Be going to can of course occur with a temporal or

conditional clause, but this clause does not have the same causative relation to the proposition that it does with will. In 13a (Binnick's 18), but not in 13b, the sun's setting is the cause of our freezing.

13a. When the sun sets, we'll be frozen.

b. When the sun sets, we're going to be frozen.

Binnick deals only with the future use of will, but the property of avoidability or contingency is characteristic of the non-future will as well. The jar in 1a (repeated here) may never actually hold two gallons; some condition such as "if it is filled" is missing. And in 9b if Mary is always too, busy, we may never get a ride.

1a. This jar will hold two gallons.

9b. Mary will usually give us a ride, if she's not too busy.

The fact that will represents an avoidable potential may explain its 'deferential' use in sentences like 14. The cashier who says 14a implies or at least pretends that the handing over of five dollars is not inevitable; the customer has some choice in the matter. And 14b could well be followed by "if you don't mind" or "if you'll just step this way."

14a. That'il be five dollars, please.

b. The doctor will see you now.

Similarly will is often used in polite (or pseudo-polite: 15c) requests:

15a. Will somebody please get the phone?

b. Will you have a seat, please.

c. Will you please get out of my office!

The only cases in which will does not have the 'avoidability' meaning are a few idioms, like 16a, and the volitional usage exemplified by 16b; this usage is marginal at best, for me, and I will make no attempt to deal with it here.

16a. Boys will be boys.

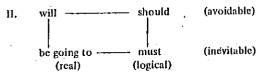
b. He will wear that awful tie. (=he insists on wearing . . .)

We have, then, the beginnings of a placement of will in a system of modals. Will is opposed to be going to along an axis of evitability:

This is closely parallel to the distinction between should and must proposed by Erich Woisetschlaeger in his thesis, should being the avoidable member of the opposition and must the inevitable member. The distinction is illustrated by sentences such as 17. In each case the sentence with should is less certain than the corresponding sentence with must.

John Goldsmith has suggested (personal communication) that will and be going to could be opposed to should and must as in 11, by the 'real' (causal) or 'logical' (inferential)

nature of the relation between the proposition asserted (S) and the speaker's knowledge.



Should and must indicate an inference from the speaker's knowledge of the world (what Woisetschlaeger calls a "law") to S. The law may be applicable either in the real world or in some ideal world; hence the moral reading of should and must. Will and be going to, however, indicate a causal relation between the present state of the world (as perceived by the speaker) and S; S necessarily will occur given present circumstances (and given certain conditions for will, as discussed above).

If we set aside *must* and *be going to*, the following examples illustrate the real/logical opposition for *will* and *should*.

18a. I should fire you.

b. This jar should hold two gallons.

will

Should in both sentences can be represented as a logical proof with premises and a conclusion:

a) premise: (circumstances (e.g., you drink on the job)

[law: in an ideal world, under those circumstances, you would be fired.

conclusion: S (=I fire you)

b) premise: { circumstances (size of the jar)

I law: something that size holds two gallons.

conclusion: S (=the jar holds two gallons)

Will involves no premises or laws; rather, the circumstances relate causally to S:

a) cause: circumstances (you drink on the job)
(and conditions: If you don't reform, ...)

effect: S

b) cause: circumstances (size of the jar)

(and conditions: if it is filled,...)
effect: S

As demonstrated by these examples, the real/causal opposition holds for both future and non-future senses of will. However, sentences like the following do not fit this distinction:

19a. That'll be Margaret now. (As the doorbell rings)

b. I'm sure you'll all have met Dr. Brown.

c. This'll be Maple Street, I guess. (Speaker standing on the street corner with map in hand)

In these cases, will is clearly not causal, but instead represents a logical inference. This use of will sounds slightly odd to me, but it is apparently perfectly acceptable for some speakers and should be accounted for. Unfortunately I know of no criteria which will distinguish this and all other uses of will from should. Since the real/logical distinction works in the vast majority of cases it seems pointless to throw it out until something better is found; it is listed below with a question mark.

In conclusion, then, I propose the following points as a first approximation to a semantic characterization of will: will indicates that it is possible to construct a pathway from present conditions to S; that is, S is potential;

will, as opposed to be going to, means that the pathway leading to S is not the only conceivable one; all necessary and sufficient conditions for S are not currently true; S is not inevitable;

??will (and be going to), as opposed to should (and must), means that there is a real or causal connection between some conditions and S; should and must are characterized by a corresponding logical or inferential connection.

All of these points apply to both the future and non-future senses of will; I claim, in fact, that the two 'senses' are semantically identical. Will has no temporal meaning of its own but is interpreted as future or as habitual/non-future depending on the sentence or discourse context, specifically depending on whether S is viewed as a single event or a group of events. Will is not a future tense marker; it merely indicates a timeless, avoidable potentiality.*

*I am grateful to John Goldsmith for his many helpful suggestions and general encouragement in the writing of this paper.

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