

Two types of futures in Washo

M. Ryan Bochnak

University of British Columbia

Washo (Hokan/isolate; USA) has been described as having a graded future tense system, grammaticalizing distinctions in temporal distance from a reference point (Jacobsen 1964). According to Jacobsen, the ‘near future’ *-ašaʔ* covers a time period up to about an hour in the future; the ‘intermediate future’ *-tiʔ/-t* covers an interval up to a few hours in the future; and the ‘distant future’ *-gab* is used for the following day or any time after. I argue that these graded futures do not form a unified class: specifically, ‘near future’ *-ašaʔ* has a distinct morphosyntactic and semantic profile from ‘int. fut.’ *-tiʔ/-t* and ‘dist. fut.’ *-gab*. I propose that *-ašaʔ* combines both a temporal and modal semantics, while *-tiʔ/-t* and *-gab* have only a temporal semantics and must combine with another operator to form licit claims about the future.

Not members of the same morphological paradigm. As already noted by Jacobsen (1964, 1973), the graded futures occupy different slots in the Washo verbal template: *-ašaʔ* is classed as a “stem formative” suffix (closer to the verb stem), while *-tiʔ/-t* and *-gab* are “prefinal” suffixes (farther from the verb stem). Though rare, suffixes from the different slots in the template can co-occur, as in (1):

- (1) *hálaŋa k' éšeyes-é:s-aʔ-š hak' -éʔ-ašaʔ-tiʔ-i-ŋa*
still 3.breathe-NEG-DEP-SR like.that-be-NEAR.FUT-INT.FUT-IND-but
'Still she didn't die, but it's going to happen.' (Jacobsen 1964:645)

Temporal distance not encoded in *-ašaʔ*. In contexts where the speaker is ignorant about how far in the future something will happen, ‘near future’ *-ašaʔ* must be used. Evidence comes from ignorance about temporal distance in questions in (2) (adapted from Cable 2013 for graded pasts in Gikūyū). In the same context, speakers find *-tiʔ/-t* and *-gab* unacceptable (examples suppressed for space). Futures *-tiʔ/-t* and *-gab* are acceptable if the context supports their distance specifications; see (3) for *-gab*.

- (2) Context: Your grandson in Sacramento said he would come over some time, but you don't know when. He might come in a couple of days from now, next week, or even later today, you don't know. So you call up and ask him:

huyatésŋa hé:š m-í:biʔ-ašaʔ-i
when Q 2-come-NEAR.FUT-IND
'When will you come?'

- (3) Context: Your grandson in Sacramento said he would come over some time next week, but you don't know exactly when.

huyatésŋa hé:š m-í:biʔ-{\#ašaʔ/\#tiʔ/\#gab}-i
when Q 2-come-{\NEAR/INT/DIST}-IND
'When will you come?'

This suggests that *-ašaʔ* is in fact underspecified for temporal distance, with its “nearness” interpretation derived as an inference as a result of a competition with the more specific *-tiʔ/-t* and *-gab* forms.

Only *-ašaʔ* can combine with past tense. A combination of near fut *-ašaʔ* and past tense *-ujil* locates an event in the future of a past time, and often conveys counterfactuality (Bochnak, 2016); see (4). Futures *-tiʔ/-t* and *-gab* cannot combine with past tense (Jacobsen 1964).

- (4) Context: Steven had the winning numbers in the lottery, but when he went to look for his ticket, he couldn't find it anywhere.

t' é:k' eʔ ʃ-heyéʔem-ašaʔ-ujil-aʔ-š git-behúweʔ ʃ-páyʔ-ha-yi
much 3-win-NEAR.FUT-PAST-DEP-SR REFL-ticket 3-lose-CAUS-IND
'He was going to win a lot of money, but he lost his lottery ticket.'

Licensing environments for *-tiʔ/-t* and *-gab*. Whereas *-ašaʔ* can occur freely to convey future meaning, *-tiʔ/-t* and *-gab* can only occur in certain licensing environments, namely: under the scope of a modal (shown in (5) for *-gab*); under the scope of an attitude verb (shown in (6) for *-tiʔ/-t*); and in questions (shown in (7) for polar questions; constituent questions also license *-tiʔ/-t* and *-gab*). Note that negation

is not a licenser for *-ti?/-t* and *-gab*; these markers thus have a distribution similar to so-called “bagel NPIs” (e.g., Progovac 1994), where non-veridical but not anti-veridical operators are licensers.

- (5) [\emptyset -há?aš-**gab-i-gi**] k'-é?-i wá:t
 3-rain-DIST.FUT-IND-NMLZ 3-MOD-IND tomorrow
 ‘It’ll rain tomorrow.’ (adapt. Jacobsen 1964: 649)
- (6) [t’ánu lé-ši démlu \emptyset -dó:da-ha-t-a?] ?-ít-leg-i
 person 1PRO-DU food 3-prepare-CAUS-INT.FUT-DEP 3-say-REC.PST-IND
 ‘He said someone is going to prepare food for the two of us.’ (Jacobsen 1964: 644)
- (7) m-íme?-hé:š-ti?/gab-i
 2-drink-Q-INT.FUT/DIST.FUT-IND
 ‘Are you going to drink?’ (adapt. Jacobsen 1964: 645/651)

Analytical proposals. First, ‘near future’ *-aša?* lexicalizes both a future shifting temporal component and a modal component together, as in (8). Consistent with ignorance questions like (2), there is no temporal distance specification semantically encoded. Furthermore, *-aša?* in (8) has a relative interpretation, and so can yield future in the past readings when combined with past tense as in (4).

$$(8) \llbracket -aša? \rrbracket = \lambda P_{\langle i, st \rangle} \lambda t \lambda w. \forall w' \in \text{Acc}(w, t) [\exists t' [t' > t \ \& \ P(t')(w')]]$$

The accessibility relations ($\text{Acc}(w, t)$) compatible with *-aša?* are those describing intention and prediction (cf. Tonhauser 2011 on Paraguayan Guaraní future *-ta*). In contrast to English *will* however (e.g., Kratzer 2012, Winans 2016), a future interpretation is entailed by *-aša?* – e.g., a present-oriented episodic interpretation is not possible; see (9).

- (9) Context: You expect Beverly to come over any time now, and you hear a knock on the door.
 Beverly k'-e? (#-aša?)-i-gi k'-é?-i
 Beverly 3-be(-NEAR.FUT)-IND-REL 3-MOD-IND
 ‘That must/will be Beverly.’

By contrast, ‘intermediate future’ *-ti?/-t* and ‘distant future’ *-gab* are proposed to be pure future tenses with temporal distance specifications as in (10)-(11).

- (10) $\llbracket -ti?/-t \rrbracket = \lambda P_{\langle i, st \rangle} \lambda t \lambda w. \exists t' [t' >_{int} t \ \& \ P(t')(w)]$
 (where $t' >_{int} t$ means “ t' is at least in the intermediate future of t ”)
- (11) $\llbracket -gab \rrbracket = \lambda P_{\langle i, st \rangle} \lambda t \lambda w. \exists t' [t' >_{far} t \ \& \ P(t')(w)]$
 (where $t' >_{far} t$ means “ t' is at least in the distant future of t ”)

I suggest that the reason why *-ti?/-t* and *-gab* are restricted to special licensing environments is that their meaning is too strong. Assuming a branching times model of the future (e.g., Thomason 1970), the future is represented not as a single timeline, but as a set of possible worlds that share a history up to the reference time. Thus, for a purely future tense statement to be true, the speaker must know which branch is the future continuation of the actual world. Such a meaning is unlikely to ever be true, and must thus be mediated by a modal or other non-veridical operator. Thus, future reference with *-ti?/-t* and *-gab* is in some sense decompositional, with temporal and modal components expressed separately.

Pragmatic competition derives temporal distance effects. Given the meanings in (8), (10) and (11), the ‘near future’ *-aša?* has the weakest temporal distance specification (i.e., none), so based on Gricean reasoning, a speaker should prefer sentences with more specific forms when s/he believes that the stronger meaning holds. Conversely, if a speaker didn’t use the more specific *-ti?/-t* or *-gab* forms, s/he must not believe or have evidence that the stronger meaning holds. This derives both why *-aša?* is typically restricted to ‘near future’ contexts, and why *-aša?* is used in ignorance contexts like (2).

Conclusion. The results of this study support two distinct analyses of futures (and within a single language): a monolithic temporal+modal analysis, and a decompositional analysis, both of which have been proposed independently for other individual languages. With respect to decompositional futures, we observe a new twist on what those components are, in this case a temporal operator plus a non-veridical operator to the exclusion of negation (compare Matthewson 2012 on Gitksan and Mucha 2016 on Medumba for modals and non-veridical operators, respectively, as licensers for futures).

Selected Refs: Bochnak, M.R. 2016. Past time reference in a language with optional tense. *L&P*. • Cable, S. 2013. Beyond the past, present and future: Towards a semantics of ‘gradrd tense’ in Gĩkũyũ. *NaLS*. • Jacobsen, W.H. 1964. *A grammar of Washo*. • Kratzer, A. 2012. What “can” can mean. LOT Winter School, Tilburg.