## Imperfective Shifts in Kaqchikel Maya

This research presents a semantic analysis for a part of the temporal systems of Colonial and Modern Kaqchikel Maya as well as an account of the diachronic path between them.

First, we investigate verbal prefixes t- (Colonial) and n- (Modern), both of which have been analyzed as present tense markers by Maxwell & Hill (2006) and Brown et al. (2006), respectively. We claim, however, that both prefixes are best analyzed as imperfective aspect markers.<sup>1</sup> (1) illustrates that Modern Kaqchikel n- is compatible with both present and future interpretations, suggesting that it is not a tense marker. On the other hand, the fact that (1a) is compatible with both habitual and progressive interpretations provides evidence that it is an imperfective marker.

(1) a. n- $\emptyset$ -atin b. n- $\emptyset$ -atin chuwa'q ?-B3s-bathe ?-B3s-bathe tomorrow 'He/she bathes/is bathing.' 'He/she will bathe/be bathing tomorrow.'

The Colonial form t- exhibits a similar distribution. In addition to encoding events in progress at the utterance time, it also marks states that hold at a past time (2), and we show that it is also compatible with future and habitual interpretations).

(2) qi-tzij k'a t-(i)-∅-xib'-in öq x-oj-pe true-word D PRS-EPV-3A-frighten-AP when PS-1Ap-come 'In truth, it was frightening when we came.' (Maxwell & Hill 2006: 32)

However, Colonial Kaqchikel *t-* also marked imperatives and hortatives (3).

(3) t-∅-iw-ak'ax-aj nu-tzij ïx nuk'ajol H-3A-2Ep-listen-TV 1E-word 2Ap 1E-son 'Listen to my words, you, my son' (Maxwell & Hill 2006)

We hypothesize that this ambiguity of Colonial t- led to a rise in the use of the periphrastic imperfective marker tan, a form illustrated in (4).

(4) xa wi ja ajaw Oxlajuj Tz=i= tan t-∅-ajaw-är öq just TC D lord Oxlajuj Tz=i= IM PRS-3A-lord-VR when x-∅-ajaw-är chïk Kab=lajuj Tijax PS-3A-lord-VR r Kab=lajuj Tijax

'It was lord Oxlajuj Tz=i= who was ruling when Kab=lajuj Tijax also became lord.' (Maxwell & Hill 2006: 194)

<sup>1</sup> We adopt definitions of present and imperfective from (Bybee et al. 1994: 316–317): the present tense locates a situation "simultaneous with the moment of speech," and the imperfective presents a situation as "unbounded in the sense that it is habitual, continuous, progressive, or iterative."

<sup>2</sup> This corresponds well with grammaticalization paths described by Bybee et al. (1994).

Ultimately, *tan* was phonologically reduced to *n*- and completely supplanted Colonial *t*- as a marker of imperfectivity, while the latter is only used in Modern Kaqchikel as an imperative/hortative marker.

This shift further set the stage for the emergence of a progressive marker. According to Maxwell & Hill (2006: 54), Modern Kaqchikel has recourse "to a paraphrastic [*sic*] construction with the verb *-ajin* 'to be in progress, to be happening'" as illustrated in (5).

(5) Tajin n-(k)i-tzib'an täq x-Ø-kip nu-tz'ib'ab'äl PROG IMPF-B1s-draw when PRFV-A3s-break A1s-pen 'I was drawing when my pencil broke.'

However, -ajin is also to be found in Colonial Kaqchikel.

(6)tan ti-Ø-t-aj-in q=aq=-aläj lab=al chi ri= Jolom Pan Aj Chi IM PRS-3A-e-be-AP fire-int PR D PR PR head war cane 'There was an intense war raging there at Pan Aj Chi Jolom.'

(Maxwell & Hill 2006: 161)

We present evidence from speakers of Modern Kaqchikel in the Sololá region of Guatemala suggesting that in at least some dialects of Modern Kaqchikel, this Colonial form has been reanalyzed as a monomorphemic progressive marker, *tajin*, whereas the stem *-ajin* is no longer used productively.

We conclude by formalizing our analysis of the various markers of imperfectivity in Colonial and Modern Kaqchikel. We adopt Discourse Representation Theory (Kamp & Reyle 1993) as a semantic framework; it is particularly suited to this investigation in that (i) it has been previously developed to deal with a wide range of temporal phenomena in a variety of languages, and (ii) its dynamic properties allow certain pragmatic inferences to be captured formally, and thus it allows us to model the grammaticalization process with a degree of precision lacking in many diachronic studies.

## References

Brown, R. M., J. Maxwell & W. E. Little. 2006. *La ütz awäch?: Introduction to Kaqchikel Maya language and culture.* Austin, TX: University of Texas Press.

Bybee, Joan, Revere Perkins & William Pagliuca. 1994. *The evolution of grammar: Tense, aspect, and modality in the languages of the world.* Chicago, IL: University of Chicago Press.

Kamp, Hans & Uwe Reyle. 1993. From discourse to logic: Introduction to modeltheoretic semantics of natural language, formal logic and Discourse Representation Theory. Dordrecht, The Netherlands: Kluwer Academic Publishers.

Maxwell, Judith M. & Robert M. Hill, II. 2006. *Kaqchikel chronicles: The definitive edition*. Austin, TX: University of Texas Press.