# Future Modals in Ktunaxa
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**Introduction.**  This paper provides a semantic analysis of two future expressions, *¢xaɫ* and *¢,* in Ktunaxa, an endangered language isolate spoken in south-eastern British Columbia, northern Idaho and north-western Montana. Previous analyses suggest that *¢* and *¢xaɫ* are variants of the same morpheme, with the former glossed as the shortened form of the latter (cf. Morgan 1991; Dryer 2002, 2007; Kootenay Culture Committee, 1999). Distinct patterns and semantic properties emerge, however, upon further investigation of their relative uses. I focus on the semantic distribution of these two morphemes, suggesting they both encode epistemic modality and the modal notion of intentions. Following Kratzer's (1981, 1991b) framework for possible world modality, my analysis illustrates that *¢* and *¢xaɫ* have lexically-specified modal force, as strong and weak necessity, respectively, but are compatible with multiple conversational backgrounds.

**Data.**  Although either *¢* or *¢xaɫ* may be used to express the future, a distinction becomes evident when both forms are tested in identical contexts. Copley (2002) outlines a situation in English where one future expression may be used, but not another. She notes that in the context of an offer, as in (1), only *will* is felicitous. This same pattern emerges in Ktunaxa.

(1)  There's a birthday party tomorrow and everyone is deciding who should bring what.

| a) Hu | *¢xaɫ* | ¢inaɫki-ni | kuk¢iɫikiɫ | b) Hu | *¢* | ¢inaɫki-ni | kuk¢iɫikiɫ |
|---|---|---|---|---|---|---|---|
| 1SG | *¢xaɫ* | bring-IND | cake | 1 | *¢* | bring-IND | cake |
| 'I'll bring the cake (if you want)' | | | | 'I'm bringing the cake' | | | |

In an offering context, only *¢xaɫ* is accepted. My consultant remarked that the use of *¢* in (1)b is slightly rude because it is more forceful than *¢xaɫ* - the addressee can't easily contradict the speaker and ask her to bring the fish instead. A distinction between *¢* and *¢xaɫ* is also evident in situations akin to (2), which involve the knowledge base of the speaker.

(2)  Mary lives in a different province. Since her sister is getting married the day after tomorrow and the rehearsal dinner is tomorrow night, we await her arrival.

| a) *¢xaɫ* | wax-i | maɫi | kanmiyit-s | b) *¢* | wax-i | maɫi | kanmiyit-s |
|---|---|---|---|---|---|---|---|
| *¢xaɫ* | arrive-IND | Mary | tomorrow-OBV | *¢* | arrive-IND | Mary | tomorrow-OBV |
| "Mary will (probably) arrive tomorrow" | | | | "Mary will arrive tomorrow" | | | |

Speaker judgements affirm it would be infelicitous to use *¢xaɫ* if the speaker were positive that Mary would arrive tomorrow, since (2)a expresses incomplete certainty. My consultant offered the explanation that in (2)b the speaker might also know that Mary is a bridesmaid, so he knows she can't miss the rehearsal dinner and thus is more certain of her arrival.

**Generalisation.**  The data presented in (1) and (2), I argue, demonstrate that Ktunaxa's *¢* and *¢xaɫ* are compatible with the modal notions of intention (1) and prediction or expectation (2). In (1), the intentions of the speaker are most relevant to the utterance's truth conditions, while in (2), intentions are irrelevant; it is the knowledge of the speaker that determines which morpheme

is used in these examples. Rather than differing in their conversational backgrounds, ¢ and ¢xał are distinct in their relative modal forces. This distinction is easily accounted for using von Fintel and Iatridou's (2008) analysis of weak necessity modals within a Kratzerian (1981, 1991b) framework. The term *weak necessity* here captures the difference in force between 'strong' necessity modals, which universally quantify over sets of accessible worlds, such as the English *must*, and other necessity modals that seem relatively weaker, such as *ought*. von Fintel and Iatridou's analysis extends Kratzer's framework, where modals are analysed relative to a modal base and an ordering source, by adding a third conversational background in the form of a second ordering source, which affects only weak necessity modals. This second ordering of worlds results in a smaller quantificational domain, and thus a weaker modal force than their 'strong necessity' counterparts; for all worlds highly-ranked by a strong necessity modal's single ordering source, the prejacent is true, while for weak necessity modals, only those worlds that are additionally ranked as most ideal by the second ordering source must have the prejacent as true.

**Discussion.** In (1), above, both ¢xał and ¢, I argue, have circumstantial modal bases. The ordering source for each is the set of propositions denoting the speaker's intentions. The weak necessity modal ¢xał in (1)a contains the implicit conditional clause, *if you want,* which, as Copley (2002) explains, is necessary for an offer. This conditional, I suggest, serves as a second bouletic ordering source, ranking the ideal worlds of the primary ordering source according to the desires of the *addressee.* Because of this second ordering, ¢xał is felicitous as an offer, as it expresses that the event will occur only if the addressee wishes it to. In (1)b, by contrast, since ¢ lacks this second ordering source, the prejacent is true in every world compatible with the speaker's intentions, regardless of the addressee's desires. Similarly, the presence of a second ordering source for ¢xał in (2) can account for the apparent difference in modal strength between (2)a and (2)b. The modal base for these utterances is epistemic, and the ordering source is stereotypical. The relative weakness of (2)a is obtained via a second ordering source, which consists of a set of propositions denoting  other conditions to Mary's arrival, such as her desire to attend the dinner, that she can afford to take the day off work, that she is not otherwise busy, and the like. Only worlds in which these propositions are true in addition to those in the modal base and primary ordering source will be highly-ranked. In (2)b, by contrast, there is no second ordering source and the strong claim is made that Mary arrives in all worlds that proceed stereotypically and are compatible with the speaker's knowledge.
By providing insight into temporal and modal reference in Ktunaxa, an endangered, understudied language isolate, this paper contributes to the growing discussion of the types of modality that may be encoded in future markers, and whether futurity in natural languages is inherently modal.

**References.** Copley, B.2002. *The Semantics of the Future.* MIT.• Dryer, M. 2002. A comparison of Preverbs in Kutenai and Algonquian. *Proceedings of the Thirtieth Algonquian Conference.* Uof Manitoba.• Dryer, M. 2007. Kutenai, Algonquian, and the Pacific Northwest from an areal perspective. *Proceedings of the Thirty-Eighth Algonquian Conference.* Uof Manitoba.• Kootenay Culture Committee. 1999. *Ksanka A:kłukaqwum.* Confederated Salish and Kootenai Tribes.• Kratzer, A. 1981. The notional category of modality. In *Words, Worlds, and Contexts: New Approaches in Word Semantics.* Mouton de Gruyter.• Kratzer, A. 1991b. Modality. *Semantik: Ein Internationales Handbuch Der Zeitgenossischen Forschung.* Mouton de Gruyter.• Morgan, L. (1991). *A description of the Kutenai language. 1.2.* Ms.• von Fintel, K. & S. Iatridou. 2008. How to say *ought* in Foreign: The composition of weak necessity modals. Studies in Natural Language and Linguistic Theory (75).