Two Strategies for Accommodating Blackfoot Conditional Antecedents

Meagan Louie (UBC)

1 Intro Blackfoot has two distinct conditional constructions which vary in their antecedent's clause-type morphology. Following Frantz 2009's terminology for these clause-types, I refer to the two types of conditionals as SUBJUNCTIVES and UNREALS. I propose that these conditionals differ in how they accommodate their antecedents: SUBJUNCTIVE antecedents are accommodated into the Speaker's current belief-state, whereas UNREAL antecedents are accommodated into a more abstract premise set, eg., the notion of Basis as defined by Veltman 2005. I argue this accounts for their distinct distributions.

2 Data I SUBJUNCTIVE and UNREAL conditionals usually translate into English indicative and past-subjunctive conditionals respectively. Consider (1), where the antecedent expresses a hypothetical future event: Blackfoot SUBJUNCTIVES are felicitous, but UNREALS are not, just like English indicative and past-subjunctives respectively.

(1) *Context*: I know I shouldn't steal my sister's apple. But I'm feeling really hungry...

    a)   ***kam**-sa-ikamo'saatá-**íniki***   b)   *#nit-íí-sa-ikamo'saata-**ohtopi***
        if-neg-steal.vta-**sbj:1/2**   1-ic-neg-steal.vta-**unr**
        "If I don't steal...   SUBJUNCTIVE   #"If I hadn't stolen...   UNREAL
            oma apasstaaminaam   *n-ókowaan*   *áak-it-omatap-ohtako*
            dem apple   1-stomach   fut-rl-start-sound.vai
            ..that apple, my stomach (a) will start/(b) would have started sounding."

However, while English indicatives are also used to speculate about epistemically uncertain past events, Blackfoot SUBJUNCTIVES are not. Given the contexts in (2) and 3), an English (past) indicative is preferred and a past-subjunctive infelicitous. Contrastingly, (2) shows that a Blackfoot SUBJUNCTIVE is infelicitous and an UNREAL preferred. This is a restriction on the grammatical form of the antecedent; (3) shows that a present perfect (as opposed to past perfective) SUBJUNCTIVE *can* be used in such contexts.

(2) *Context*: My sister was running in a race yesterday. I haven't gotten the results yet, but I hope she won, because if she did, she'll want to celebrate. If she won yesterday, we'll eat cake.

    a)   *#**kam**-omo'tsaaki-**si**   matonni,*   *nit-áak-Ioyi-hpinaan pisatsskiitaa*n
        if-win.vai-**sbj:3**   yesterday   1-fut-eat.vai-1pl   cake   SUBJUNCTIVE
        Consultant: No, that would be more like for today (eg. "If she wins today, we'll eat cake.")

    b)   ii-omo'tsaaki-**ohtopi** matónni   nit-áak-Ioyi-hpinaan pisatsskiitaan
        ic-win.vai-**unr**   yesterday   1-fut-eat.vai-1pl   cake
        "If she won yesterday, we will eat cake."   UNREAL
        Consultant: OK if I don't know she won, or you might know it and you can say that too.

(3) *Context*: We aren't sure if Martina is at the department or not. I saw her earlier, but maybe she's already left campus. I do know that Martina always locks her office before she leaves campus.

    a)   #annahk Martina   **kam**-omatoo-**si**   b)   anahk M   **kam-ikaa**-omatoo-**si**
        dem   Martina   **if**-leave.vai-**sbj:3**   dem M   **if-perf**-leave.vai-**sbj:3**
        "If Martina left...   SUBJUNCTIVE   "If Martina **has** left...   SUBJUNCTIVE
            omi otsita'potakihpi áak-itapiyooki-m   o-kitsim
            dem workplace   fut-lock.vti-3>0   door
            ...her office, she will have locked her door."

(4) and (5) show that present-oriented SUBJUNCTIVE antecedents are felicitous in general: (4) and (5) show a present-oriented (counterfactual) stative and present progressive eventive respectively:

(4)   poos-iksi   **kam**-ominnii-**si-yaa**   aahkama'p-ohkott-ipaawaani-yaa
       cat-pl   **if**-have.wings.vai-**sbj:3-3pl**   might-able-fly.vai-3pl
       "If cats had wings, they might be able to fly."   SUBJUNCTIVE

(5) *Context:* I'm setting up skype, and am trying to determine if the video feed is working.

      kam-á-ino-ok-**kiniki**,   a'pstaki-t!
      if-impf-see.vta-inv-**sbj:2>1**,   wave.vai-impv:2s
      "If you see me, wave!"   SUBJUNCTIVE

A summary: SUBJUNCTIVE conditionals are felicitous when the antecedent is future eventive [(1)], present perfect, stative, or progressive[(3b),(4a),(5)]; but infelicitous when the antecedent is past eventive (2a). If we assume a Reichenbach-inspired formalization of [(1)] as present prospective aspect (as in (6), we can make the following generalisation: Blackfoot SUBJUNCTIVE conditionals require that the property expressed in their antecedent clause be evaluable with respect to the utterance time (see section 4).

     (6) $[[\oslash_{prospective}]]=\lambda t. \exists e[P(e)(w) \,\&\, \tau(e) > t]$

The antecedent in (2),only evaluable with respect to a past time, does does not satisfy this requirement.

3 Data II Unlike SUBJUNCTIVES, UNREALS do not restrict the temporal configuration of their antecedent - UNREALS are only barred from hypothesizing about a future event when the event in question is metaphysically unsettled (cf. Condoravdi 2002, Laca 2008). Consider the UNREAL in (7) - it is infelicitous in context A, where the speaker does not know that the proposition, p, expressed by the antecedent, is already settled, but felicitous in B where the speaker *is* aware that p is settled (as false).

(7)   nit-ii-omo'tsaaki-**ohtopi,**   nit-áak-itap-oo   Hawaii
        1-ic-win.vai-**unr,**   1-fut-towards-go.vai Hawaii
       "If I should win, I would go to Hawaii."   UNREAL

A: Joanne is entering into a contest, and considers what to do with the prize-money   ⟶ ✘
B: The contest is actually rigged. No one but the contest organizer's wife will win. Another contestant finds out and wistfully speculates on what he would have done with the prize-money. ⟶ ✓

4 Analysis I propose that SUBJUNCTIVES accommodate their antecedent into the Speaker's current belief-set, where the speaker's beliefs are formalized as functions from world-time pairs to truth-values (i.e., type $<<i<wt>$), and all of these beliefs are evaluated with respect to a single time parameter - the utterance time. Such a formalization requires that all premises in the belief set, as well as any proposition being accommodated into this set (i.e., SUBJUNCTIVE antecedents), be evaluable with respect to the utterance time. I suggest that such a formalization of a belief-set is motivated by a desire for computational simplicity. Storing beliefs as elements of type $<wt>$ would require the Speaker to maintain an inventory of distinct evaluation times for each proposition in their belief set. The system outlined above avoids this computationally onerous requirement. I further propose that UNREALS accommodate their antecedent into a set of propositions inspired by what Veltman 2005 terms a Basis. I use the term Basis to refer to a minimal set of mutually-independent propositions which, given general laws, entail the propositions known by the Speaker. While Veltman abstracts away from temporality, I suggest that because there are fewer premises in a Basis (compared to a belief set), the premises contained therein can be formalized as functions from worlds to truth-values - i.e., each proposition in the Basis (as well as any proposition being accommodated into the Basis) is associated with its own evaluation time. This allows UNREALS a freer temporal interpretation. Further, Veltman's mechanism for antecedent-accommodation is such that the Basis, in conjunction with general laws, does not force (i.e., settle) the truth of the antecedent (see Veltman 2005 for details). Uttering an UNREAL instead of a SUBJUNCTIVE conditional (where a SUBJUNCTIVE is not ruled out) should thus trigger an implicature that p *is* settled with respect to the Speaker's belief set, i.e., the settledness implicature observed in section 3.

5 Conclusions I proposed that the morphological clause-type of Blackfoot conditional antecedents correlates with the type of premise set into which the antecedent is accommodated, accounting for (i) proposition-internal temporal restrictions on SUBJUNCTIVES, and (ii) proposition-external contextual restrictions on UNREALS. While most premise-semantics for conditionals (eg., Kratzer 2010, Lewis 1981, Veltman 2005) abstract away from temporality, I have proposed that distinct types of premise sets in Blackfoot crucially differ according to how their propositions compose with (an) evaluation time(s).

References Condoravdi, C. 2002 The Temporal Interpretation of Modals. •Frantz, D. 2009. Blackfoot Grammar.•Laca,B. 2008. On Modal Tenses and Tensed Modals. Chronos 2008. •Kratzer A. 2010. What *must* and *can* must and can mean.(1977 L&P:1)• Lewis, D. 1981. Ordering Semantics and Premise Semantics for Counterfactuals. JoPhil. Logic10(2) .•Veltman,F. 2005. Making Counterfactual Assumptions. JoS 22.