

Concord as Syntactic Agreement: Evidence from Intervention Effects

Introduction: Concord, a phenomenon where two or more linguistic materials give the same semantic contribution, is extensively studied from negative concord (NC). Its nature is however subject to debate, e.g. NC has been treated as a semantic licensing of NPIs (Giannakidou 2000) or syntactic Agree (Zeijlstra 2004). While impenetrability (e.g. islands) is often used in argumentation, *intervention effects (IEs)* has been paid little attention on. On the other hand, interrogative and existential concord are recognized (Kratzer & Shimoyama 2002), but *universal concord (UC)* seems not to be well-attested. Following Zeijlstra (2004)'s definition for NC, I define UC as two or more universal elements yielding one semantic universal quantification.

Goals: (i) Fill the empirical gap by showing Cantonese verbal suffix *-can* is a UC element; (ii) Provide novel evidence from IEs to argue for a *syntactic agreement* approach to concord.

Data: The first set of data presents a paradigm of UC. Cantonese verbal suffix *-can* in (1), claimed to be a universal quantifier (UQ) (Tang 2015, Lee 2017), may express universal quantification over events on its own, evidenced by the incompatibility with an existential quantifier. Crucially, *-can* can occur with an overt UQ like *mui-ci* 'every time' while giving the same semantics (=2)). Fitting UC's definition, this constitutes a problem to *compositionality*: how do two UQs give one universal quantification? Note that the co-occurrence of genuine UQs in (3) gives rise to two universal quantification. Since the event variable is already bound by one of the UQs, another UQ cannot bind any variable and results in vacuous quantification (=4)).

- (1) [Aaming (*mui-ci* / **jau jat ci*) *jam*[-*can*] *naai*] *go-tou* *zau tung*. (∀ / *∃)
 Ming every-time have one time drink-CAN milk CL-stomach thenache
 'Every time (/ *there was once) Ming drank milk, his tummy felt odd.'
 (2) $\forall e[\text{DRINK}(\text{milk})(\text{Ming})(e) \rightarrow \exists e'[\text{ACHE}(\text{Ming's stomach})(e')]]$ (where *e, e'* stand for event variables)
 (3) **Zijiu* Aaming *mui-ci* *jam* *naai*, *go-tou* *zau tung*.
 only.if Ming every.time drink milk CL-stomach thenache
 (4) * $\forall e_2 \forall e_1 [\text{DRINK}(\text{milk})(e_1)(\text{Ming}) \rightarrow \exists e'[\text{ACHE}(e')(\text{Ming's stomach})]]$ (vacuous quantification)

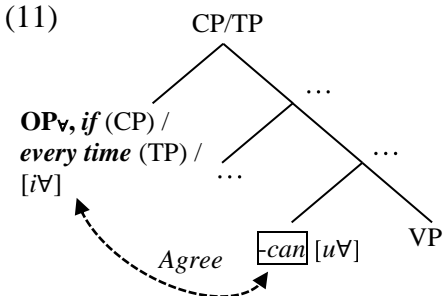
Another set of data shows IEs in UC. Q(uantificational)-elements cannot occur in between a UQ and *-can*, e.g. negation, focus, modals, quantifiers (i.e. interveners to A-not-A questions):

- (5) *mui-ci* *mou* *daai*(*[-*can*]) *syu*, ... (6) *mui-ci* *dak* *keoi* *jung*(*[-*can*]) *gaan-fong*, ...
 every-time not.have bring-CAN book e.-t. only 3SG use-CAN CL-room
 'Every time (he) hadn't brought a book, ...' 'Every time that only he used the room, ...'
 (7) *mui-ci* *jiu* *zou*(*[-*can*]) *je* *go-zan* (8) *Zijiu* *jau* *jan* *man*(*[-*can*]) *je*, ...
 e.-t. should do-CAN stuff that-time only.if have person ask-CAN stuff
 'Every time when he should work, ...' 'Once someone asks him for something, ...'

In contrast, non-Q-elements could freely occur in between a UQ and *-can*:

- (9) *Mui-ci* *haideitit-dou* *king*([-*can*]) *dinwaa*, ... (10) *Zijiu* *ziuzou* *jam*([-*can*]) *naai*, ...
 e.-t. at subway-LOC talk-CAN phone only.if morning drink-CAN milk
 'Every time (I) had a call on the subway, ...' 'Once (I) drinks milk in the morning, ...'

Proposal: I analyze *-can* as a *concord* element carrying an *uninterpretable universal feature* [*u*∇]. It agrees with a genuine UQ like 'every time' which carries an *interpretable* [*i*∇]. This entails the occurrence of UQs in every clause with *-can*, as in (1). For clauses lacking an overt UQ, I attribute the universal reading to an implicit necessity operator at CP (OP_∇), which is independently motivated by Chinese donkey sentences (Cheng & Huang 1996).



Arguments: First, the uninterpretability of [$u\forall$] on *-can* is confirmed by the *lack of quantificational force* on *-can*. While elements modified by *caa-m-do* 'almost' must be quantificational (exemplified by (12)), predicates with *-can* can be modified by 'almost' only if 'every time' is present (= (13)). It follows that 'every time' carries (universal) quantificational force which *-can* does not have. That is, *-can* is *not* a quantifier at all, but a *concord* element. The compositionality problem is thus solved. Note that (13) cannot be salvaged by a covert UQ since *caa-m-do* is at TP (Tang 2009), lower than OP_v .

(12) *Keoi* [_{PP} *tung* [*caa-m-do mui-go-jan*/ **keoidei*]] *dou king-dou gai*
 3SG with almost every-CL-person they all talk-ablechat
 'He can chat with almost everyone/*them.'

(13) [*keoi caa-m-do* *(*mui-ci*) *king[-can] gai*] *ne, lousi zau wui faatnau*
 3SG almost every-time talk-CAN chatTOP teacher thenwill become.mad
 'Almost every time he chatted with someone, the teacher got angry.'

Second, the IEs to the Agree relation are regulated by feature-based Relativized Minimality (RM, Rizzi 2004). Q-elements (including focus) carry a superfeature [Q] and induce IEs to Q-chains by intervening in between them. This is exactly the case in (5)-(8), diagrammed in (14). Contrarily, non-Q-elements lack a [Q] and would not trigger IEs, deriving (9)-(10).

(14) * [... UQ_[$u\forall$, Q] ... {neg/ focus/ modal/ quantifiers etc.}]_[Q] ... [-*can*_[$u\forall$, Q] ...]
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Third, the Agree relation obeys the PIC (*DbP* version in Chomsky 2001) which dictates the domain of a lower phase to become inaccessible upon the completion of a higher phase. *-Can* and a UQ can be separated by a vP and a non-finite TP boundary in (15), but not a vP and a CP boundary as (16). Taking the standard assumption that vP and CP are phases while non-finite TP is not, the contrast in (15) and (16) follows naturally from the PIC.

(15) *Ngomui-ci* [_{vP} *bik keoi* [_{TP} *king* (*[-can]*) *gai*], *keoi zau sauseng*
 1SG every.time force 3SG talk-CAN chat 3SG then shut.up
 'Every time I forced him to talk (with me), he became silent.'

(16) *Ngomui-ci* [_{vP} *gong* [_{CP} *waa keoi* *king* (**[-can]*) *gai*], *keoi zau sauseng*
 1SG every.time say C 3SG talk-CAN chat 3SG then shut.up
 'Every time I said that he had a chat, he became silent.'

NPI licensing is different from UC in these two localities. It is well-documented that NPI licensing does not respect islands (Zeijlstra 2008 amo.). Cantonese NPI *jamho* 'any' exhibits the same by not observing PIC with licensing across two phases (DP, CP) in (17). Besides, although IEs are reported in NPI licensing (Guerzoni 2006), some interveners do not block the licensing, e.g. (18)'s necessity modal. Featural RM is violated, opposed to the strict compliance of UC.

(17) *Ngo* *(*m-*) *zungji* [_{DP} [_{CP} [*jamho*] *zokgaase*] *ge syu*] (PIC violation)
 1SG NEG-like any writer write MOD book 'I don't like books wrote by any writer.'

(18) *Ngo* *(*m-*) *gokdak* [*keoi jinggoi sik* [*jamho*] *zinzaa-je*] (RM violation)
 1SG NEG-think 3SG should eat any fried-food 'I don't think he should eat any junk food.'

Implications: (i) A new type of evidence, *IEs*, is offered to the syntactic agreement approach on concord. (ii) *-Can* agrees *upward*, which is an additional evidence to support *Upward Agree* (Zeijlstra 2012). (iii) The paradigm of Kratzerian quantifier concord is now complete, with the final piece as *UC*. (iv) Not only nominal domains but also *verbal domains* may have concord elements. Reconsideration can be made towards proposed A-quantifiers.

Keywords: Concord, Agree, Intervention effects, Universal concord, Cantonese