Transparent Unconditionality

Unconditional (UC) constructions (after Zaefferer 1991; e.g. *Whether she runs or walks, she will win the race*) relate an antecedent set P (e.g., *she runs, she walks*) to a consequent proposition q (*she will win the race*) by asserting that q holds unconditionally of the question of which one of the members of P is true, where it is presupposed that the members of P exhaust all contextually relevant alternatives. In this paper, we analyze the Alternative UC construction (AUC) in Hebrew, showing that it exhibits the characteristic properties of UCs (Rawlins 2008, 2013) despite having very different morpho-semantic ingredients: overt conditional marking (missing in English), and conjunction (instead of disjunction). Our analysis assigns transparent meanings to the ingredients of the Hebrew AUCs, expanding our understanding of unconditionality crosslinguistically.

I. Alternative UCs with conjunction and conditional marking. Hebrew AUCs come in two varieties: one with a disjunctive antecedent (1a) and one with a conjunctive antecedent (1b). Both varieties are interpreted as a conjunction of conditionals ('If she walks she will win **and** if she runs she will win') with two additional presuppositions: that the options mentioned exhaust the relevant alternatives (*exhaustivity*) and that one or the other, but not both, are possible (*mutual exclusivity*). These are the familiar properties of UCs in English and other languages (Rawlins 2008, 2013; see also AnderBois 2014; Haspelmath and König 1998; Gawron 2001). We focus on the more transparent and less familiar (1b) in our analysis.

(1) a. *beyn* ***im*** *maribel telex* ***o*** *taruc, hi tenacéax b-a-taxarut*
between **if** M will.walk **or** will.run she will.win in-the-race

b. *beyn* ***im*** *maribel telex* ***ve****-beyn* ***im*** *hi taruc,*
between **if** M will.walk **and**-between **if** she will.run
hi tenacéax b-a-taxarut
she will.win in-the-race

Both: 'Whether Maribel walks or runs, she will win the race.'

We propose that unconditionality arises in (1b) from the combination of three ingredients: (i) *im* 'if/whether', (ii) Boolean conjunction *ve* 'and', and (iii) the preposition *beyn* 'between'. In a nutshell, 'and' is assumed to conjoin two (elliptical) conditional structures, and the preposition 'between' is shown to introduce – in general in Hebrew, not just in UCs – the presuppositions of exhaustivity and mutual exclusivity characteristic of UCs in other languages. In more detail:

(i) We analyze *im* 'if/whether' as 'if' in this construction, since it embeds a single proposition and not a disjunction, or set of propositions. Its clause is interpreted as an *if*-clause restrictor to a modal operator (Lewis 1975, Kratzer 1978, 1981, 1991, Heim 1982). The modal operator in the logical form of a conditional is a covert necessity modal, as in the analysis of bare conditionals (Kratzer 1978).

(2) $[[\textit{if } p, q]]^{MB,OS} = [[\text{must}(p)(q)]]^{MB,OS} = \forall w\ (w \in \text{Best}_{OS}\ (MB \cap p) \rightarrow q(w)))$

(ii) The conjunctive meaning of unconditionals is derived using the ordinary meaning of 'and', type-shifted to connect two <st,t>-type arguments. The arguments conjoined by and^{if} are two conditionals that have the same consequent, which is abstracted upon.

(3) $[[\ and^{if}\ ]](\ \lambda Q.Q(p')\ )(\ \lambda Q.Q(p'')\ ) = \lambda Q.Q(p')\ \&\ Q(p'')$

(iii) The role of *beyn* 'between' is to introduce the presuppositions that the alternatives in its scope exhaust the contextually relevant possibilities, and that they are mutually exclusive (in English these have been argued to be the contribution of *whether*; Rawlins 2013):

(4) $[\![\textit{beyn}\ \alpha]\!]^{w,c} = [\![\alpha]\!]^{w,c}$
Defined for w,c,α and $A = \iota X.\textit{min}([\![\alpha]\!]^{w,c})(X)$ only if presuppositions of exhaustivity and mutual exclusivity hold for A:
i. $\forall w \in cs_c\ \exists p \in A\ p(w)$ (*exhaustivity*)
ii. $\forall p, p' \in A.\ (p \neq p') \rightarrow \neg \exists w \in cs_c.p(w)\ \&\ p'(w)$ (*mutual exclusivity*)

This is the analysis of the preposition *beyn* 'between' independently of unconditionals:

(5) *hi hitlabta* ***beyn*** *halixa ve-* ***beyn*** *rica*
she deliberated **between** walking and- **between** running
'She deliberated between walking and running (these are the relevant options).'

In the case of a conjunctive antecedent of an unconditional, we assume that only one *beyn* is interpreted and that *beyn* has access to a structure that keeps track of all the alternatives that have been conjoined. In order to "extract" the alternatives from the conjunction, we have applied in (4) Winter's (1996) *min* operator (6). This operator extracts the minimal set from the conjoined structure:

(6) For each type τ, *min* is an operation of type $<\tau t, \tau t>$ defined as follows:
$\textit{min} = \lambda X_{\tau t}\lambda Y_{\tau}.X(Y) \wedge\ \forall Z \sqsubseteq Y\ (X(Z) \rightarrow\ Z=Y)$ (Winter 1996: 351)

The meaning of (1b) is thus derived as follows:

- $[\![$if M. walks/runs Q$]\!]^{MB,OS} = [\![Q]\!]^{MB,OS}([\![$M. walks/runs$]\!])$
where $Q_{<st,t>}$ is a variable left by the movement of a conditional structure
- $[\![$if M. walks and^{if} if M. runs$]\!] = \lambda Q.Q([\![$M. walks$]\!])\ \&\ Q([\![$M. runs$]\!])$
- Presuppositions checked by *beyn* on the conjoined alternatives:
$\textit{min}(\lambda Q.Q([\![$M. walks$]\!])\ \&\ Q([\![$M. runs$]\!]))$ = (in set notation) { {[[M. walks]], [[M. runs]]} }
- Combination with the moved conditional structure:
$[\ \lambda Q.Q([\![$M. walks$]\!])\ \&\ Q([\![$M. runs$]\!])\ ](\ \lambda p_5.\text{must}(p_5)(q_7)\ )$
$= \text{must}(([\![$M. walks$]\!])(q_7)\ \&\ \text{must}(([\![$M. runs$]\!])(q_7)$
- Abstraction over and combination with the consequent:
$[\ \lambda q_7.\text{must}(([\![$M. walks$]\!])(q_7)\ \&\ \text{must}(([\![$M. runs$]\!])(q_7)\ ]([\![$M. wins$]\!])$
$= \text{must}(([\![$M. walks$]\!])([\![$M. wins$]\!])\ \&\ \text{must}(([\![$M. runs$]\!])([\![$M. wins$]\!])$

II. Constituent UCs. We end with a discussion of Hebrew Constituent UCs (akin to *Whatever she does, she will win the race*), which in Hebrew (and in Slavic) contain negation in the antecedent (Haspelmath and König 1998, Eilam 2009). Negation seems intrusive in the construction and is referred to as *expletive* or *superfluous*:

(7) *ma še-hi* ***lo*** *ta'ase, maribel tenacéax b-a-taxarut*
what that-she **NEG** will.do M will.win in-the-race
'Whatever she does, Maribel will win the race.'

We suggest that negation is responsible for introducing non-actual alternatives, including ones that are unreasonable. Universal quantification over the conditionals built from these alternatives results in the characteristic meaning of the construction, which ends up having a meaning parallel to the AUC despite being built from very different ingredients in Hebrew.

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