Universal free choice from concessive conditionals

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Draft, May 2020

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I develop a new approach to universal free choice which does not prescribe universal force, but rather ensures this result through the use of a scalar particle. 'Even' associating with a *wh*-indefinite in a conditional clause will ensure that the modal/temporal operator restricted by the conditional has universal force. A pronoun referring to a referent described by this conditional will thus have wide-scope universal force, parasitic on the modal/temporal quantification. Evidence for such an approach for free choice comes from the overt morphology of universal free choice items in Tibetan, as well as similar expressions in Japanese and Dravidian languages.

I thank Kunga Choedon, Pema Yonden, and Tenzin Kunsang for patiently sharing their language with me. For earlier comments and discussion related to this project, I thank Maayan Abenina-Adar, Rahul Balusu, Kenyon Branan, James Collins, Chris Davis, Kai von Fintel, Danny Fox, Hadas Kotek, Elin McCready, Ryan Walter Smith, as well as audiences at NELS 50, the 2020 LSA, and the National University of Singapore. I thank Zheng Shen and Wenkai Tay for comments on earlier drafts.

Contents

1 Introduction

This paper has two complementary goals. The first is to report on the expression of free choice in Tibetan, based on original fieldwork.[1] Free choice items in Tibetan are a combination of a *wh*-word and the particle *yin.na'ang*, optionally preceded by a nominal domain.[2] Example (1) may describe someone who is not picky about their food. Dumplings? Norbu eats them. Frog? He eats that too. Whatever the food, Norbu eats it.

(1) Nor.bu [(kha.lag) **ga.re** **yin.na'ang**] za-gi-red.
Norbu food what YIN.NA'ANG eat-IMPF-AUX
'Norbu eats **anything** / **any** food.'

As this description suggests, the free choice item (FCI) exhibits Giannakidou 2001's "quasi-universal effect" or Kratzer and Shimoyama 2002's "distribution requirement." It is an expression with apparent universal quantificational force.

The second goal is to motivate a new compositional semantics for universal free choice based on the overt morphosyntax of these Tibetan FCIs. *Yin.na'ang* is quite transparently the combination of the copular verb *yin*, conditional suffix *na*, and scalar focus particle *yang* 'even' (2). The combination may indeed appear transparently as *yin.na.yang*, but is commonly contracted to *yin.na'ang* in both writing and speech, and may further reduce to *yin.na'i* in casual speech.[3] Goldstein 2001 lists all three forms (p. 1000), but identifies *yin.na'ang* as the canonical form. I follow this convention here and report all examples with *yin.na'ang*.

(2) **yin** + **na** + **yang** = yin.na.yang > yin.na'ang > yin.na'i
COPULA **COND** **EVEN**

In addition to forming *wh*-FCIs, *yin.na'ang* has two other uses, as a counterexpectational discourse particle — i.e. the translation equivalent for English 'but' and 'however' — and as a concessive scalar particle. I discuss these uses and their compositional semantics in Erlewine to appear.

Here I pursue the null hypothesis, that *yin.na'ang* in the expression of free choice indeed decomposes into the ingredients in (2). The structure in (1) is thus literally as in (3). *Wh-yin.na'ang* is a concessive conditional (i.e. *even if*; see e.g. König, 1986) containing a copular description with a *wh*-word.

[1] The original data here reflect the grammars of three speakers of the Tibetan diaspora community in Dharamsala, India. One was born in Tibet and moved to India early in life; the other two were born in India. All grew up in the diaspora community with Tibetan as their first language. The data here was collected in Dharamsala in the summers of 2018 and 2019, and through some further correspondence.

[2] Abbreviations: AUX = auxiliary, COND = conditional, COP = copula, IMPF = imperfective, NEG = negation; DAT = dative, ERG = ergative, GEN = genitive. I employ Wylie romanization here, with periods indicating syllable boundaries where there is no morpheme boundary, as in Garrett 2001 (see note on p. 12).

[3] This reduction to *yin.na'i* /yin.nɛ/ follows the common contraction of the scalar particle *yang* to *ya'i* /yɛ/, common in speech (Tournadre and Sangda Dorje, 2003: 409).

(3) Norbu eats [even if {it/the food} is what].

My core contribution in this paper will be to show how these ingredients in (3) together give rise to its behavior as a universal FCI, without stipulating universal quantificational force. Previous work has discussed both empirical and analytic connections between universal free choice and (concessive) conditionals, as well as to *ever* free relatives and so-called unconditionals (see e.g. Gawron, 2001; Rawlins, 2008a,b, 2013; Szabolcsi, 2019). Existing analyses which take the connection between these constructions seriously either stipulate a covert universal quantifier in these constructions (Menéndez-Benito, 2005, 2010; Rawlins, 2008a,b, 2013) or propose to derive universal force from a strengthening process (Chierchia, 2013; Szabolcsi, 2019). I argue that universal quantificational force is instead simply a necessary consequence of the semantics of conditionals, the scalar particle 'even,' and the *wh*-phrase interpreted as a kind of indefinite, in combination.

2 Morphosyntactic preliminaries

I begin with a brief discussion of the overt morphosyntax of the *wh-yin.na'ang* FCI and the ingredients therein: a *wh*-word, the copula *yin*, conditional ending *na*, and scalar particle *yang* (2). This discussion is necessary to see that *yin.na'ang* indeed transparently decomposes into these ingredients in the synchronic grammar of Tibetan, which in turn serves to motivate the new compositional semantics for universal free choice that I develop below.

We begin with *yin*. Tibetan has two copular verb forms, *yin* and *red*. *Yin* is commonly used with first-person statements (4a), and *red* elsewhere (4b), but there are exceptions, including most notably the use of *yin* with second-person questions (5). Such interactions have motivated the analysis of this contrast as an evidentiality distinction, with *yin* being the ego evidential form of the copula and *red* the indirect evidential (Garrett, 2001; Tournadre, 2008).[4]

(4) **Tibetan copulas *yin* vs *red*:**

a. {Nga / *Khyed.rang / *Kho} bod.pa **yin**.
1sg 2sg 3sgm Tibetan YIN
'{I am / you are / he is} Tibetan.'

b. {*Nga / Khyed.rang / Kho} bod.pa **red**.
1sg 2sg 3sgm Tibetan RED
'{I am / you are / he is} Tibetan.' (based on DeLancey, 1992: 42, Garrett, 2001: 208)

[4] See Garrett 2001: 66ff on the lack of a direct evidential copula.

(5) **Second-person subjects take *yin* in questions:**

Khyed.rang bod.pa **yin**-pas?
2sg Tibetan YIN-Q
'Are you Tibetan?' (DeLancey, 1992: 43)

However, evidential distinctions are neutralized in non-root embedded clauses (Garrett, 2001). In such environments, ego forms are used. For example, the *yin* copula must be used in the conditional in (6), despite the third-person subject.

(6) ***Yin* is the default copula (not strictly ego) in conditionals:**

Kho dge.rgan {***red***-na / **yin**-na}...
3sgm teacher RED-COND / YIN-na
'If he's a teacher...' (Garrett, 2001: 254)

Garrett 2001 (ch. 4) thus argues that ego forms such as the *yin* copula are in fact evidentially unmarked and appear in the absence of a marked direct or indirect evidential expression. It is for this reason that *yin* is consistently the form of the copula in conditional clauses, including in *yin.na'ang* (2).

Next we turn to the structure of *wh-yin.na'ang* FCIs. Again, taking its morphology at face value, *wh-yin.na'ang* is a *wh*-containing conditional clause, to which the scalar focus particle *yang* has adjoined, and I propose that it is interpreted as such. However, there is evidence that this whole FCI structure may actually occupy a nominal argument position. Consider example (7). Here the *wh-yin.na'ang* FCI hosts the dative case marker *-la*:

(7) ***Wh-yin.na'ang* FCI with dative case:**

Pad.ma [(phru.gu) **su yin.na'ang**]-la skad.cha bshad-kyi-red.
Pema child who YIN.NA'ANG-DAT speech talk-IMPF-AUX
'Pema talks to **anyone** / **any** child.'

The *wh-yin.na'ang* FCI is a clause in an argument position which describes that argument, and thus in broad strokes resembles a head-internal relative clause or a so-called *amalgam* structure (Lakoff, 1974; also Kluck, 2011), as in (8):

(8) John is going to I think it's Chicago on Saturday. (Lakoff, 1974: 324)

Here I propose to follow the intuition developed by Shimoyama (1999) for the interpretation of Japanese head-internal relatives, and independently by Hirsch (2016) for English *ever* free relatives. This involves the idea that the embedded clause is interpreted higher at LF, as adjoined to the embedding clause, and that the argument position is then interpreted as a pronoun anaphoric to the individual described in the clause. As a concrete example, then, assuming a surface structure for (7) roughly isomorphic to (9a) below, the corresponding LF for its interpretation will resemble (9b).

(9) **The structure of *wh-yin.na'ang*:**

a. Literal (7): Pema talks to [even if {it/the child} is who] ⇒

b. LF: [even if {it/the child}$_i$'s who], Pema talks to *them*$_i$ ⇒
EVEN [if {it/the child}$_i$'s who, Pema talks to *them*$_i$]

I model the scalar particle *yang* as a unary EVEN operator at LF, taking the entire conditional structure, with its consequent clause, as its complement. This is reflected in the second line of (9b) above.

Finally, a note on the content of the conditional clause: In cases such as (7) with explicit nominal domain *phru.gu* 'child' or (1) above with *kha.lag* 'food,' I take these nominals to be definite descriptions in the first argument of the copular verb: i.e. 'the child is who' or 'the food is what.' Tibetan lacks definite articles, so I assume null definite determiners in such positions.

An alternative analysis would be for these nominals to form a constituent with the *wh*-word to form a complex *wh*-phrase. However, complex *wh*-phrases in Tibetan are headed by postnominal *ga.gi* 'which' and *wh-yin.na'ang* FCIs cannot be built from such *which*-phrases:

(10) ***Wh-yin.na'ang* does not take *which*-phrases:**

a. *[kha.lag *ga.gi*] yin.na'ang
food which YIN.NA'ANG
'any (of the) food'

b. *[phru.gu *ga.gi*] yin.na'ang
child which YIN.NA'ANG
'any child / of the children'

Therefore, I argue that the copular verb takes the noun phrase — or if absent, a null pronoun — and the *wh*-word as two separate arguments.

3 An approach to *wh*-quantification

Before we turn to the interpretation of the whole *wh-yin.na'ang* FCI construction together, I will introduce my assumptions regarding the compositional semantics of *wh*-phrases and their interaction with focus particles such as EVEN. Studies of the semantics of *wh*-questions and focus association have both motivated the idea that natural language meanings may make reference to *sets of alternative denotations* that vary in a systematic way. In a larger project in progress (see e.g. Erlewine, 2019), I pursue the hypothesis that these two forms of "alternatives" in grammar can be productively integrated, with the result being a compositional semantics for a wide range of non-interrogative uses of *wh*-words, i.e. *wh*-quantification. I present the core of this approach here, illustrating through its application to *wh*-EVEN NPIs in Tibetan (Erlewine and Kotek, 2016).

I begin with a brief sketch of the compositional semantics of focus association in the framework of Alternative Semantics (Rooth, 1985, 1992). Consider the interpretation of the English example (11) with the focus particle *even*.

(11) Even Tashi came to the party.

Following Karttunen and Peters 1979, the addition of *even* here introduces a requirement that the possibility of Tashi coming to the party is somehow particularly unlikely, compared to the possibility of other people coming to the party.[5]

Let us see how this meaning can be computed compositionally. We annotate the position of focus in a sentence with ...$_F$ (Jackendoff, 1972). As Jackendoff discusses, with *even* in pre-subject position in English, focus must be on the subject or a subpart thereof. We therefore take the LF structure for (11) to be as in (12a). In Alternative Semantics, each syntactic object α has two different corresponding meanings: its ordinary semantic value, $[\![\alpha]\!]^o$, and a set of alternative denotations of equal semantic type, $[\![\alpha]\!]^{alt}$. The alternative set (12c) is a set of propositions that includes the prejacent proposition (12b), as well as other contextually restricted alternative propositions that vary in the focused position. *Even* introduces the inference in (12d), requiring that the prejacent proposition $[\![\alpha]\!]^o$ (that Tashi came) be the least likely among the alternatives $[\![\alpha]\!]^{alt}$.

(12) a. LF: EVEN [$_\alpha$ [Tashi]$_F$ came to the party]

b. $[\![\alpha]\!]^o$ = ^Tashi came to the party

c. $[\![\alpha]\!]^{alt}$ = {^Tashi came..., ^Sonam came..., ^Migmar came..., ...}

d. $[\text{EVEN } \alpha] \rightsquigarrow$ (^Tashi came ...) $<_{\text{likely}}$ (^Sonam came ...) $\wedge$
(^Tashi came ...) $<_{\text{likely}}$ (^Migmar came ...) ...

The general recipe for this scalar inference of *even* is given in (13a). *Even* simply passes up the ordinary value of its complement (13b); thus in (12), the at-issue content is the prejacent proposition, 'that Tashi came to the party.'

(13) **The contribution of *even*:**

a. $[\text{EVEN } \alpha] \rightsquigarrow \forall q \in [\![\alpha]\!]^{alt} \left[q \neq [\![\alpha]\!]^o \rightarrow [\![\alpha]\!]^o <_{\text{likely}} q\right]$

b. $[\![\text{EVEN } \alpha]\!]^o = [\![\alpha]\!]^o$

c. $[\![\text{EVEN } \alpha]\!]^{alt} = \{[\![\alpha]\!]^o\}$

Finally, *even* also has the function of "resetting" the alternative set to be the singleton set of the ordinary value (13c).

Let's now step back and discuss the computation of ordinary and alternative set denotations. Just as ordinary denotations of complex expressions are determined by the denotations of their subparts (14a), where $\circ$ is the appropriate mode of composition (e.g. function application), Alternative Semantics provides a procedure for calculating the alternative set denotation for a

[5] Or, more "noteworthy" (Herburger, 2000). Karttunen and Peters 1979 describes an additional, additive inference of *even*: a requirement that someone else in addition to Tashi came to the party. Here I concentrate on the scalar part of *even*.

complex expression, in (14b).

(14) For node α with two daughters, β and γ:

a. $[\![\alpha]\!]^{o} \equiv [\![\beta]\!]^{o} \circ [\![\gamma]\!]^{o}$

b. $[\![\alpha]\!]^{alt} \equiv \{b \circ c \mid b \in [\![\beta]\!]^{alt},\ c \in [\![\gamma]\!]^{alt}\}$

In words, for α with two daughters β and γ, each alternative denotation for β is composed with each alternative denotation for γ; the collection of such results is the alternative set denotation for α.

This method for the computation of sets of alternatives in (14b) is also useful for the interpretation of in-situ *wh*-phrases, as was proposed earlier in Hamblin 1973. *Wh*-phrases have the denotation of a set of alternatives, which then compose pointwise with other material to yield the denotation of a question as a set of alternative propositions, corresponding to possible answers. I follow Ramchand 1996, 1997, Beck 2006, and Kotek 2014, 2019, in casting this Hamblinian system of *wh*-alternatives within the Roothian two-dimensional semantic system just presented. *Wh*-phrases have an alternative set denotation corresponding to its Hamblin alternatives, but no defined ordinary semantic value. See for example the denotation of *who* in (15); its alternative set (15b) is the set of contextually-determined animate individuals which may count as short answers to *who*.

(15) a. $[\![\text{who}]\!]^{o}$ undefined

b. $[\![\text{who}]\!]^{alt} = \{\text{Tashi}, \text{Sonam}, \text{Migmar}, ...\}$

Consider now the interpretation of the Tibetan *wh*-containing clause in (16) below. This example must be interpreted as a *wh*-question, even without the final question marker *pas*. Tibetan is a *wh*-in-situ language and does not have bare *wh*-indefinites.

(16) **Tibetan *wh*-question:**

[$_{TP}$ Thugs.spro-la *su* slebs-song] (-pas?)
party-DAT who arrive-AUX -Q

'Who came to the party?' / *'Someone came to the party.'

Composing 'who' (15) with the rest of the clause, we yield (17):

(17) a. $[\![\text{TP}]\!]^{o}$ undefined

b. $[\![\text{TP}]\!]^{alt} = \{^{\wedge}\text{Tashi came...}, {}^{\wedge}\text{Sonam came...}, {}^{\wedge}\text{Migmar came}, ...\}$

To grammatically interpret (17) as a question, the alternatives that have been calculated as an alternative set ($[\![\text{TP}]\!]^{alt}$) must be made the ordinary semantic value, which is the denotation that is ultimately interpreted. This is accomplished by the interrogative complementizer (Beck, 2006) or by a dedicated adjoined operator, AltShift (Kotek, 2019). See especially Kotek 2019 for more on the use of this framework for the interpretation of *wh*-questions.

Our interest, however, is in the non-interrogative use of *wh*-phrases, especially in concert with focus particles. In addition to *wh-yin.na'ang* FCIs, Tibetan forms NPIs through the combination of a *wh*-phrase and the scalar particle *yang* 'even' (Erlewine and Kotek, 2016), as in (18):

(18) ***Wh*-EVEN NPI:**

Thugs.spro-la *su*-**yang** slebs-*(**ma**)-song.
party-DAT who-EVEN arrive-NEG-AUX
'No one came to the party.'

Let's consider the interpretation of the grammatical (with negation) and ungrammatical (negation-less) variants of (18) in turn. Following Erlewine and Kotek 2016, I take the focus particle *yang* to correspond to a unary EVEN operator taking propositional scope at LF, as schematized in (19). When we attempt to compute the EVEN in this structure, however, we run into a problem. The semantics for the scalar inference of EVEN (13a) requires that its sister have a defined ordinary value, but the sister of EVEN in (19) is a *wh*-containing clause, as in (17), and therefore does not have a defined ordinary value.

(19) LF: EVEN [NEG [*who* came to the party]]

To avoid this issue, I propose the adjunction of a covert operator $\exists$ (20) that defines an ordinary value that is the disjunction of its sister's alternative set, and simply passes up its sister's alternative set as its own.[6,7]

(20) a. $[\![\exists\ \alpha]\!]^{o} = \bigvee [\![\alpha]\!]^{alt}$

b. $[\![\exists\ \alpha]\!]^{alt} = [\![\alpha]\!]^{alt}$

The full LF for (18) is thus as follows in (21). The denotation for ① is as in (17), which has no defined ordinary value. The application of $\exists$ in ② results in (21a). Negation applies pointwise in ③ (21b). Now notice that $[\![③]\!]^{o}$ asymmetrically entails every alternative in $[\![③]\!]^{alt}$. This ensures that the scalar inference of EVEN (21c) will always be true. The end result will be equivalent to the proposition 'that no one came to the party,' as desired.

[6] For Erlewine and Kotek 2016, this function is served by the additive component of *yang*, in lieu of this covert $\exists$ operator.

[7] This $\exists$ operator stands in contrast to the existential closure operator of e.g. Kratzer and Shimoyama 2002, which also has the effect of collapsing or "resetting" the set of alternatives. In the Roothian two-dimensional framework adopted here, we can distinguish between this $\exists$ operator which passes up its sister's alternatives for quantification above, versus another operator ($\exists_{reset}$) which also sets its alternative denotation to be the singleton set of its new ordinary value. I propose that $\exists_{reset}$ is not freely available in Tibetan, which explains the fact that bare *wh*-phrases do not have an indefinite use (16). See Erlewine 2019 for further discussion.

(21) LF: EVEN [$_{③}$ NEG [$_{②}$ ∃ [$_{①}$ *who* came to the party]]]

a. i. $[\![②]\!]^{o}$ = ^Tashi or Sonam or Migmar... came to the party
= ^someone came to the party

ii. $[\![②]\!]^{alt} = [\![①]\!]^{alt}$ = {^Tashi came..., ^Sonam came..., ^Migmar came..., ...}

b. i. $[\![③]\!]^{o}$ = NEG(^someone came to the party)
= ^no one came to the party

ii. $[\![③]\!]^{alt}$ = {^Tashi didn't come..., ^Sonam didn't come..., ^Migmar didn't..., ...}

c. [EVEN ③] ⇝ (^no one came ...) $<_{likely}$ (^Tashi didn't come ...) ∧
(^no one came ...) $<_{likely}$ (^Sonam didn't come ...) ∧
(^no one came ...) $<_{likely}$ (^Migmar didn't come ...) ... ◯

Now consider the variant of this structure without negation. (22) gives the scalar inference predicted by EVEN applying directly to ② in (21a):

(22) [EVEN ②] ⇝ (^someone came ...) $<_{likely}$ (^Tashi came ...) ∧
(^someone came ...) $<_{likely}$ (^Sonam came ...) ∧
(^someone came ...) $<_{likely}$ (^Migmar came ...) ... ×

Because the prejacent 'that someone came to the party' $[\![②]\!]^{o}$ is asymmetrically entailed by each alternative in $[\![②]\!]^{alt}$, this requirement in (22) is a contradiction. This scalar inference of EVEN can never be satisfied. Following Lahiri 1998, this fatal requirement of EVEN in (22) leads to the ungrammaticality of the *wh*-EVEN expression without a licensing negation.[8]

In this way, the Hamblin semantics of *wh*-phrases can be productively combined with the Roothian semantics of focus, for example giving us a compositional semantics for *wh*-EVEN NPIs in Tibetan. With this background on the compositional semantics of *wh*-phrases and their interaction with focus particles in place, we are now in a position to turn to the compositional semantics of *wh-yin.na'ang* FCIs.

4 Deriving universal free choice

I now turn to the main event, the compositional semantics of *wh-yin.na'ang*. As discussed above, *yin.na'ang* is a transparent combination of the copular verb *yin*, conditional suffix *na*, and scalar particle *yang* 'even,' in an amalgam-like argument position. In this section, I will show how these ingredients (even without considering 'even') together in the examples presented above yield a universal free choice expression. In particular, my approach does not need to stipulate the universal force for these expressions as in Menéndez-Benito 2005, 2010 or Rawlins 2008a,b,

[8] Erlewine and Kotek 2016 shows that *wh-yang* NPIs must be licensed by clause-mate negation. This is explained by the interpreted LF position of EVEN needing to be in the same clause as the pronounced position of *yang*. See Erlewine and Kotek 2016: 149 for discussion.

2013, nor derive universal force from a secondary strengthening process as in Chierchia 2013 and Szabolcsi 2019.

Once we have established how universal force comes about in these grammatical examples, in section 5, I show how this construction enforces universal force. There, *yang* 'even' will play a star role. Just as association with 'even' can build NPIs from indefinites (Lee and Horn, 1995; Lahiri, 1998), as we also saw in Tibetan in section 3, the logical properties of 'even' will serve to ensure that *wh-yin.na'ang* be interpreted as a universal FCI.

Recall that Tibetan *wh-yin.na'ang* FCIs may be in argument positions.[9] I proposed in section 2 above that a FCI in argument position is interpreted at LF as a conditional clause adjoined to the containing clause, with unary EVEN taking the entire conditional structure as its sister.

(23) **The structure of *wh-yin.na'ang* in (7):** based on (9)

a. Surface stucture: Pema talks to [even if {*pro*/the child} is who] ⇒

b. LF: EVEN [if [$_\varphi$ {*pro*/the child}$_i$ is who], [$_\psi$ Pema talks to *pro*$_i$]]

I analyze the copula in the conditional clause φ as equational, with its linearly first argument — either a null *pro* or a bare noun, e.g. *phru.gu* 'child' or *kha.lag* 'food' — co-indexed with the pronoun in its corresponding argument position in the consequent clause ψ. I discuss the interpretation of these pronouns in some detail below. The second argument of the copula is the *wh*-word.

Notice that the sister of EVEN in (23b) is a *wh*-containing clause, and therefore will not have a defined ordinary value. Following the discussion in section 3, I posit a covert $\exists$ (20). This gives us the following LF for (7):

(24) **Revised LF for (7):** (revised from (23b), to be revised once more)
EVEN [if [$_\varphi$ $\exists$ [{*pro*/the child}$_i$ is who]], [$_\psi$ Pema talks to *pro*$_i$]]

Given the semantics for 'who' (15) and $\exists$ (20) in section 3 above, we yield the following two-dimensional denotation for φ, where X_i temporarily stands in for $[\![pro_i]\!]$ or $[\![\text{the child}_i]\!]$:

(25) a. $[\![\varphi]\!]^o = {}^\wedge X_i = \text{Tashi} \vee X_i = \text{Sonam} \vee X_i = \text{Migmar} \vee ...$

b. $[\![\varphi]\!]^{alt} = \{{}^\wedge X_i = \text{Tashi}, {}^\wedge X_i = \text{Sonam}, {}^\wedge X_i = \text{Migmar}, ...\}$

I now take a brief detour into the structure and interpretation of pronouns and definite descriptions, before we discuss the interpretation of (24) further. I follow the view developed in Elbourne 2001, 2005 and subsequent work that (a) pronouns can be covert definite descriptions

[9] I suspect that they are *always* in argument positions, but in the absence of overt case markers or postpositions as in (7), it is difficult to be certain. For examples without such clues, it is possible that *wh-yin.na'ang* is overtly in its clausal adjunct position, as in (23b), with the corresponding pronoun in the consequent clause simply being null. Note that Tibetan is descriptively pro-drop.

with NP-deletion and (b) definite descriptions take a *situation* argument. Situations are subparts of possible worlds, which may be thought of as limited to particular times or places, or in other ways (see e.g. Kratzer, 1989; Heim, 1990).[10] A definite description presupposes that there is a unique individual that satisfies its nominal restrictor in a particular situation.

This view of definite descriptions will be useful here especially as it has been motivated through the study of so-called donkey pronouns and donkey definite descriptions.[11] Consider the example in (26) below.

(26) If a man beats a donkey, {it/the donkey} kicks him. (Elbourne, 2013: 120)

At first glance, such examples pose a puzzle for the view of singular pronouns and definite descriptions as requiring a unique referent to refer to. An intuition for solving this puzzle is that we are only talking about one, somewhat minimal situation at a time. With the conditional clause in (26), we are quantifying over different situations — one where Kenyon beats Murphy, one where Zheng beats Tucker, etc. — and, in each such situation, there *is* a unique donkey and unique man, and that donkey kicks that man.

Here for concreteness I follow the formalization presented in Elbourne 2013. The definite description 'the child' will have a structure as in (27). The definite determiner in (28) takes two arguments: a nominal restrictor P — which itself takes a situation variable argument (29) — and a situation variable s. (27) presupposes that there is a unique child in the situation s and, if the presupposition holds, returns that individual.

(27) $[_{\text{DP}}$ [THE $[_{\text{NP}}$ child]] s]

(28) $[\![\text{THE}]\!] = \lambda P_{\langle e,\langle s,t\rangle\rangle} \,.\, \lambda s : \exists! x[P(x)(s)] \,.\, \iota x[P(x)(s)]$ (Elbourne, 2013: 35)

(29) $[\![\text{child}]\!] = \lambda x \,.\, \lambda s \,.\, x$ is a child in s

Let us return to the interpretation of φ in (24), first sketched in (25) above. Using the analysis of the definite description as in (27), we can flesh out our denotations for φ as in (30), for the variant of the example (7) with the overt nominal *phru.gu* 'child.' As Tibetan is an article-less language, I assume that THE is unpronounced in Tibetan.

(30) **φ in (24) with definite description:**[12]

a. $[\![\varphi]\!]^{\text{o}} = \lambda s_s : \exists! x[x \text{ child in } s]$
$\quad . \, \iota x[x \text{ child in } s] = \text{Tashi} \;\vee\; \iota x[x \text{ child in } s] = \text{Sonam} \vee \ldots$

b. $[\![\varphi]\!]^{\text{alt}} = \left\{ \begin{array}{l} \lambda s_s : \exists! x[x \text{ child in } s] \,.\, \iota x[x \text{ child in } s] = \text{Tashi}, \\ \lambda s_s : \exists! x[x \text{ child in } s] \,.\, \iota x[x \text{ child in } s] = \text{Sonam}, \ldots \end{array} \right\}$

[10] The type s is used for both situations and (whole) worlds. $\leq$ is the (reflexive) subpart relation for situations.

[11] As Elbourne (2013) touts, "the binding of situation pronouns is the backbone of a moderately popular and not entirely unsuccessful account of donkey anaphora" (p. 119).

[12] I assume that the equational copula of two type e individuals is not itself situation-sensitive. The relation $=$ may hold of counterparts.

The ordinary value of φ (30a) is a proposition — a predicate of situations — which presupposes that there is a unique child in its argument situation s and will return true if that child is Tashi or Sonam or Migmar, etc.; e.g. in the domain of 'who.' The individual alternatives in $[\![\varphi]\!]^{\text{alt}}$ (30b) each similarly presuppose a unique child in the situation, but then return true when that child is a particular individual in the domain.

I extend this analysis to instances of *wh-yin.na'ang* FCIs with no overt domain nominal as well. In such cases, I claim that the first argument of the copula is a null pronoun. I follow the view that pronouns are covert definite descriptions; in particular, I take the null pronoun *pro* to have the structure in (31), where P is a salient predicate determined by the context of utterance.

(31) *pro* = $[_{\text{DP}}$ [THE P] s]

(32) **φ in (24) with null *pro*:**

a. $[\![\varphi]\!]^{\text{o}} = \lambda s_s : \exists!x[P(x)(s)]$
$\quad . \iota x[P(x)(s)] = \text{Tashi} \ \vee \ \iota x[P(x)(s)] = \text{Sonam} \vee ...$

b. $[\![\varphi]\!]^{\text{alt}} = \left\{ \begin{array}{l} \lambda s_s : \exists!x[P(x)(s)] \ . \ \iota x[P(x)(s)] = \text{Tashi}, \\ \lambda s_s : \exists!x[P(x)(s)] \ . \ \iota x[P(x)(s)] = \text{Sonam}, ... \end{array} \right\}$

As proposed in section 2, in LFs for *wh-yin.na'ang* FCIs, there will be a pronoun or definite description in the conditional clause and a corresponding pronoun in the consequent's argument position. I used co-indexation above as in "*pro*$_{\text{i}}$ ... *pro*$_{\text{i}}$" as a notational device to highlight the link between these two nominals, but we are now in a position to specify this relationship. Specifically, I propose that these two definite descriptions — recall that null *pro* are definite descriptions too — must share the same restrictor property P. If the conditional includes an overt nominal such as 'the child' as in (30), its use in φ will support its use as P in ψ. If the conditional includes no overt nominal (32), a contextually salient domain property will be determined for φ, and the same choice must be made for ψ.

For the rest of our discussion, I will make reference to this shared property as P and the definite descriptions or *pro* in both positions, informally, as "THE P." We thus arrive at our final LF for example (7):

(33) **Complete LF for (7):** (revised from (24))
EVEN [if [$_{\varphi}$ $\exists$ [THE P is who]], [$_{\psi}$ IMPF [Pema talks to THE P]]]

I also take this opportunity to unpack the imperfective aspectual marker in ψ, which will become important momentarily.

With this discussion of the interpretation of φ and our co-indexed definite descriptions in place, I now turn to the interpretation of the conditional and its consequent ψ in (33).

I adopt the now standard approach to conditionals as restricting the domain of a modal or temporal operator in the consequent clause (Lewis, 1975; Kratzer, 1979, 1986; von Fintel, 1994).

The modal/temporal operator in the consequent ψ (the overt main clause) in both examples that we have seen so far (in (1) and (7)) is the imperfective aspect with generic/habitual interpretation. Following Arregui, Rivero, and Salanova 2014 and citations there, I model the imperfective as a type of universal modal that quantifies over a particular set of situations. In particular, for generic or habitual imperfectives, in turn following Cipria and Roberts 2000, the relevant set of situations will be "normal or usual" sub-situations of the topic situation, formally described as "characteristic" (Cipria and Roberts, 2000: 325). I write $s' \leq_{\text{ch}} s$ to indicate that s' is a characteristic sub-situation of s.

I spell out the interpretation of ψ with its imperfective quantification in (34). As ψ does not contain any alternative-generating (e.g. focused) expression, $[\![\psi]\!]^{\text{alt}} = \{[\![\psi]\!]^{\text{o}}\}$.

(34) **ψ in (33):**

$$
\begin{aligned}
[\![\psi]\!]^{\text{o}} &= \textsc{impf}_{\text{habitual}}\,([\![\text{Pema talks to } \textsc{the}\ P]\!]^{\text{o}}) \\
&= \lambda s_s\ .\ \forall s'[s' \leq_{\text{ch}} s \rightarrow \text{Pema talks to } \textsc{the}\ P \text{ in } s'] \\
&= \lambda s_s\ .\ \forall s'[s' \leq_{\text{ch}} s\ \wedge\ \exists!x[P(x)(s')] \rightarrow \text{Pema talks to } \iota x[P(x)(s')] \text{ in } s']
\end{aligned}
$$

Note that, in the third line in (34), I have unpacked the presupposition of "$\textsc{the}\ P$" and allowed this condition to restrict the set of relevant sub-situations s'. For example, if P is 'child,' we are allowing ourselves to look at only those characteristic sub-situations where there is a unique child to refer to. In all such situations, Pema talks to that child.

We now can calculate our full conditional clause, "if φ, ψ." Recall that the conditional clause φ acts as a restrictor on the modal base of the ψ's modal quantification. The two-dimensional denotation for "if φ, ψ" is thus as in (35). The effects of this conditional restriction are boxed here for presentation:

(35) **"If φ, ψ" in (33):**

a.
$$
\begin{aligned}
[\![\text{if } \varphi,\ \psi]\!]^{\text{o}} &= \lambda s_s\ .\ \forall s'\left[\begin{array}{c} s' \leq_{\text{ch}} s\ \wedge\ \exists!x[P(x)(s')] \\ \boxed{\wedge\ [\![\varphi]\!]^{\text{o}}(s')} \end{array} \rightarrow \begin{array}{c} \text{Pema talks to} \\ \iota x[P(x)(s')] \text{ in } s' \end{array}\right] \\
&= \lambda s_s\ .\ \forall s'\left[\begin{array}{c} s' \leq_{\text{ch}} s\ \wedge\ \exists!x[P(x)(s')] \\ \boxed{\wedge \left(\begin{array}{l} \iota x[P(x)(s')] = \text{Tashi} \vee \\ \iota x[P(x)(s')] = \text{Sonam} \vee \ldots \end{array}\right)} \end{array} \rightarrow \begin{array}{c} \text{Pema talks to} \\ \iota x[P(x)(s')] \text{ in } s' \end{array}\right]
\end{aligned}
$$

b.
$$
[\![\text{if } \varphi,\ \psi]\!]^{\text{alt}} = \left\{\begin{array}{l} \lambda s_s\,.\forall s'\left[\begin{array}{c} s' \leq_{\text{ch}} s\ \wedge\ \exists!x[P(x)(s')] \\ \boxed{\wedge\, \iota x[P(x)(s')] = \text{Tashi}} \end{array} \rightarrow \begin{array}{c} \text{Pema talks to} \\ \iota x[P(x)(s')] \text{ in } s' \end{array}\right], \\ \lambda s_s\,.\forall s'\left[\begin{array}{c} s' \leq_{\text{ch}} s\ \wedge\ \exists!x[P(x)(s')] \\ \boxed{\wedge\, \iota x[P(x)(s')] = \text{Sonam}} \end{array} \rightarrow \begin{array}{c} \text{Pema talks to} \\ \iota x[P(x)(s')] \text{in } s' \end{array}\right], \\ \ldots \end{array}\right\}
$$

The final ingredient in the *wh-yin.na'ang* LF in (33) is EVEN. As EVEN does not change the at-issue (asserted) content, our work in interpreting example (7) is now done, in (35a). (I discuss the contribution of EVEN in the following section.) What does this result in (35a) express? It

claims that, in all characteristic sub-situations s' of the topic situation s where (a) there is a unique P (e.g. 'child') in s' and (b) that unique P is Tashi or Sonam or Migmar, etc. — e.g., an individual in the domain of 'who' — Pema talks to that unique P.

Let's restate this again in slightly more informal terms, to build an intuition for the claim. Concretely, let our salient property P be 'child,' and assume that all individuals that satisfy 'child' are in the domain of 'who.' Then, (35a) conveys the following:

(36) In any and all "normal or usual" sub-parts of the current situation/world with a unique child, Pema talks to that child.

Note that (36a) does not require Pema to have actually spoken with any or all of these children. Instead, it uses the modal semantics of the imperfective to allow ourselves to consider different "characteristic" situations with different children present. What about a situation with Tashi? Pema talks to him. How about Sonam? Pema talks to her too. Pema talks to any child. We have successfully derived the expression of universal free choice.

How did we do this? In particular, where did the universal force of the FCI come from? The universal quantificational force of *wh-yin.na'ang* in this example is that of the imperfective modal/temporal operator, whose modal base was restricted by the conditional. The imperfective introduces universal quantification over situations (see e.g. Arregui et al., 2014), binding the situation variable in a definite description, allowing us to indirectly universally quantify over different individuals and make claims about them.[13] On this approach, this universal force need not be stipulated as in Menéndez-Benito 2005, 2010 or Rawlins 2008a,b, 2013, nor does it need to be derived using a strengthening procedure as in Chierchia 2013 and Szabolcsi 2019. Instead, it is simply a reflection of an ingredient that is already there: the modal/temporal operator restricted by the conditional.

5 Enforcing universal force

In the previous section, we saw how the *wh-yin.na'ang* FCI derives the effect of universal quantification over a set of individuals, parasitic on a universal modal/temporal quantifier in the sentence. In this section, we will see how *wh-yin.na'ang* enforces this result. The key here is the final ingredient in *wh-yin.na'ang*: the scalar particle *yang* 'even.'

We begin by considering the effect of EVEN in example (7), which applies last in its LF (33). I repeat the two-dimensional denotation of EVEN's sister, "if φ, ψ," here blurring out the material that is common to all propositions, so we can more easily see their interrelationships.

[13] There are a number of precursors to this idea — see for example Giannakidou 2001: 665–666 and citations there — although the implementation here using situation-binding in conditionals is to my knowledge new. In addition, the idea that 'even' plays a critical role in enforcing universal force, which I develop in the next section, is also new.

(37) **"If φ, ψ" from (35), schematically:**

a. $[\![\text{if } \varphi,\ \psi]\!]^{o} = \lambda s_s\ .\ \forall s' \left[... \wedge \left(\begin{array}{l} \iota x[P(x)(s')] = \text{Tashi} \vee \\ \iota x[P(x)(s')] = \text{Sonam} \vee ... \end{array} \right) \rightarrow ... \right]$

b. $[\![\text{if } \varphi,\ \psi]\!]^{alt} = \left\{ \begin{array}{l} \lambda s_s\ .\ \forall s' \left[... \wedge \iota x[P(x)(s')] = \text{Tashi} \rightarrow ... \right], \\ \lambda s_s\ .\ \forall s' \left[... \wedge \iota x[P(x)(s')] = \text{Sonam} \rightarrow ... \right], ... \end{array} \right\}$

We observe that the ordinary value $[\![\text{if } \varphi,\ \psi]\!]^{o}$ (37a) asymmetrically entails each of the alternatives in $[\![\text{if } \varphi,\ \psi]\!]^{alt}$ (37b): If "in every situation where the unique P is Tashi or Sonam or ..., blah is true," then it follows that "in every situation where the unique P is Tashi, blah," and "in every situation where the unique P is Sonam, blah," etc., but not vice versa. The prejacent proposition of EVEN is necessarily less likely than all of its alternatives, so the scalar inference of [EVEN [if φ, ψ]] will always be true. The addition of EVEN is felicitous here.[14]

What happens if the conditional instead restricts an existential modal/temporal quantifier, e.g. a possibility modal, instead of the universal imperfective operator of the examples above? Schematically again, we can expect to yield denotations for "if φ, ψ" of the form in (38). The salient change from (37) is boxed.

(38) **"If φ, ψ" with φ restricting a possibility modal in ψ:**

a. $[\![\text{if } \varphi,\ \psi]\!]^{o} = \lambda s_s\ .\ \boxed{\exists s'} \left[... \wedge \left(\begin{array}{l} \iota x[P(x)(s')] = \text{Tashi} \vee \\ \iota x[P(x)(s')] = \text{Sonam} \vee ... \end{array} \right) \wedge\ ... \right]$

b. $[\![\text{if } \varphi,\ \psi]\!]^{alt} = \left\{ \begin{array}{l} \lambda s_s\ .\ \boxed{\exists s'} \left[... \wedge \iota x[P(x)(s')] = \text{Tashi} \wedge\ ... \right], \\ \lambda s_s\ .\ \boxed{\exists s'} \left[... \wedge \iota x[P(x)(s')] = \text{Sonam} \wedge\ ... \right], ... \end{array} \right\}$

Here, with existential quantification over situations, the entailment relationships between the prejacent and its alternatives have reversed. Each alternative in $[\![\text{if } \varphi,\ \psi]\!]^{alt}$ (38b) now asymmetrically entails the prejacent $[\![\text{if } \varphi,\ \psi]\!]^{o}$ (38a): If any proposition of the form "there is a situation where the unique P is Tashi, and blah is true" or "there is a situation where the unique P is Sonam, and blah is true" etc. is true, it follows that "there is a situation where the unique P is Tashi or Sonam or... and blah is true" will necessarily be true. In this case, the prejacent is logically weaker than its alternatives. EVEN applied to "if φ, ψ" with a possibility modal will thus lead to a systematically unsatisfiable scalar inference, resulting in ungrammaticality.

The scalar particle *yang* 'even' in Tibetan *wh-yin.na'ang* FCIs thus plays a crucial role in ensuring that *wh-yin.na'ang* always expresses universal free choice, just as it may serve a crucial role in explaining the behavior of NPIs (Lee and Horn, 1995; Lahiri, 1998; Erlewine and Kotek, 2016). The logical requirements of EVEN — quantifying over the prejacent and alternatives using the independently motivated semantics of *wh*-alternatives and their disjunction by $\exists$,

[14] This appears to make the addition of *yang* in *wh-yin.na'ang* systematically vacuous. In Erlewine 2019, I suggest that this is not entirely so: The addition of an overt focus particle necessitates its sister to have a defined ordinary value, which licenses insertion of the $\exists$ operator (20), whose insertion is otherwise marked.

introduced in section 3 — ensures that the conditional clause of *wh-yin.na'ang* restricts a universal modal/temporal operator, and therefore that *wh-yin.na'ang* itself will always have universal force.

Practically speaking, *wh-yin.na'ang* can cooccur with possibility modals. Consider example (39) below. The verb form in this example differs from (1) in the addition of the deontic possibility modal *chog*, and is also grammatical. The interpretation of *wh-yin.na'ang* here is again a universal FCI.

(39) ***Wh-yin.na'ang* FCI with deontic possibility modal:**

Nga-'i khyi [(kha.lag) ga.re yin.na'ang] za-**chog**-gi-red.
1sg-GEN dog food what YIN.NA'ANG eat-ALLOWED-IMPF-AUX
'My dog is allowed to eat anything / any food.'

In such examples, there is in principle a choice in what modal/temporal operator the conditional clause restricts. If the conditional of *wh-yin.na'ang* restricts the ability modal, we yield prejacent and alternative set denotations of the form in (38), leading to ungrammaticality due to an unsatisfiable scalar inference of EVEN. Instead, the conditional clause must be construed as restricting the modal base of the higher imperfective operator.

In some cases, however, there is no higher universal quantification which can be restricted by the conditional in *wh-yin.na'ang*. This is the case in episodic descriptions, where *wh-yin.na'ang* is ungrammatical. See example (40) and its grammatical, FCI-less variant in (41).

(40) ***Wh-yin.na'ang* ungrammatical in episodic descriptions:**

*bKra.shis da.lta [(kha.lag) ga.re yin.na'ang] bzas-tshar-song.
Tashi now food what YIN.NA'ANG eat-finish-AUX
Intended: ≈ 'Tashi finished eating any food now.'

(41) bKra.shis da.lta (kha.lag) bzas-tshar-song.
Tashi now food eat-finish-AUX
'Tashi just finished eating right now.'

Episodic descriptions simply claim the existence of a particular type of event: here, (43) asserts that there was a completion of an eating event, in the past,[15] in the halo of the speech time 'now.' There is not any kind of universal modal/temporal operator which the conditional in *wh-yin.na'ang* can modify. In such a case, there is no way for the scalar inference of *wh-yin.na'ang*'s EVEN to be satisfied, explaining the ungrammaticality of the *wh-yin.na'ang* FCI in such examples.

[15] The auxiliary *song* expresses both past tense and direct evidentiality (Garrett, 2001).

6 Summary and outlook

This paper develops a new compositional semantics for universal free choice, from the predictable interactions of a number of ingredients. A copular conditional clause describes a referent which the consequent then makes reference to. The conditional restricts the modal base of a modal/temporal operator in the sentence. And finally, the scalar particle EVEN associating with a *wh*-indefinite, enforces that the modified modal/temporal operator be a universal quantifier over situations. This leads indirectly to a kind of universal quantification over individuals in the domain of the FCI. The end result is a new approach to the universal force of universal FCIs, without directly prescribing or deriving this force.

Most importantly, this proposal is not a hypothetical proof-of-concept. The expression of universal free choice in Tibetan, documented here, transparently involves these ingredients: a concessive conditional clause (*even if*) that describes the identity of some referent, ranging over different possibilities in the domain of a *wh*-word.

If this analytic approach for universal free choice is truly successful, we might imagine that other languages would also express universal free choice claims in this way. There is recent work suggesting exactly this. For example, Rahul Balusu (2019; 2020) has investigated different uses of concessive conditional expressions in a range of Dravidian languages; one such use is the formation of FCIs with exactly the same surface morphological makeup as in Tibetan: a *wh*-word with a copula and concessive conditional ending.

(42) **Morphologically parallel FCIs in Dravidian languages:**

a. **Een-aad-ar-uu** tinnutteene.
what-COP-COND-EVEN eat.will
'I'll eat anything.' Kannada (Balusu, 2020)

b. Ravi **eed-ai-naa** tinTaaDu.
Ravi what-COP-COND.EVEN eat.will
'Ravi will eat anything / something or other.' Telugu (Balusu, 2019: 46)

There are, however, some subtle differences within these Dravidian languages, and Tibetan. For example, Telugu *wh-ai-naa* FCIs allow both universal 'anything' as well as existential 'something or other' readings, although Kannada and Tibetan do not have such existential readings. See Balusu 2019, 2020 for discussion.

Additional evidence comes from the form of universal FCIs in Japanese, which appear to be formed of a *wh*-phrase with a particle *demo*, as in (43a). On the identity of this particle *demo*, Nakanishi (2006: 141) states, "*-Demo* can be morphologically decomposed into the copular verb *-de* followed by *-mo* [*even*]. However, it is not clear whether this decomposition is necessary." In recent work, however, Hiraiwa and Nakanishi (to appear) push the decompositional hypothesis a step further, specifically proposing that Japanese *wh-demo* FCIs have the underlying structure

in (43b), with a type of ellipsis obscuring the conditional morphology.[16]

(43) **Morphologically similar FCI in Japanese:**

a.	**Nan-demo** tabemasu.	→	b.	nan(i) de ~~ar-te~~	mo
	what-DEMO eat.will			what COP EXIST-COND	EVEN
	'I will eat anything.'			(Hiraiwa and Nakanishi, to appear)	

Whether expressions with *demo* indeed always reflect the structure in (43b) in the synchronic grammar of Japanese — or if the hypothesized structure in (43b) is better thought of as the diachronic source for what is now a single grammaticalized particle, *demo* — in my opinion warrants further debate. Still, the parallel as in (43) is additional fodder for the broad cross-linguistic viability of the decompositional approach to universal free choice developed here. See also Haspelmath 1997: 135–140 for discussion of indefinite expressions in many other languages which also exhibit morphological traces of copulas and concessive conditional morphology, some of which are still clearly FCIs, whereas others have extended to other indefinite types (pp. 149–150).

Furthermore, each of these concessive copular conditional expressions in both Dravidian languages and Japanese have a number of additional uses, which in fact largely overlap with the range of uses for Tibetan *yin.na'ang* (Erlewine, to appear). The clear parallels in both the morphosyntactic composition and interpretational range of these expressions, across these genetically unrelated languages, further strengthens the motivation to take the decompositional approach to these expressions seriously, as well as to better document and understand the microvariation observed in their fine-grained behavior.

[16] The copula in Japanese involves the copular marker *de* as well as the existential verb *ar-*, making *de ar-te* in (43) the expected verb form for a copular conditional. See e.g. Nishiyama 1999.

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