

Universal free choice from concessive conditionals in Tibetan and beyond

Michael Yoshitaka Erlewine
mitcho@mitcho.com

Variation in Adverbial Clauses
Göttingen, October 2023



Introduction

Universal free choice items (\forall -FCIs) are licensed in a range of modal/conditional and non-episodic (non-veridical; Giannakidou 2001) environments and lead to *universal free choice inferences*:

(1) $f(\text{FCI}_x) \Rightarrow$ for any choice of x , $f(x)$ is true

(Giannakidou 2001's "quasi-universal effect"; Kratzer and Shimoyama 2002's "distribution requirement")

An important question in the study of free choice is the source of this universal force.

Tibetan forms universal free choice items (FCIs) with a *wh*-word and the particle *yin.na'ang*, optionally preceded by a nominal domain:

(2) ***Wh* universal free choice item (∀-FCI):**

ནོར་བུ་ཁ་ལག་ག་རེ་ཡིན་ནའང་ཟ་གི་རེད།

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.'

Yin.na'ang = yin + na + yang

Yin.na'ang is also variably *yin.na.yang* ཡིན་ན་ཡང་ or *yin.n'i* ཡིན་ནའི་
and is morphologically clearly:

(3) ཡིན་ ན་ ཡང་ ཡིན་ན་ཡང་ ཡིན་ནའང་ ཡིན་ནའི་
yin +na +yang = yin.na.yang > yin.na'ang > yin.n'i
COPULA COND EVEN /yine/

▶ Roughly, then, (2) appears to literally be:

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

- Based on my original fieldwork on Tibetan, I pursue the hypothesis that *wh-yin.na'ang* FCIs transparently involve the ingredients in (3): a *wh*, copula, conditional, and *even*.
- This motivates **a new approach to universal free choice**, which does not stipulate its quantificational force, and leads to a new insight into subtriggering effects.
- ▶ These and similar facts from Dravidian languages and Japanese motivate a novel syntax/semantics for the interpretation of **adverb clauses in argument positions** and their subsequent grammaticalization.

§2 Preliminaries

§3 Interpreting *wh-yin.na'ang*

§4 Enforcing universal force

§5 Conclusion and extensions

§2 Preliminaries

§2.1 *Wh*-quantification (in Tibetan)

§2.2 On the syntax of *wh-yin.na'ang*

I first consider the uses of *wh*-words in Tibetan:

- (5) **Tibetan is *wh*-in-situ; no bare *wh* indefinites:**

ཐུགས་སྐྱོལ་སྲུ་སྐྱེབས་སོང་པས།

Thugs.spro-la su slebs-song(-pas?)

party-DAT who arrive-AUX-Q

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

- (6) ***Wh*-EVEN NPI:** (see Erlewine and Kotek 2016)

ཐུགས་སྐྱོལ་སྲུ་ཡང་སྐྱེབས་མ་སོང།

Thugs.spro-la su-**yang** slebs-*(ma)-song.

party-DAT who-EVEN arrive-NEG-AUX

'No one came to the party.'

Wh-quantification in Alternative Semantics

I employ the framework for *wh*-quantification in Alternative Semantics in my work in progress; see e.g. Erlewine 2019.

- *Wh*-words have an alternative set ranging over its domain but no ordinary value (Ramchand 1997, Beck 2006, Kotek 2014):

(7) a. $[[su/who]]^0$ undefined

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

(8) a. $[[TP]]^0$ undefined

b. $[[TP]]^{alt} = \{\text{^T came...}, \text{^S came...}, \text{^M came...}\}$

Wh-quantification in Alternative Semantics

- Focus particles such as EVEN can't compose with (8) because they require a defined ordinary value (the prejacent).

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

- a. $[\text{EVEN } \alpha] \rightsquigarrow \forall q \in [[\alpha]]^{\text{alt}} [q \neq [[\alpha]]^{\circ} \rightarrow [[\alpha]]^{\circ} <_{\text{likely}} q]$
- b. $[[\text{EVEN } \alpha]]^{\circ} = [[\alpha]]^{\circ}$
- c. $[[\text{EVEN } \alpha]]^{\text{alt}} = \{[[\alpha]]^{\circ}\}$

- To fix this problem, I propose the covert \exists in (10):

- (10) a. $[[\exists \alpha]]^{\circ} = \bigvee [[\alpha]]^{\text{alt}}$ b. $[[\exists \alpha]]^{\text{alt}} = [[\alpha]]^{\text{alt}}$

Wh-quantification in Alternative Semantics

(11) LF for (6): EVEN [₃ NEG [₂ \exists [₁ *who* came to the party]]]

a. [EVEN ₃]

\rightsquigarrow (\wedge no one came ...) $<_{\text{likely}}$ (\wedge T didn't come ...) \wedge ... ○

b. [EVEN ₂]

\rightsquigarrow (\wedge someone came ...) $<_{\text{likely}}$ (\wedge Tashi came ...) \wedge ... ✕

This follows Lahiri 1998 in enforcing polarity-sensitivity through a scalar particle. See also Erlewine 2019 for further discussion of this framework.

On the syntax of *wh-yin.na'ang*

Taking the morphology of *yin.na'ang* at face value — COPULA + COND + EVEN (3) — *yin.na'ang* is a copular conditional clause with EVEN.

Two questions about the form *wh-yin.na'ang*:

1. the content of the copular clause; and
2. the interpretation of *wh-yin.na'ang* in argument position.

The arguments of the copular predicate

It is at first glance tempting to describe the *wh*-FCI as a *wh*-phrase + *yin.na'ang*.

(12) **But *wh-yin.na'ang* doesn't take 'which' phrases:**

a. ཁ་ལག་ག་གི་ཡིན་ནའང་

*[kha.lag **ga.gi**] yin.na'ang
food which YIN.NA'ANG

'any (of the) food'

b. ཕུ་བུ་ག་གི་ཡིན་ནའང་

*[phru.gu **ga.gi**] yin.na'ang
child which YIN.NA'ANG

'any child / of the children'

The arguments of the copular predicate

- Instead, I propose that the nominal (if present) is the first argument of the copula and the simplex *wh* is its second argument. With no nominal, the first argument is *pro*.

(13) ***Wh-yin.na'ang* takes a nominal and a simplex *wh*-word:**

a. ཁ་ལག་ག་རེ་ཡིན་ནའང་

[(kha.lag) **ga.re**] yin.na'ang

food what YIN.NA'ANG

'any (of the) food'

lit. 'even if {the food/it} is what'

b. ཕུ་གུ་སུ་ཡིན་ནའང་

[(phru.gu) **su**] yin.na'ang

child who YIN.NA'ANG

'any child / of the children'

lit. 'even if {the child/it} is who'

Wh-yin.na'ang in argument position

Again, the morphology of *yin.na'ang* suggests that *wh-yin.na'ang* is a copular conditional clause, plus EVEN.

- ▶ But *wh-yin.na'ang* is in an argument position! This is clear in examples like (14) where *wh-yin.na'ang* takes dative case:

- (14) པད་མ་ཕུག་སུ་ཡིན་ནའང་ལ་སྐད་ཆ་བཤད་གྱི་རེད།
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.'

Wh-yin.na'ang is a clausal structure in an argument position which describes that argument; in other words, a *head-internal relative* or *amalgam* (Lakoff 1974; see also Kluck 2011):

(15) John is going to I think it's Chicago on Saturday.

(Lakoff 1974: 324)

...but many approaches to head-internal relatives and amalgams will not apply here, as the embedded clause is a *conditional* clause.

- ▶ I adopt the Shimoyama 1999 anaphora approach for (Japanese) head-internal relatives: the clause is interpreted as adjoined to the main clause at LF, with its surface position interpreted as a pronoun.

- (16) a. (14): Pema talks to [even if {*pro*/the child}₇ is who] ⇒
b. LF: [even if {*pro*/the child}_i's who], she talks to *them*_i ⇒
EVEN [if {*pro*/the child}_i's who, she talks to *them*_i]

(I discuss the meaning of this coindexation below.)

§3 Interpreting *wh-yin.na'ang*

I now elaborate on the interpretation of a *wh-yin.na'ang* FCI, staying with (14):

(17) **Unpacking *wh-yin.na'ang* in (14):**

a. (14): Pema talks to [even if {*pro*/the child} is *who*] \Rightarrow

b. LF: EVEN [if [φ \exists [{*pro*/the child}_{*i*} is *who*]],

[ψ IMPF [Pema talks to *pro*_{*i*}]]]

The nominals

I take the nominals *pro* and 'child' a.o. here to take situation variables. I follow the formalization in Elbourne 2013:

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

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

Note that Tibetan has bare noun definites and no overt definite determiner.

(20) φ in (17) with definite description:

a. $[[\varphi]]^0 = \lambda s_s : \exists!x[x \text{ child in } s]$

$$. \iota x[x \text{ child in } s] = T \vee \iota x[x \text{ child in } s] = S \vee \dots$$

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

Similarly, I take *pro* be a definite with salient property *P*:

(21) φ in (17) with null *pro*:

- a. $[[\varphi]]^0 = \lambda s_s : \exists !x[P(x)(s)]$
 $\quad \quad \quad \cdot \iota x[P(x)(s)] = T \vee \iota x[P(x)(s)] = S \vee \dots$
- b. $[[\varphi]]^{\text{alt}} = \left\{ \begin{array}{l} \lambda s_s : \exists !x[P(x)(s)] \cdot \iota x[P(x)(s)] = T, \\ \lambda s_s : \exists !x[P(x)(s)] \cdot \iota x[P(x)(s)] = S, \dots \end{array} \right\}$

Below, I refer to these definites or *pro* as “THE *P*.” (The coindexation above reflects the reference to the shared property *P*.)

(22) **Final LF for (14):** (revised from (17))

EVEN [if [_{φ} \exists [THE *P* is who]], [_{ψ} IMPF [Pema talks to THE *P*]]]

The conditional

- ▶ I model the habitual imperfective in (22) as a universal quantifier over “characteristic” sub-situations (\leq_{ch}) (Cipria and Roberts 2000, Arregui et al. 2014).

(23) ψ in (22):

$$\begin{aligned} \llbracket \psi \rrbracket^0 &= \text{IMPF}_{\text{habitual}} (\llbracket \text{Pema talks to THE } P \rrbracket^0) \\ &= \lambda s_S . \forall s' [s' \leq_{ch} s \rightarrow \text{Pema talks to THE } P \text{ in } s'] \end{aligned}$$

- ▶ I take the conditional clause to restrict the domain of the modal/temporal quantifier (Lewis 1975, Kratzer 1979, 1986, von Stechow 1994).

The conditional

(24) “If φ , ψ ” in (22):

$$\begin{aligned} \llbracket \text{if } \varphi, \psi \rrbracket^o &= \lambda s_s . \forall s' \left[\begin{array}{c} s' \leq_{\text{ch}} s \\ \wedge \llbracket \varphi \rrbracket^o(s') \end{array} \rightarrow \begin{array}{c} \text{Pema talks to} \\ \text{THE } P \text{ in } s' \end{array} \right] \\ &= \lambda s_s . \forall s' \left[\begin{array}{c} s' \leq_{\text{ch}} s \wedge \exists !x [P(x)(s')] \\ \wedge \left(\begin{array}{l} \iota x [P(x)(s')] = T \vee \\ \iota x [P(x)(s')] = S \vee \dots \end{array} \right) \end{array} \rightarrow \begin{array}{c} \text{Pema talks to} \\ \iota x [P(x)(s')] \text{ in } s' \end{array} \right] \end{aligned}$$

“In any and all ‘normal or usual’ sub-parts of the current situation/world with a unique child, Pema talks to that child.”

We derived the expression of universal free choice from the ingredients in *wh-yin.na'ang*: **wh + copula + conditional (+ EVEN)**!

How did this happen?

- ▶ **The universal force of the FCI comes from the modal/temporal operator** — here, imperfective — restricted by the conditional.
- The universal force here is not 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.

§4 Enforcing universal force

Enforcing universal force

The approach just presented derives \forall -FC, parasitic on a universal modal/temporal operator. This raises two questions:

Q1: What if the conditional restricts a possibility modal?

Q2: What about in episodic descriptions? In necessity statements?

- ▶ **EVEN ensures that the conditional in *wh-yin.na'ang* must restrict a universal modal/temporal operator.**

Consider the denotation of “if φ, ψ ” for example (14) above and its alternatives:

The role of EVEN

(25) “If φ, ψ ” for (14), schematically:

a. $\llbracket \text{if } \varphi, \psi \rrbracket^0 = \lambda s_s .$
 $\forall s' \left[\dots \wedge \left(\begin{array}{l} \iota x [P(x)(s')] = \text{Tashi} \vee \\ \iota x [P(x)(s')] = \text{Sonam} \vee \dots \end{array} \right) \rightarrow \dots \right]$

“In any and all ‘normal or usual’ sub-situations with a unique child, Pema talks to that child.”

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

“In any and all ‘normal or usual’ sub-situations with a unique child who is Tashi/Sonam/..., P talks to that child.”

- ▶ Notice that $\llbracket \text{if } \varphi, \psi \rrbracket^0$ in (25a) asymmetrically entails each alternative in $\llbracket \text{if } \varphi, \psi \rrbracket^{\text{alt}}$ (25b). EVEN [if φ, ψ] then introduces a satisfiable (trivial) scalar inference.

What if the conditional instead restricts a possibility modal?

Restricting a possibility modal

(26) “If φ , ψ ” with φ restricting a possibility modal in ψ :

a. $\llbracket \text{if } \varphi, \psi \rrbracket^0 = \lambda w_s .$

$$\boxed{\exists w'} \left[\dots \wedge \left(\begin{array}{l} \iota x [P(x)(w')] = \text{Tashi} \vee \\ \iota x [P(x)(w')] = \text{Sonam} \vee \dots \end{array} \right) \wedge \dots \right]$$

“There is an accessible world with a unique child where Pema talks to that child.”

b. $\llbracket \text{if } \varphi, \psi \rrbracket^{\text{alt}} =$

$$\left\{ \begin{array}{l} \lambda w_s . \boxed{\exists w'} \left[\dots \wedge \iota x [P(x)(w')] = \text{Tashi} \wedge \dots \right], \\ \lambda w_s . \boxed{\exists w'} \left[\dots \wedge \iota x [P(x)(w')] = \text{Sonam} \wedge \dots \right], \dots \end{array} \right\}$$

“There is an accessible world with a unique child who is Tashi/Sonam/..., where Pema talks to that child.”

Restricting a possibility modal

- ▶ Here each alternative in (26b) is logically stronger than the prejacent. **EVEN will lead to an unsatisfiable presupposition!** This blocks the *wh-yin.na'ang* FCI from involving a conditional restricting a possibility modal, in a method similar to ensuring negative polarity dependency with EVEN as in Lahiri 1998.

Wh-yin.na'ang with possibility modals

Wh-yin.na'ang FCIs do (unsurprisingly) cooccur with possibility modals, though:

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

ངའི་བྱི་ཁལ་ག་རེ་ཡིན་ནའང་ཟ་ཚོག་གི་རེད།

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 cases, I propose that the conditional in *wh-yin.na'ang* must be associated with the imperfective aspect *-gi-*, leading to universal quantification scoping over the deontic possibility modal: $\forall > \text{ALLOWED}$.

Wh-yin.na'ang in episodic descriptions

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

*བཀྲ་ཤིས་ད་ལྟ་ཁ་ལག་ག་རེ་ཡིན་ནའང་བཟས་ཚར་ཤོད།

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 right now.'

Episodic descriptions claim the existence of a particular event:
here, that there was completion of eating, in the past halo of 'now.'

- ▶ There is no modal/temporal operator which supplies universal force and thus the prejacent will not be less likely than its alternatives, so EVEN cannot be satisfied. (There may be a high covert necessity modal, which is insufficiently granular...)

Wh-yin.na'ang in necessity statements

The current analysis may suggest the availability of *wh-yin.na'ang* in statements with necessity modals, contrary to fact:

(29) *Wh-yin.na'ang* marked in necessity statements:

?? ཁྱེད་རང་སློན་ག་རེ་ཡིན་ནའང་ཟ་དགོས་རེད།

Khyed.rang [sman ga.re yin.na'ang] za-dgos-red.

2sg medicine what YIN.NA'ANG eat-must-AUX

Intended: ≈ 'You **must** take *any* medicine.'

Wh-yin.na'ang in necessity statements

- ▶ I suggest that the deontic necessity modal as in (29) does quantify over situations/worlds that are granular enough to allow restriction by the uniqueness presupposition of the definite:

(30) **Impossible LF for (29):**

EVEN [if [φ \exists [THE P is what]], [ψ MUST [you eat THE P]]]

Notably, *wh-yin.na'ang* in necessity statements are improved by further modification, e.g. *subtriggering* (LeGrand 1975):

(31) **Wh-yin.na'ang improved with subtriggering:**

ཕྱིད་རང་སྐྱེན་པ་སྤྲད་པའི་སྐྱེན་ག་རེ་ཡིན་ནའང་ཟ་དགོས་རེད།

[[_{RC} sman.pa sprad-pa-'i] sman ga.re yin.na'ang] za-**dgos**-red.

doctor give-REL-GEN medicine what YIN.NA'ANG eat-must-AUX
'[You] **must** take *any* medicine [that the doctor gives [you]].'

I suggest that, here, an alternate source exists:

(32) **Alternate LF with indefinite specificational subject:**

EVEN [if [_φ ∃ [A P is what]], [_ψ MUST [you eat THE P]]]

Subtriggering and indefinite specificational subjects

We know that indefinite specificational subjects are marked unless they have what Comorovski (2007) calls “indirect contextual anchoring”; see also Mikkelsen 2005: ch. 8 and Milway 2020:

(33) a. *A doctor is John. (Heycock and Kroch 1999: 379)

b. ✓ One person who might help you is Mary. (Higgins 1973: 270)

- ▶ I pursue the possibility that “subtriggering” is a reflection of this anchoring requirement on indefinite specificational subjects.

► **A new approach to universal free choice:**

- parasitic on an existing universal/necessity operator via the conditional,
- enforced by the logical properties of *EVEN*,
- interpreting an adjunct (conditional) clause in an argument position, inspired by Shimoyama's approach to head-internal relative clauses.

See also its further formalization in Erlewine 2020b.

§5 Conclusion and extensions

Here I investigated the syntax/semantics of universal FCIs in Tibetan.

- ▶ **∀-FCIs can be derived from these ingredients:**

(3) ཡིན་ ན་ ཡང་
 WH + yin + na + yang
 COPULA CONDITIONAL EVEN

The expression *yin.na'ang* ཡིན་ནའང་ has two other uses:

Yin.na'ang beyond free choice

- (34) **Counterexpectational discourse particle 'however':**

བཟུ་ཤིས་དག་ཀྱང་། ཡིན་ནའང་སྤྱད་པོ་མི་འདུག།

bKra.shis dge-r gan red. **Yin.na'ang** spyang.po mi-'dug.

Tashi teacher COP YIN.NA'ANG clever NEG-AUX

'Tashi is a teacher. **However**, [he] isn't smart.'

- (35) **Concessive scalar focus particle:**

Context: Don't worry, the test is easy.

དེ་ལ་ཅི་ག་ཡིན་ནའང་གློག་ན་ཡིག་ཚད་མཐར་འཁྲོལ་གྱི་རེད།

[Dep [gcig]_F **yin.na'ang** klog-na] yig.tshad mthar.'khyol-kyi-red.

book one YIN.NA'ANG read-COND exam succeed-IMPF-AUX

≈ '[If [you] read **even/at least** [one]_F book], [you] will pass the exam.'

Summary

Tibetan *yin.na'ang* has three functions:

1. *Yin.na'ang* counterexpectational discourse particle
2. *X yin.na'ang* concessive scalar focus particle
3. *wh yin.na'ang* universal free choice item

► **All three uses can be derived compositionally from (3):**

- (3) ཡིན་ ན་ ཡང་
yin + na + yang
COPULA CONDITIONAL EVEN

See Erlewine 2020a for further discussion and analysis.

- ▶ If this is really derived from the independent conventional semantics for the copula, conditional, and *even*, we might expect similar expressions in other languages.

Balusu (2019, 2020) shows this to be true in a range of Dravidian languages!

For example, Telugu *ai-naa* = COP-EVEN.IF has three functions:

1. *Ai-naa* counterexpectational discourse particle
2. *X ai-naa* concessive scalar focus particle
3. *wh ai-naa* universal/existential free choice item

! But there are subtle differences! For example, Telugu *wh ai-naa* also allows \exists -FCI ('somebody or other') readings. See Balusu 2019, 2020.

Japanese *demo* has three functions:

1. *Demo* counterexpectational discourse particle
2. *X demo* concessive scalar focus particle / 'for example'
3. *wh demo* universal free choice item

See the handout's Appendix for some data and one particularly striking parallel between Tibetan *yin.na'ang* and Japanese *demo*.

! But there is a subtle difference! *Demo* has a 'for example' use (Watanabe 2013). See Appendix in handout.

On constructional transparency

A complication is that Japanese *demo* may not be a synchronically productive combination of copula, conditional, and *even*.

- Hiraiwa and Nakanishi (2021) propose that the Japanese surface form *demo* is a conventionalized contraction of *dear-te-mo*, which is transparently COP-COND-EVEN. But the proposed contraction is not a productive process. (But see also Oda 2021 for another view.)

On constructional transparency

- ▶ The success of the decomposition for Tibetan *yin.na'ang* — from its ingredients, COPULA + CONDITIONAL + EVEN — is valuable for understanding this class of expressions, **both synchronically productive and not**:
 - We might find other cases where the morphology and semantics are quite transparent (Dravidian?)
 - and for others, it offers an explanation for *why* a language bundles such meanings together, even if its morphology is now calcified (Japanese).

ཐུགས་རྗེ་ཆེ།

I report on aspects of this work in Erlewine 2020a,b. All uncredited Tibetan data is from my fieldwork in Dharamsala, India in summers 2018 and 2019 and through subsequent correspondence. I especially thank Kunga Choedon, Pema Yonden, and Tenzin Kunsang for patiently sharing their language with me. For earlier comments and discussion, I especially thank Maayan Abenina-Adar, Rahul Balusu, Kenyon Branan, Seth Cable, James Collins, Chris Davis, Kai von Fintel, Danny Fox, Hadas Kotek, Elin McCready, Ryan Walter Smith, and audiences at NELS 50, LSA 2020, TripleA 7, FASAL 11, National University of Singapore, and Tsinghua University.

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