

Cross-linguistic Analysis of the Mermaid Constructions in LFG

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Outline

Introduction

Descriptive Analysis

LFG Analysis

Cross-linguistic Analysis

Conclusion

In this talk...

Objective

- To analyze the Mermaid Constructions across languages with LFG

Background (from LFG 2022 at Groningen)

- “Mermaid Constructions in LFG”
- Takeaways: Mermaid Constructions are **control** and **raising** with a **nominal predicate**
- Evidence was mainly data from Japanese

What’s new in this talk?

- Provide a cross-linguistic account

Mermaid Constructions

Coined by Tsunoda (2011¹, 2012², 2020³)

Structure (by Tsunoda 2020)

[N_{SUBJ} ... V]_{Clause} + N_{MC} + (Copula)⁴

- Tsunoda's analysis: V and N_{MC} compose a **compound predicate**
- thus MC is **monoclausal**: N_{SUBJ} ... [V + N + (Copula)]_{CompPred}

Examples

(1) Japanese (< Japonic; SOV)

Hanako=ga [Igirisu=ni ik-u] yotei=da

Hanako=**NOM** UK=**DAT** go-NPST.**ADN** plan(N)=**COP**

‘Hanako is going to go to the UK. (*lit.* Hanako is the plan that goes to the UK)’

ADN: adnominal, COP: copula, NPST: non-past

¹Tsunoda Tasaku. “Ningyo koubun: nihongogaku kara ippan gengogaku he no kouken”. In: *NINJAL Research Papers* 1 (2011), pp. 53–75.

²Tasaku Tsunoda. “Ningyo koubun to meisi no bunpouka”. In: *NINJAL Project Review* 7 (2012), pp. 3–11.

³Tasaku Tsunoda. *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020.

⁴The actual order is subject to language-specific word order.

Examples (contd.)

- (2) Mitsukaido (< Japanese < Japonic; SOV)⁵

oraNte [gaNzizu=dage udoN ku-u] *eNji=da*
 my:family.NOM New_Year's_Day=only udon eat-NPST.ADN origin=COP.NPST
 'My family customarily eat udon only on New Year's Day.'

- (3) Irabu (< Miyako < Ryukyuan < Japonic; SOV)⁶

kai=ga=du [*sac=n idi-r*] *kutu*
 3SG=NOM=FOC first=DAT go_out-NPST.ADN thing
 'S(he) should go first'

- (4) Korean (< Koreanic; SOV)⁷

chinkwu=ka [*ilpon=ey ka-l*] *yeyceng=i-ta*
 friend=NOM Japan=DAT go-PROS.ADN plan=COP-DECL
 '(My) friend is going to Japan'

DECL: declarative, NMLZ: nominalizer, PROS: prospective

⁵ Kan Sasaki. "Mitsukaido dialect of Japanese". In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 125–166.

⁶ Michinori Shimoji. "Irabu Ryukyuan". In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 781–816.

⁷ Jongmin Kim. "Korean". In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 781–816.

Examples (contd.)

- (5) Amdo Tibetan (< Tibeto-Burman < Sino-Tibetan; SOV)⁸

arʃa=kə [*nor ptsəŋ-ʃu*] *ntʃ^harʒə* *rɛ*
 father=ERG yak sell.IPFV-NMLZ.GEN plan COP.B

‘(My) father plans to sell yaks’

- (6) nDrapa (Zhaba) (< Qiangic < Sino-Tibetan; SOV)⁹

ŋoro1 [*kaotŋ1*] *lo=ci2* *fidi=ʃi3* *nkhei1* *rɛ*
 3SG high_school learn=wish think=IPFV appearance COP

‘He seems to want to go to high school’

- (7) Burmese (< Tibeto-Burman < Sino-Tibetan; SOV)¹⁰

tù [*dì híN=gò sá=dê*] *póun(=bé)*
 3SG this curry=KO eat=ADN shape(=EMP)

‘(S)he seems to have eaten this curry’

B — pattern B (see Ebihara 2020), EMP — emphasis, KO — *kò/gò* (see Kato 2020)

⁸Shiho Ebihara. “Amdo Tibetan”. In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 419–464.

⁹Satoko Shirai. “nDrapa”. In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 465–509.

¹⁰Atsuhiko Kato. “Burmese”. In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 781–816.

Examples (contd.)

- (8) Kurukh (< Northern Dravidian < Dravidian; SOV)¹¹
a:s-hi: [tamba-s-in ilc-ka:] *caqde:* rahc-a:
 3SG.M-GEN own.father-M-ACC fear.PS-PST.VADJ necessity COP.PS-PST.3SG.NM
 ‘It was because he was afraid of his father’
- (9) Sidaama (< Cushitic < Afro-Asiatic; SOV)¹²
ise [faraššó guluf-f-annó] *gara-a=ti*
 3SG.F.NOM horse.ACCOBL ride-3SG.F-IPFV.3 manner-LV=NPC.PRED.MOD
 ‘She seems to ride a horse (habitually)’
- (10) Bengali (< Indo-Iranian < Indo-European; SOV)¹³
tar [tokio=te jawar] *koṭ^ha*
 3SG.GEN Tokyo=LOC go.NMLZ.GEN word
 ‘It is planned that he s/he is going to Tokyo’

ACCOBL — Accusative-Oblique, LV — lengthened vowel, MOD — modified, NM — non-masculine, NPC — nominalized predicate clitic, PRED — predicative, PS — past stem, VADJ — verbal adjective

¹¹ Masato Kobayashi and Tasaku Tsunoda. “Kurux”. In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 781–816.

¹² Kazuhiro Kawachi. “Sidaama”. In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 781–816.

¹³ Keisuke Huziwaru. “A contrastive study of external adnominal clauses in Japanese and Bangla”. In: *Bangabidya: International Journal of Bengal Studies* 10 (2018), pp. 358–367.

Examples: different case-marking in Tagalog

(11) Tagalog < Malayo-Polynesian < Austronesian; VSO)¹⁴

plano ni=Noy [na b<um>isita sa=Davao bukas]
 plan GEN=Noy LK visit<AF:INF> OBL=Davao tomorrow
 ‘Noy plans to go to Davao tomorrow’

(12) Tagalog < Malayo-Polynesian < Austronesian; VSO)

plano [=ng b<um>isita ni=Noy sa=Davao bukas]
 plan=LK visit<AF:INF> GEN=Noy OBL=Davao tomorrow
 ‘Noy plans to go to Davao tomorrow’

(13) Tagalog < Malayo-Polynesian < Austronesian; VSO)

mukha [=ng bi-bisita si=Noy sa=Davao bukas]
 face=LK AF:CONT-visit NOM=Noy OBL=Davao tomorrow
 ‘It seems that Noy will go to Davao tomorrow’

Genitive vs. Nominative

Position of *ni=Noy*

CONT — contemplative (prospective) aspect

¹⁴Masumi Katagiri. “Tagalog”. In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 781–816.

Examples: Different case-marking in Tatar

(14) Tatar (< Kipchak < Turkic; SOV)¹⁵

siŋa [joqla-rya] *röxsät*
2SG.DAT sleep-INF permission

‘You are allowed to sleep.’

(15) Tatar (< Kipchak < Turkic; SOV)¹⁶

Marat-niŋ [joqla-rya] *isäb-e*
Marat-GEN sleep-INF thought-POSS.3

‘Marat is going to sleep.’

Dative vs. Genitive (+ possessive agreement)

¹⁵ Chihiro Taguchi. “Mermaid Construction in Tatar”. In: *Proceedings of the 162nd Conference of the Linguistic Society of Japan*. 2021.

¹⁶ Chihiro Taguchi. “Mermaid Construction in Tatar”. In: *Proceedings of the 162nd Conference of the Linguistic Society of Japan*. 2021. ▶

Examples: Copy raising in Egyptian Arabic

(16) Egyptian Arabic (< Arabic < Semitic < Afroasiatic; SVO)¹⁷

šakl el-welād [kānu biyitderbo]

shape DET-boy.PL be.PV.3PL beat.BI.IPFV.PASS.3PL

‘The boys seem to have been beaten (*lit.* the boys’ shape, they were beaten)’

(17) Egyptian Arabic (< Arabic < Semitic < Afroasiatic; SVO)

šakl-uhum [waħašū-k]

shape-POSS.3PL lack.PV.3PL-2SG.M

‘It seems like you missed them! (*lit.* their shape, you missed them)’

The syntactic subject of the embedded finite clause is copied to the matrix clause

Examples against the compound predicate analysis

Tsunoda (2020) says adjacent V and N become a compound predicate, but...

(18) Russian (< Slavic < Indo-European; SVO)

pora nam [uxodit']
time 1PL.DAT PF:leave:INF

‘It is time for us to leave’

(19) Welsh (< Celtic < Indo-European; VSO)

Rhaid i fi [godi'n gynnar]
rhaid i fi [godi yn gynnar]
necessity to 1SG wake_up.INF in early

‘I need to wake up early’

- N_{MC} and V are not adjacent to each other in these languages
- How can they form a compound predicate? (they don't)

Typology of Mermaid Constructions

Case-marking of subject/agent

Case	Languages
NOM/ERG	Japanese, Mitsukaido, Irabu, Korean, Amdo-Tibetan, nDrapa, Burmese, Sidaama, Tagalog
GEN/POSS	Kurukh, Bengali, Tagalog, Tatar, Egyptian Arabic
DAT/to	Tatar, Russian, Welsh

Form of the embedded predicate

Function	Form	Languages
Adnominal	ADN	Japanese, Mitsukaido, Irabu, Korean, nDrapa, Burmese, Sidaama
	NMLZ.GEN	Amdo-Tibetan, Bengali
	VADJ	Kurukh
Infinitive		Tagalog, Tatar, Russian, Welsh
Finite		Tagalog, Egyptian Arabic

... Quite diverse

Tsunoda's (2020)¹⁸ generalization:

- MCs are “in the main confined to Asia” ... not really

¹⁸Tasaku Tsunoda. *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. *Comparative Handbooks of Linguistics*. Mouton de Gruyter, 2020.

Proposal

Proposal (from LFG22)

- MC is **anaphoric/functional control** with a nominal predicate
- MC does **not** involve a compound predicate
- Therefore, MC is **biclausal**
- MC can be analyzed in LFG just like other anaphoric/functional control

Proposal (new)

- Typological diversity of MCs can be captured in f-structure
- different case-marking: subcategorization of predicates
- different verb forms:

Subject is in the matrix clause: Evidence 1

The following slides demonstrate that an MC subject is in the matrix clause.

- A comparison with the similar non-MC (21)
- In (21), *Hanako(=ga)* is inside the modifier clause, so an additional subject argument can be added in the matrix clause (otherwise *pro*).
- (20), in contrast, doesn't allow it
- the matrix subject is already **occupied**

(20) Japanese (MC)

(**kore=ga*) *Hanako=ga sakana=o yak-u yotei=da*
 this=NOM Hanako=NOM fish=OBJ grill-NPST.ADN plan(N)=COP

‘Hanako is going to grill the fish.’

(21) Japanese (non-MC)

(**kore=ga*) [*Hanako=ga sakana=o yak-u*] *nioi=da*
 this=NOM Hanako=NOM fish=ACC grill-PRS.ADN smell(N)=COP

‘(This is) the smell that [comes from where] Hanako grills the fish.’

Subject is in the matrix clause: Evidence 2

- NOM-GEN alternation of a subject in relative clauses (in Japanese)
 - RC (23): NOM-GEN alternation ✓
 - MC (22): NOM-GEN alternation ✗
- In MC, the subject is in the matrix clause

(22) Japanese (MC)

Hanako={ *ga*/**no* } *sakana*=*o* *yak-u* *yotei*=*da*
 Hanako=NOM/*GEN fish=ACC grill-NPST.ADN plan(N)=COP

‘Hanako is going to grill the fish.’

(23) Japanese (non-MC)

[*Hanako*={ *ga*/*no* } *sakana*=*o* *yak-u*] *nioi*=*da*
 Hanako=NOM/GEN fish=ACC grill-NPST.ADN smell(N)=COP

‘(It is) the smell that [comes from where] Hanako grills the fish.’

Subject is in the matrix clause: Evidence 3

- Honorifics¹⁹ in Japanese: the referent is its subject (Matsumoto 1996)²⁰
 - In (25) *Hanako* can agree with *yotei*: matrix subject
 - In (26) *Hanako* **cannot** agree with *nioi*: embedded subject
- MC's subject is in the matrix clause (agreeing with Tsunoda (2020))

(24) Japanese (Hanako is honored by the speaker)

Hanako=sama=ga sakana=o oyakininar-u
Hanako=HON=NOM fish=ACC grill:HON-NPST.DECL

‘Hanako grills the fish.’

(25) Japanese (Hanako is honored by the speaker)

Hanako=sama=ga sakana=o yak-u go-yotei=da
Hanako=HON=NOM fish=ACC grill-NPST.ADN HON-plan(N)=COP

‘Hanako is going to grill the fish.’

(26) Japanese (Hanako is honored by the speaker)

Hanako=sama=ga sakana=o yak-u o-nioi=da
Hanako=HON=NOM fish=ACC grill-NPST.ADN HON-plan(N)=COP

‘(It is) the smell that [comes from where] Hanako grills the fish.’

¹⁹I thank Chen Xie (Oxford) for suggesting this diagnostic.

²⁰Yo Matsumoto. “Complex Predicates in Japanese: A Syntactic and Semantic Study of the Notion ‘Word’”. In: *Studies in Japanese Linguistics series*

Anaphoric/functional control analysis of MC

- **Observation:** Subject of MC is in the matrix clause
- **Point:** Some MCs are anaphoric control like (27), others are functional control like (28)
- **Intuition:** MCs function as modals, evidentials, aspects, and attitudes, just like verbs and adjectives of anaphoric/functional control
- In this section, syntactic diagnostics for anaphoric/functional control are applied to MCs
 - Passivization
 - Idiom chunks

(27) Japanese (anaphoric control)

Hanako=ga_i [PRO_i Taro=o tatak-u] ki=da
 Hanako=NOM PRO Taro=ACC hit-NPST.ADN feeling(N)=COP

‘Hanako intends to hit Taro.’

(28) Japanese (functional control)

Hanako=ga_i [t_i Taro=o tatak-u] yotei=da
 Hanako=NOM Taro=ACC hit-NPST.ADN plan(N)=COP

‘Hanako is going to hit Taro.’

Syntactic tests: Passivization

- Functional control (29), (30): passivization does not change thematic relation
- Anaphoric control (31), (32): passivization **does** change thematic relation

- (29) a. Tom seems to hit Jerry. *seem(hit(Tom, Jerry))*
 b. Jerry seems to be hit by Tom. *seem(hit(Tom, Jerry))*

- (30) a. Japanese (functional control)
Hanako=ga_i [t_i Taroo=o tatak-u] yotei=da
 Hanako=NOM Taro=ACC hit-NPST.ADN plan(N)=COP

‘Hanako is going to hit Taro: *planned(hit(h, t))*’

- b. Japanese (functional control, passivized)
Taroo=ga_i [t_i Hanako=ni tatak-are-ru] yotei=da
 Taro=NOM Hanako=DAT hit-PASS-NPST.ADN plan(N)=COP

‘Taro is going to be hit by Hanako: *planned(hit(h, t))*’

- *yotei* shares a characteristic of a functional control predicate

Syntactic tests: Passivization

- Functional control (29), (30): passivization does not change thematic relation
- Anaphoric control (31), (32): passivization **does** change thematic relation

- (31) a. Tom tries to hit Jerry. *try(Tom, hit(Tom, Jerry))*
 b. Jerry tries to be hit by Tom. *try(Jerry, hit(Tom, Jerry))*

- (32) a. Japanese (anaphoric control)
Hanako=ga_i [PRO_i taroo=o tatak-u] ki=da
 Hanako=NOM PRO Taro=ACC hit-NPST.ADN feeling(N)=COP

‘Hanako intends to hit Taro: *intend(h, hit(h, t))*’

- b. Japanese (anaphoric control, passivized)
Taroo=ga_i [PRO_i Hanako=ni tatak-are-ru] ki=da
 Taro=NOM PRO Hanako=DAT hit-PASS-NPST.ADN feeling(N)=COP

‘Taro intends to be hit by Hanako: *intend(t, hit(h, t))*’

- *ki* shares a characteristic of an anaphoric control predicate

Syntactic tests: Idiom chunks

- Functional control (33 b), (34 b) keeps idiomatic meaning
- Anaphoric control only allows for literal meaning

(33) a. The cat is out of the bag. (i.e., the secret is revealed)
 b. The cat seems to be out of the bag.

(34) a. Japanese
asi=ga boo=ni nar-u
 leg=NOM stick=DAT become-NPST
 ‘The legs become sticks (i.e., exhausted)’

b. Japanese
asi=ga boo=ni nar-u yotei=da
 leg=NOM stick=DAT become-NPST.ADN plan(N)=COP
 ‘The legs are going to be sticks (i.e., exhausted)’

- *yotei* shares a characteristic of a functional control predicate

Syntactic tests: Idiom chunks

- Functional control keeps idiomatic meaning
- Anaphoric control (35 b), (36 b) only allows for literal meaning

(35) a. The cat is out of the bag.

b. # The cat tries to be out of the bag.

(36) a. Japanese

asi=ga boo=ni nar-u

leg=NOM stick=DAT become-NPST

‘The legs become sticks (i.e., exhausted)’

b. Japanese

asi=ga boo=ni nar-u ki=da

leg=NOM stick=DAT become-NPST.ADN plan(N)=COP

‘The legs intend to become sticks’

- *ki* shares a characteristic of an anaphoric control predicate

(Hopefully theory-neutral) Interim summary

Tsunoda (2020)'s Analysis of MC

- V and N_{MC} compose a compound predicate
- MC is monoclausal

We have seen:

- MC can be treated as **anaphoric/functional control**
 - but with a **noun predicate**
- It follows that MC is **biclausal**

Next:

- Analyze MC in LFG

Motivation for an LFG analysis

- PRED readily allows for a nominal predicate
- Therefore, lexical entries of MC nouns (N_{MC}) have a similar form to anaphoric/functional control
 - Anaphoric control MC:
 - $(\uparrow \text{PRED}) = \langle N_{MC} \langle (\text{SUBJ} | \text{OBL}_{\theta}), \text{COMP} \rangle \rangle^{21}$
 - $(\uparrow \text{COMP SUBJ PRED}) = \text{'PRO'}$
 - Functional control MC:
 - $(\uparrow \text{PRED}) = \langle N_{MC} \langle \text{XCOMP} \rangle \text{SUBJ}$
 - $(\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})$
- COMP/XCOMP can readily handle the cross-linguistic variation of non-finite forms
 - Infinitive: Tagalog, Tatar, Russian, Welsh
 - Adnominal/verbal adjective: Japanese, Burmese, Kurukh, Sidaama, etc.
 - Verbal noun: Amdo Tibetan, Bengali
- Severing syntax, function, and semantics (c/f/s-structure)
 - Disentangling MC's mystery: 'Syntactically nominal, functionally predicative, and semantically abstract (modal, etc.)?'

²¹Whether SUBJ or OBL_θ is selected depends on each lexeme.

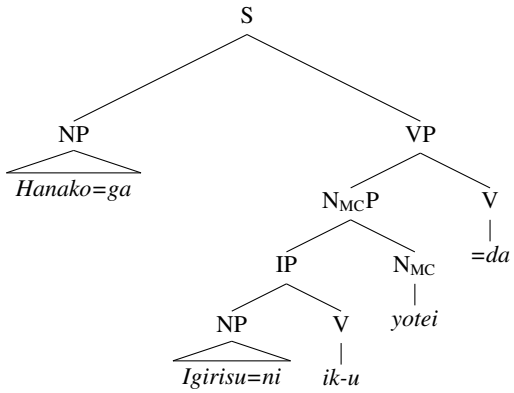
c-structure of functional control with N_{MC}

(37) Japanese (< Japonic)

Hanako=ga Igirisu=ni ik-u yotei=da
 Hanako=NOM UK=DAT go-NPST.ADN plan(N)=COP

‘Hanako is going to go to the UK.’

(38)



c-structure of anaphoric control with N_{MC}

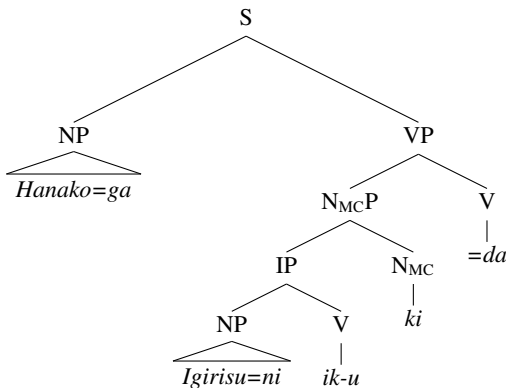
(39) Japanese (< Japanic)

Hanako=ga Igirisu=ni ik-u ki=da

Hanako=NOM UK=DAT go-NPST.ADN feeling(N)=COP

‘Hanako intends to go to the UK.’

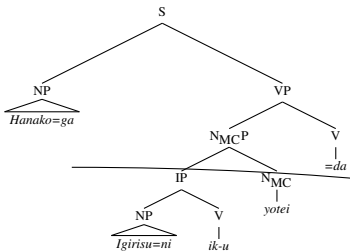
(40)



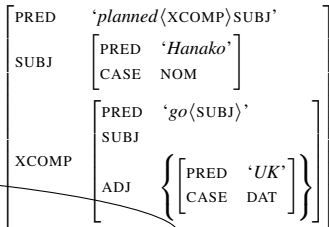
- c-structural form is the same in raising and equi (language-specific)

f-structure of functional control with N_{MC}

(41)

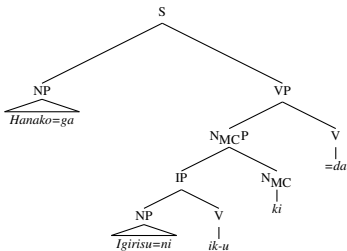


(42)

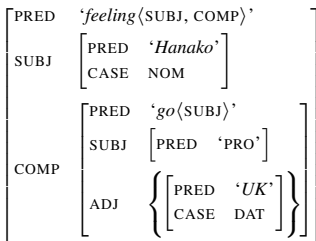


f-structure of anaphoric control with N_{MC}

(43)



(44)



- Raising and equi MCs have a different f-structure (lexical entries)

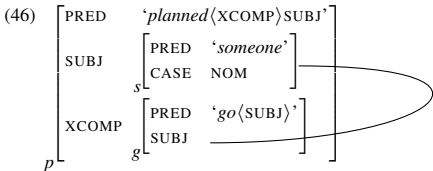
Semantics of the Mermaid Constructions

- The meaning of MCs can also be constructed in the same manner as functional/anaphoric control
- Following the semantic representation of raising and equi verbs by Dalrymple et al. (2019)²²:
 - David seemed to yawn: *seem(yawn(David))*
 - David tried to yawn: *try(David, yawn(David))*
- We expect the same representation for MCs too:
 - Hanako=ga Nagoya=ni ik-u yotei=da: *planned(go(Hanako, UK))*
 - Hanako=ga Nagoya=ni ik-u ki=da: *feeling(Hanako, go(Hanako, UK))*
- Meaning constructors for N_{MC} :
 - raising: $\lambda P.yotei(P) : (\uparrow \text{XCOMP})_{\sigma} \multimap \uparrow_{\sigma}$
 - equi: $\lambda P\lambda x.ki(x, P(x)) :$
 $((\uparrow \text{COMP SUBJ})_{\sigma} \multimap (\uparrow \text{COMP PRED})_{\sigma}) \multimap ((\uparrow \text{SUBJ})_{\sigma} \multimap \uparrow_{\sigma})$

Predicting scope ambiguity of functional control

- Functional control analysis can correctly predict the scope of N_{MC}

(45) Japanese
dareka=ga ik-u yotei=da
 someone=NOM go-NPST.ADN plan(N)=COP
 ‘Someone is going to go. (wide: $\exists >$ plan, or narrow: plan $>$ \exists)’



(47)

[yotei]	$\lambda P.planned(P)$:	$g_\sigma \multimap p_\sigma$
[dareka]	$\lambda S.exist(x, person(x), S(x))$:	$\forall H.(s_\sigma \multimap H) \multimap H$
[iku]	$\lambda x.go(x)$:	$s_\sigma \multimap g_\sigma$

(48) Narrow:

[dareka-iku]	$exist(x, person(x), go(x))$:	g_σ
[dareka-iku-yotei]	$planned(exist(x, person(x), go(x)))$:	p_σ

(49) Wide:

[iku-yotei]	$\lambda x.planned(go(x))$:	$s_\sigma \multimap p_\sigma$ ²³
[dareka-iku-yotei]	$exist(x, person(x), planned(go(x)))$:	p_σ

Predicting the scope of anaphoric control

- Anaphoric control analysis correctly restricts the scope

(50) Japanese
dareka=ga ik-u ki=da
 someone=NOM go-NPST.ADN feeling(N)=COP
 ‘Someone intends to go. (wide: $\exists > \text{intend}$; *narrow: $\text{intend} > \exists$)’

(51)
$$i \left[\begin{array}{l} \text{PRED} \quad \text{'intend' (SUBJ, COMP)'} \\ \text{SUBJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'someone' } \\ \text{CASE} \quad \text{NOM} \end{array} \right] \\ \text{COMP} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'go' (SUBJ)'} \\ \text{SUBJ} \quad \text{'PRO' } \end{array} \right] \end{array} \right]_g$$

(52)
$$\begin{array}{lll} \text{[ki]} & \lambda P \lambda x. \text{intend}(x, P) & : \quad (s_\sigma \multimap g_\sigma) \multimap (s_\sigma \multimap i_\sigma) \\ \text{[dareka]} & \lambda S. \text{exist}(x, \text{person}(x), S(x)) & : \quad \forall H. (s_\sigma \multimap H) \multimap H \\ \text{[iku]} & \lambda x. \text{go}(x) & : \quad s_\sigma \multimap g_\sigma \end{array}$$

(53) Wide:
$$\begin{array}{lll} \text{[iku-ki]} & \lambda x. \text{intend}(\text{go}(x)) & : \quad s_\sigma \multimap i_\sigma^{24} \\ \text{[dareka-iku-ki]} & \text{exist}(x, \text{person}(x), \text{intend}(\text{go}(x))) & : \quad p_\sigma \end{array}$$

- Narrow scope is undervivable

Interim Summary

- MCs can be analyzed as raising/equi in LFG.
- Parallelism with conventional verbal/adjectival raising/equi in terms of:
 - c-structure
 - f-structure
 - semantics (Glue)
- These structures disentangle the core mystery of MC:
 - ‘Syntactically nominal, functionally predicative, and semantically abstract’

	Verbal	Adjectival	Nominal
Control	English <i>try</i>	English <i>eager</i>	Japanese <i>ki</i>
Raising	English <i>seem</i>	English <i>likely</i>	Japanese <i>yotei</i>
			↑ MC

Cross-linguistic analysis

We have seen mainly from Japanese data:

- Mermaid Constructions as raising/equi
- Anaphoric control MC:
 - $(\uparrow \text{ PRED}) = \text{‘N}_{\text{MC}} \langle (\text{SUBJ} | \text{OBL}_{\theta}), \text{COMP} \rangle^{25}$
 - $(\uparrow \text{ COMP SUBJ PRED}) = \text{‘PRO’}$
- Functional control MC:
 - $(\uparrow \text{ PRED}) = \text{‘N}_{\text{MC}} \langle \text{XCOMP} \rangle \text{SUBJ}$
 - $(\uparrow \text{ SUBJ}) = (\uparrow \text{ XCOMP SUBJ})$

How general are these formulations? Are they valid in other languages?
Arguments from here are ongoing work with sloppy points; comments are much appreciated.

²⁵Whether SUBJ or OBL_θ is selected depends on each lexeme.

Dative case-marking in Tatar

Hypothesis 1: Control by OBL_{θ}

- *röxsät* subcategorizes for $\langle OBL_{\theta}, COMP \rangle$
- OBJ_{θ} controls ($\uparrow COMP$ SUBJ)

(54) Tatar (< Kipchak < Turkic; SOV)²⁶

Marat-qa [joqla-rya] *röxsät*

Marat-DAT sleep-INF permission

‘Marat is allowed to sleep.’

(55)
$$\left[\begin{array}{l} \text{PRED} \quad \text{'permission}\langle OBL_{\theta}, COMP \rangle\text{' } \\ \text{OBL}_{\theta} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'Marat}_i\text{' } \\ \text{CASE} \quad \text{DAT} \end{array} \right] \\ \text{COMP} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'sleep}\langle \text{SUBJ} \rangle\text{' } \\ \text{SUBJ} \quad \left[\text{PRED} \quad \text{'PRO}_i\text{' } \right] \end{array} \right] \end{array} \right]$$

f *g* *h*

²⁶Chihiro Taguchi. “Mermaid Construction in Tatar”. In: *Proceedings of the 162nd Conference of the Linguistic Society of Japan*. 2021.

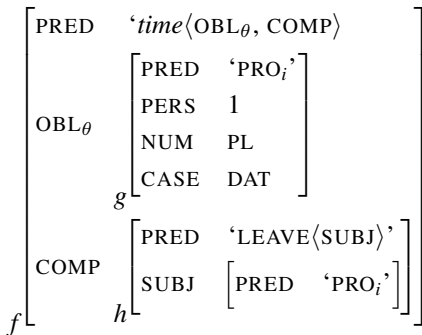
Dative case-marking in Russian

Seemingly working similarly

(56) Russian (< Slavic < Indo-European; SVO)

pora nam [uxodit']
time 1PL.DAT PF:leave:INF

‘It is time for us to leave’



Genitive case-marking in Tatar

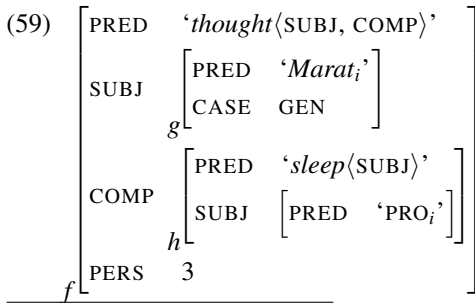
Hypothesis 2: Control by genitive SUBJ

- *isäp* subcategorizes for ⟨SUBJ, COMP⟩
- The possessive suffix on the MC noun is encoded as the value of PERS

(58) Tatar (< Kipchak < Turkic; SOV)²⁷

Marat-niŋ [joqla-rya] *isäb-e*
Marat-GEN sleep-INF thought-POSS.3

‘Marat is going to sleep.’



²⁷Chihiro Taguchi. “Mermaid Construction in Tatar”. In: *Proceedings of the 162nd Conference of the Linguistic Society of Japan*. 2021.

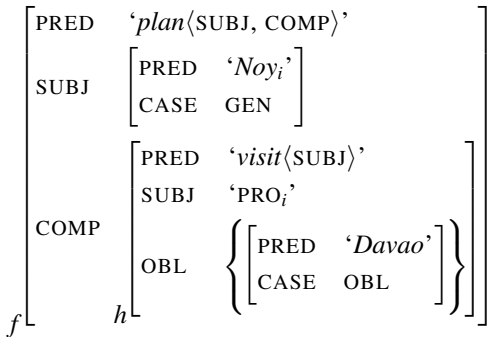
Genitive case-marking in Tagalog

Tagalog MC noun *plano* would work similarly:

(60) Tagalog < Malayo-Polynesian < Austronesian; VSO)²⁸

plano ni=Noy [na b<um>isita sa=Davao bukas]
plan GEN=Noy LK visit<AF:INF> OBL=Davao tomorrow

‘Noy plans to go to Davao tomorrow’



²⁸Masumi Katagiri. “Tagalog”. In: *Mermaid Construction: A Compound-Predicate Construction With Biclausal Appearance*. Ed. by Tasaku Tsunoda. Comparative Handbooks of Linguistics. Mouton de Gruyter, 2020, pp. 781–816.

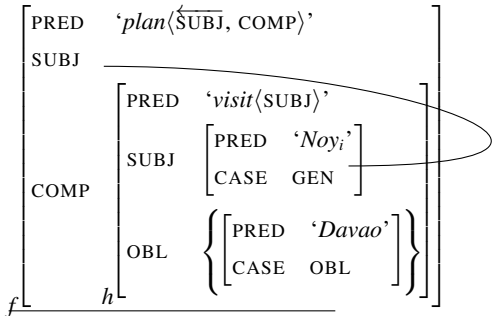
Genitive in embedded infinitival clause in Tagalog

How about this?

- (61) *plano*[=*ng* *b<um>isita* *ni=Noy* *sa=Davao* *bukas*]
 plan=LK visit<AF:INF> GEN=Noy OBL=Davao tomorrow
 ‘Noy plans to go to Davao tomorrow’

Hypothesis 3: Optional backward control raising in Tagalog

- Anaphoric controller in the matrix clause can be functionally controlled by the embedding SUBJ (backward control raising²⁹)



²⁹Susi Wurmbrand. "On forward and backward raising". In: *Proceedings of the 32nd West Coast Conference on Formal Linguistics*. Somerville, MA, 2015.

Conclusion

This presentation has shown (from LFG22):

- Descriptive (theory-neutral) evidence for **biclausal** analysis of MC
- Syntactic evidence for **anaphoric/functional** control analysis
- **LFG's merits** to analyze MCs:
 - LFG readily allows for nominal predicates
 - COMP/XCOMP covering cross-linguistically diverse non-finite forms
 - Treating each module separately (syntax — (interface) — semantics)

New:

- Possible analyses for peculiar cases of MCs across languages
- Anaphoric/functional control analysis seems to hold
- Language-specific scrutiny is still much needed

Thank you!

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