

Pro-drop, E-type Pronouns, and Agreement

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Pro-drop

- (1) ___ katta. (Japanese)
'(She/he/they/etc.) bought (it/them).'

Arguments, but not an adjunct

- (2) a. Hanako-wa Taroo-ni tegami-o okutta no?
Hanako-TOP Taroo-DAT letter-ACC sentQ
'Did Hanako send a letter to Taro?'

- b. Iie, ___ okur-anakat-ta.
no send-NEG-PST
'No, (she) didn't send (it) (to him).'

- (3) a. Taroo-wa zitensya-de kuru no?
Taro-TOP bicycle-by come Q
'Is Taro coming by bicycle?'

- b. #Iie, ko-nai yo.
no come-NEG EXPL
'No, (he) won't come (*by bicycle).'

(4) Three proposals for the nature of the null argument:

- a. pronominal (Kuroda 1965)
- b. VP ellipsis, for the null object argument (Otani and Whitman 1991)
- c. argument ellipsis (Oku 1998)

Sloppy interpretation

Huang (1987, 1991), Otani and Whitman (1991): V-ellipsis

(5) a. Taroo-wa zibun-no gakusei-o hometa.

Taro-TOP self-GEN student-ACC praised

‘Taro praised his own student.’

b. Ziroo-wa ____ home-nakat-ta.

Jiro-TOP praise-NEG-PST

‘Jiro didn’t praise ____’

strict (Taro’s student = him/her)/sloppy (Jiro’s student)

Oku (1998): Not VP-ellipsis

VP-adverb

(6) Mary cleaned the car carefully; John did, too.

(7) Taroo-wa kuruma-o teinei-ni aratta. Hanako-wa araw-anakat-ta.
Taro-TOP car-ACC carefully washed Hanako-TOP wash-NEG-PST
'Taro washed the car carefully. Hanako didn't wash *carefully.'

Subject "pro" also allows sloppy interpretation

(8) a. Mariko-wa [zibun-no kodomo-ga furansugo-o benkyoosuru to] omotteiru.
Mariko-TOP self-GEN child-NOM French-ACC study that think
'lit. Mariko thinks that self's child will study French.'

b. Haruna-wa [e surobeniago-o benkyoosuru to] omotteiru.
Haruna-TOP Slovenian-ACC study that think
'lit. Haruna thinks that e will study Slovenian.'

Strict/Sloppy

Spanish

- (9) a. María cree que su propuesta será aceptada.
Maria believes that her proposal will.be accepted
'Maria believes that her proposal will be accepted.'
- b. Juan también cree que e será aceptada.
Juan also believes that will.be accepted
'lit. Juan also believes that e will be accepted.' (Oku (1998))

Strict/*Sloppy

(10) Oku's Generalization (1998)

Agreement blocks argument ellipsis.

Portuguese

- (11) O Pedro disse que a mãe é bonita e o Paulo disse que ____ é feia.
The P. Said that the mother is beautiful and the P. said that ____ is ugly
✓strict, *sloppy
- (12) O Pedro adora a mãe, mas o Paulo odeia ____.
The Pedro adores the mother, but the P. hates ____
✓strict, ✓sloppy

Agreement in Chinese

Chinese has no ϕ -feature agreement, yet Takahashi (2008a) notes that the subject null argument does not allow a sloppy reading.

Object:

(13) Zhangsan hen xihuan ziji de mama, Lisi bu xihuan *e*.

Zhangsan very like self de mother Lisi not like

'Zhangsan likes self's mother, Lisi does not like *e*.'

✓strict, ✓sloppy

Subject:

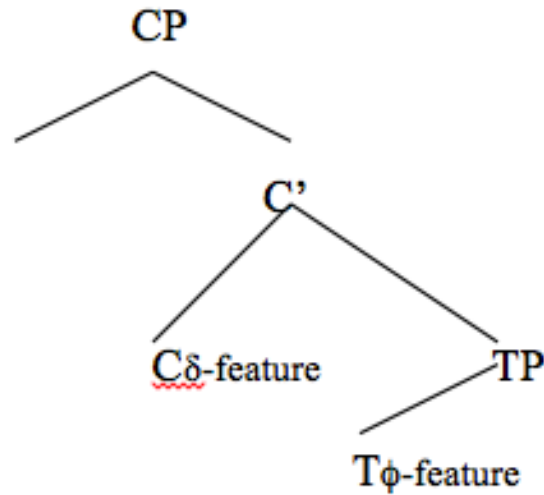
(14) Zhangsan yiwei [ziji de haizi xihuan Yingwen]; Lisi yiwei [*e* xihuan fawen]

Zhangsan think self de child like English Lisi think like French

'Zhangsan thought that self's child liked English; Lisi thought *e* liked French.'

✓strict, *sloppy

(15) Category II Language



- (16) Category I: C_{ϕ}, T_{δ} Japanese
Category II: C_{δ}, T_{ϕ} English
Category III: $C, T_{\phi/\delta}$ Spanish
Category IV: $C_{\phi/\delta}, T$ Dinka

Anaphor binding and blocking

- (17) Lisi_i juede [Zhansan_j dui ziji_{i/j} mei xinxin]
Lisi think Zhangsan have self no confidence
'Lisi think that Zhangsan has no confidence in self.'
- (18) Lisi_i juede [wo/ni_j dui ziji_{*i/j} mei xinxin]
Lisi think I/you have self no confidence
'Lisi think that I/you have no confidence in self.'
- (19) Wo_i juede [ni_j dui ziji_{*i/j} mei xinxin].
I think you have self no confidence
'I think that you have no confidence in self=you/*I.'
- (20) Wo_i juede [Zhangsan_j dui ziji_{(*)i/j} mei xinxin]
I think Zhangsan have self no confidence
'I think that Zhangsan has no confidence in self.' self = Zhangsan/(*)I
- (21) Nashi wo_i juede Zhangsan_j dui ziji_{i/j} mei xinxin
at that time I think Zhangsan to self have no confidence,
jiu fangqi le
then give up LE
'At that time, I think that Zhangsan had no confidence in self, so (I/he) gave up.'

Participant agreement

Standard Finnish (see also Holmberg 2005)

- (22) a. **pro** reputin historian kokeessa. b. **pro** reputit historian kokeessa.
failed-1-SG history's in-test failed-2-SG history's in-test
'(I) failed the history test.' '(You) failed the history test.'
- c. ***pro** reputti historian kokeessa.
failed-3RD-SG history's in-test
'(He)/(She) failed the history test.'

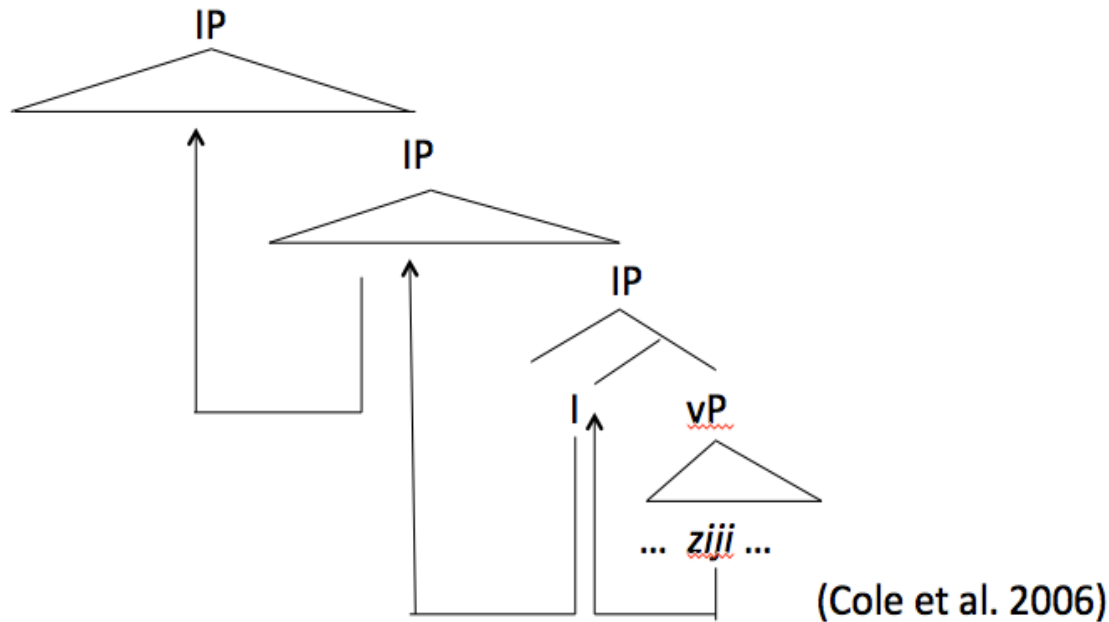
Hebrew

- (23) a. **pro** nixshalti ba-mivxan be-historia.
failed-I-SG in-the-test in-history
'(I) failed the history test.'
- b. **pro** nixshalta ba-mivxan be-historia.
failed-2-SG-M in-the-test in-history
'(You) failed the history test.'
- c. ***pro** nixshal/nixshela ba-mivxan be-historia.
failed-3-M-SG/F-SG in-the-test in-history
'(He)/(She) failed the history test.'

(24) Generalization on Blocking in Chinese (Pan 2001, Giblin 2015, etc.)

- a. 3, 3
- b. *3, 1/2
- c. *1, 2; *2, 1
- d. 1/2, 3

(25) LF raising of the anaphor (Cole, et al., 1990, Pica, 1987; Batistella, 1989; Huang and Tang, 1991; Huang and Liu, 2001)



Problem: LD construal of *ziji* is possible from within islands.

(26) Zhangsan_i shuo [_{CP} ruguo Lisi piping ziji_i], ta jiu bu qu.
Zhangsan say if Lisi criticize self he then not go
'Lit. Zhangsan_i said that if Lisi criticized self_i, then he won't go'

(Huang and Tang 1991:271)

(27) Zhangsan_i bu xihuan [_{NP} [_{CP} neixie piping ziji_i de] ren].
Zhangsan not like those criticize self MOD person
'Lit. Zhangsan_i does not like those people who criticized self_i.'

(Huang and Tang 1991:271)

Giblin (2015), based on Progovac (1992, 1993), Borer (1983): anaphoric AGR

Miyagawa (2017) (cyclic agreement -- Béjar and Rezac (2009))

(28) a. [_{TP} Wo 'I' T_{1stP} α ...]
b. [_{TP} Lisi T_{3rdP} α ...]

Subject *pro* in Chinese

Contrary to what has standardly been assumed, the subject *pro* in Chinese is highly restricted in its reference (Liu 2014; see also Huang 1984, Aoun and Li 2008).

Needs a linguistic antecedent: fine in monologues

(29) Yuehan hen congming, suoyi *pro* yiding keyi jin
John very smart, so definitely can enter
hen hao-de daxue.
very good-de university

‘John is very smart, so he can definitely enter a good university.’

Prohibited in a conversation where one speaker is referring to something mentioned by the other speaker.

(30) Speaker A: John_i not only always comes to class on time, but also gets an A in every subject. Most importantly, he is very humble.

Speaker B: *Suoyi e_i chang dang ban-zhang.
so often serve-as class-president

‘So, [he] often serves as the class president.’

Subject orientation: different from Italian and Japanese

(31) a. John_i zuotian yujian-le Bill_j, suoyi *pro*_{i/*j} hen kaixin. Chinese
yesterday meet-asp so very happy

‘John_i ran into Bill_j yesterday, so [he]_{i/*j} was very happy.’

b. John_i ha incontrato per caso Bill_j ieri, così Italian
has meet-past by chance yesterday so
*pro*_{i/j} è stato molto contento.
has been very happy.3sg.masc.

‘John_i ran into Bill_j yesterday, so he_{i/j} was very happy.’

c. John_i-wa kinoo Bill_j-ni dekuwasita; dakara Japanese
John-top yesterday Bill-into ran therefore
*pro*_{i/j} sugoku yorokondeita yo.
very was-pleased sfp

‘John_i ran into Bill_j yesterday, so [he]_{i/j} was very happy.’

Locality in Chinese, not in Italian or Japanese: closest subject

(32) a. ^{??/*}John_i hen congming, suoyi laoshi renwei *pro*_i keyi CHINESE
 very smart so teacher think can

kao-jin hen-hao-de daxue
 test-enter very-good-de university

‘John_i is very smart, so the teacher thinks that [he]_i can pass the exam to enter a good university.’

b. John_i è intelligente, e il suo professore pensa che ITALIAN
 John is intelligent so the his professor thinks that
*pro*_i possa entrare facilmente in una buona università.
 can enter easily to one good university

‘John is smart, so his teacher thinks that he can enter a good university.’

c. John_i-wa atama-ga ii node, kare-no sensei-wa [*pro*_i ii JAPANESE
 John-top head-nom good because, he-gen teacher-top good
 daigaku-ni hair-e-ru to] omotteiru.
 university-to enter-can-Pres comp. think

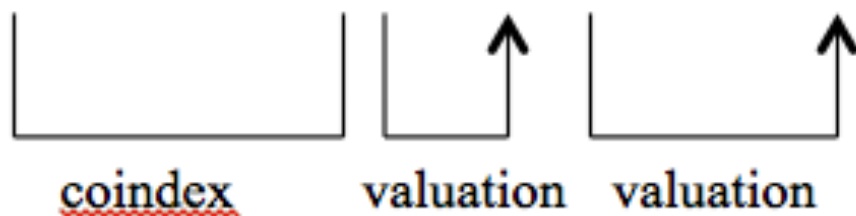
‘John_i is very smart, so his teacher thinks that [he]_i can enter a good university.’

Subject *pro* in Chinese is defective in its feature content (Liu 2014); it must get the features from some other source.

Chinese has a topic position (Chou 2004:194)

- (33) a. *Yi-ge/*yixie/*ji-ge ren zai yuenzi-li zuozhe.
 one-CL/some/several-CL person at yard-LOC sit.CONT
 ‘A man/some men/several men is/are sitting in the yard.’
- b. You yi-ge/yixie/ji-ge ren zai yuenzi-li zuozhe.
 exist one-CL /some/several-CL person at yard-LOC sit.CONT
 ‘There is/are a man/some men/several men sitting in the yard.’

(34) [SUBJECT ... [CP TOP_[μ φ-feature] [TP *pro*_[μ φ-feature]I ...]]] (Liu 2014)



Revising Liu's analysis.

One problem for Liu:

- (35) Zhangsan_i shuo [_{CP} yuyanxue_k, [_{IP} *pro*_i du-guo t_k]]
Zhangsan say linguistics study-EXP
'Zhangsan_i said [[he_i] studied linguistics before.' (Yang 2014)

Also, it is possible under limited circumstance for the subject *pro* to refer to a previously mentioned entity in discourse.

(36) Q: Did Lisi_j study linguistics before?

- A: Zhangsan_ishuo [_{CP} e_{i/j} mei du-guo yuyanxue].
Zhangsan say not study-EXP linguistics
'Zhangsan_i said [he_{i/j}] hadn't studied linguistics before.'

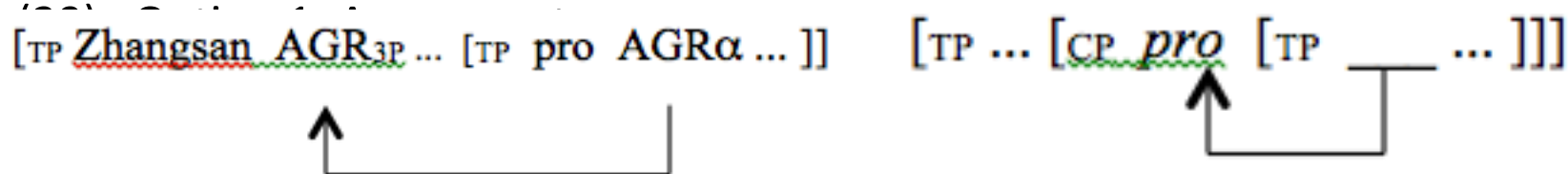
Proposal for Chinese subject *pro* based on Strong Uniformity

In the following sentence, which is a slightly modified example from Yang (2014), the subject *pro* may refer either to the matrix subject or to an entity outside the sentence so long as there is sufficient context.

(37) Zhangsan_i shuo [_{CP} [_{IP} *pro*_{i/j} du-guo yuyanxue]]
 Zhangsan say study-EXP linguistics
 'Zhangsan_i said [[he_{i/j}] studied linguistics before.]'

Topicalization of the object 'linguistics' blocks the subject *pro* from referring to an entity outside the sentence.

(38) Zhangsan_i shuo [_{CP} yuyanxue_k, [_{IP} *pro*_{i/*j} du-guo t_k]]
 Zhangsan say linguistics study-EXP
 'Zhangsan_i said [[he_{i/*j}] studied linguistics before.]' (Yang 2014)



(39) Option 1: Agreement

[TP Zhangsan AGR_{3P} ... [TP pro AGR_α ...]]



Option 2: Topicalization

[TP ... [CP pro [TP _____ ...]]]



Prediction: when the subject *pro* refers to an entity in discourse, the antecedent need not be a subject:

(40) a. Mali, Zhangsan hen xihuan ta.

Mary Zhangsan very like her

'Mary, Zhangsan likes her very much.'

b. Danshi, Lisi shuo [pro yijing jiehun le.]

but Lisi say already marry PERF

'But, Lisi said that [pro=Mary] is already married to someone.'

Chinese subject *pro* as a weak pronoun

Distinction between strong and weak forms of pronouns (e.g., Cardinaletti and Starke 1999): stress pattern, etc.

Wiltschko (1998: 163-164) notes a difference in demonstrative and personal pronouns in German with regard to gender concord.

(41) a. **Ein Mädchen** kam zur Tür herein.

a.N girl(N) came to.the door in

b. {**Das Mädchen** /***Die Mädchen**} war schön.

the.N girl(N) the.F girl(N) was beautiful

c. {**Das** /***Die**} war schön.

DEM.N/DEM.F was beautiful

d. {**Es** /***Sie**} war schön.

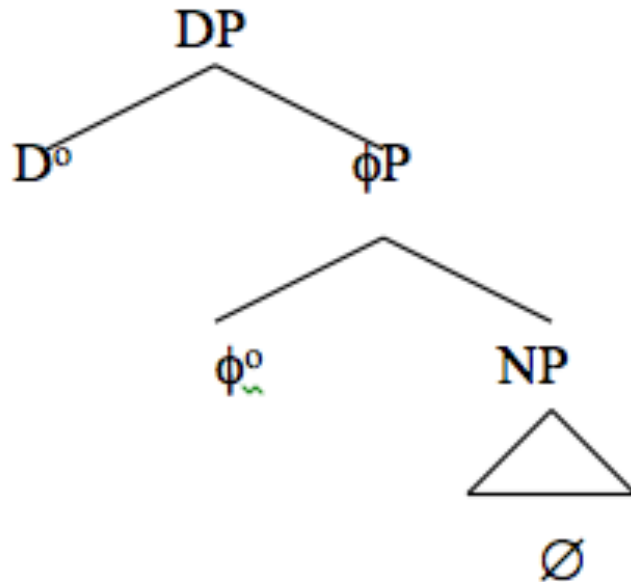
PER.N/PER.F was beautiful

'A girl came through the door. {The girl / She} was beautiful.'

Demonstrative pronoun (strong) must agree with the referent (c), while a personal pronoun (weak) apparently does not (d).

Demonstrative and personal pronouns

(42) a. demonstrative pronoun



b. personal pronoun



The demonstrative pronoun contains an NP that may have the full host of features including the gender feature. In contrast, the personal pronoun lacks the NP structure, so that it is not associated with any inherent features of its own.

On Huang's (1984, 1989) Generalized Control Rule

(43) Generalized Control Rule (GCR)

An empty pronominal is controlled in its control domain (if it has one).

α is the control domain for β iff it is the minimal category that satisfied both (a) and (b):

- (a) α is the lowest S or NP that contains (i) β , or (ii) the minimal maximal category containing β .
- (b) α contains a SUBJECT accessible to β .

Closest subject:

(44) ??/*John_i hen congming, suoyi laoshi renwei *pro*_i keyi
 very smart so teacher think can
kao-jin hen-hao-de daxue
test-enter very-good-de university

'John_i is very smart, so the teacher thinks that [he]_i can pass the exam to enter a good university.'

Two points:

Why should Chinese be different from Italian and Japanese (and Korean)?

Also, subject *pro* appears to be tapping the same system used for the antecedenthood of *ziji*.

- (45) Lisi_i juede [Zhangsan_j dui ziji_{i/j} mei xinxin]
Lisi think Zhangsan have self no confidence
'Lisi think that Zhangsan has no confidence in self.'

Malayalam

Like Chinese, Malayalam does not have subject agreement, yet Takahashi (2013) reports that the subject *pro* does not allow a sloppy interpretation, suggesting that there is covert agreement just like in Chinese.

(46) a. John tan-te amma-ye sneehik'k'unnu.

John self-GEN mother-ACC love

'John loves his mother.'

b. Bill-um e sneehik'k'unnu

Bill-also love

'lit. Bill loves *e*, too.'

✓strict, ✓sloppy

(47) a. John paRaññu [tan-te kuTTi English samsaarik'k'um ennə].

John said self-GEN child English will.speak COMP

'John said that his child would speak English.'

b. Mary paRaññu [*e* French samsaarik'k'um ennə].

Mary said French will.speak COMP

'lit. Mary said that *e* would speak French.'

✓strict, *sloppy

Binding of *taan* 'self/you'

Taan in the object position cannot be bound by its local subject. It can take the local subject if *taan* is inside a larger noun phrase, or else, it must seek its antecedent in the higher clause.

(48) Anti-local nature of *taan*

- a. *raaman_i tan_i-ne sneehikkunnu.
Raman self-ACC loves
'Raman loves himself.' (Jayaseelan, 1997, p. 191: 10a)
- b. raaman_i [tan_i-te bhaarya-ye] sneehikkunnu.
Raman self-GEN wife- ACC loves
'Raman_i loves his_i wife.' (Jayaseelan, 1997, p. 191: 10b)
- c. vinu_i [tan_i-te mukalil] oru vimanam kaNDu.
Vinu self- GEN above a plane saw
'Vinu_i saw a plane above him_i.'

Taan is not a pronoun; it must find an antecedent within the sentence (Swenson and Marty 2014). It is subject oriented.

Blocking

(49) Blocking

- a. 3rd-person_i ... [3rd-person ... *taan_i* ...]
- b. *3rd-person_i ... [1st/2nd -person ... *taan_i* ...]

(50) Examples of blocking

- a. [vinu_k tan_i/ADR/*_j–nenuLLi ennu] meera_i suman_j–inoDu parannju.
Vinu self-ACC pinched COMP Meera Suman-SOC said
'Meera said to Suman that Vinu pinched {her, you, *him, *himself}.'
- b. [naan_k tan_{ADR/*_j/*_j/*_k}–ne nuLLi ennu] meera_i suman_j–inoDu parannju.
I self- ACC pinched COMP Meera Suman-SOC said
'Meera said to Suman that I pinched {you, *her, *him, *myself}.'
- c. *[nii_k tan_{i/_j/_k}–ne nuLLi ennu] meera_i suman_j–inoDu parannju.
you self- ACC pinched COMP Meera Suman-SOC said
'Meera said to Suman that you pinched {*her, *him, *yourself}.'

Toward a unified analysis

Oku (1998) observed that the *pro* in Spanish does not allow a sloppy interpretation, leading to what we are calling Oku's Generalization: agreement blocks argument ellipsis.

(51) a. María cree que su propuesta será aceptada.

María believes that her proposal will.be accepted

'María believes that her proposal will be accepted.'

b. Juan también cree que *e* será aceptada.

Juan also believes that will.be accepted

'lit. Juan also believes that *e* will be accepted.' (Oku (1998))

Strict/*Sloppy

Contrary to Oku's Generalization, Duguine (2014) points out that even in Spanish the subject *pro* may yield a sloppy interpretation in special contexts.

(52) A: María cree [que su trabajo **le** exigirá mucho tiempo].

María believes that her work **cl. 3SG.DAT** require.fut.3SG much time

'María believes that her work will require her a lot of time.'

B: Y Ana espera [que [e] **le** dejará los fines de semana libre].

and Ana hopes that **cl. 3SG.DAT** leave.fut. 3SG the ends of week free

Lit. And Ana hopes [e] will leave her the week-ends available!

√ Sloppy reading: 'Ana hopes that Ana's work will leave her the week-end available.' [Duguine 2014: 520]

(53) Unified account of null arguments (Duguine 2014)

All null arguments are the result of argument ellipsis.

Unified account based on *pro*

Modern Greek (Oikonomo, to appear)

(54) A: i Maria pistevi oti i dulja tis **tis** troi poli hrono.

the Maria believes that the job her.POSS **CL.3SG.DAT** eats much time

‘Maria believes that her job requires her a lot of time.’

B: i Ana elpizi oti tha **tis** afini ligo elefthero hrono.

the Ana hopes that Fut **CL.3SG.DAT** leave little free time

‘Ana hopes that [e] will leave her some time.’

√ Sloppy reading: ‘Ana hopes that Ana’s work will leave her some time.’

Modern Greek based on Runic’s (2014) Serbo-Croatian example: object clitic

(55) A: i Maria pistevi oti tha **tis** epistrepsun to vivlio tis

the Maria believes that will **CL.3SG.DAT** return the book her.POSS

‘Maria believes that they will give her back her book.’

B: i Ana elpizi oti tha **tis** to ekdosun

the Ana hopes that Fut **CL.3SG.DAT it.CL** publish

‘Ana hopes that [e] they will publish it.’

√ Sloppy reading: ‘Ana hopes that they will publish Ana’s book.’

(56) Revised unified approach (Oikonomou, to appear)

All instances of “*pro*-drop,” including those that allow sloppy interpretation, are “*pro*.” The sloppy interpretation is an instance of E-type pronoun.

Tomioka's (2003) proposal: the element that gets this interpretation is type $\langle e, t \rangle$ (so a predicate); it must have Existential Closure; and it is type shifted from predicate to individual. Also related to the "indefinite pronoun" idea of Hoji (1998).

(57) E-type pronoun (Evans 1977, 1985, etc.)

- unbound anaphoric pronoun
- replace the pronoun with a full NP whose semantics is taken to be well-known
- hence, the pronoun is not interpreted directly, but is first replaced by a full NP whose content is retrieved from the discourse context. (See Heim 1990, Moltman 2006, Patel-Grosz and Grosz 2010, Nowen 2014, Patel-Grosz and Grosz, in press)

(58) a. If a farmer owns a donkey, he usually beats **it**.

b. If a farmer owns a donkey, he usually beats [the donkey owned by x].

(59) The man who gave his paycheck to his wife was wiser than the man who gave it to his child. (Karttunen 1969)

Evidence that the sloppy interpretation cannot be due to argument ellipsis

Oikonomou (to appear) notes examples such as the following.

(60) a. o babas tis Marias den tin afini na pai se parti
the dad the Maria.GEN not **CL.3SG.ACC** allowed SUBJ go.3SG to parties
giati ine poli afstiros.

because is very strict

‘Mary’s dad didn’t let her go to parties because he is very strict.’

b. Tin Ana antitheta tin afini na kani oti theli
the Ana.ACC on the contrary **CL.3SG.ACC** allowed SUBJ do.3SG whatever wants
giati ine poli modernos.

because is very modern

‘Ana, on the contrary, he lets her do whatever she wants because he is very modern.’

√ Sloppy reading: ‘Ana, on the contrary, Ana’s dad allows her to do whatever she wants.’

Oikonomou-type examples in Japanese

(61) Tanaka-san-wa, Tanaka-san-no nensyuu-ga 20% hetta to itte iru no ni taisi,
Tanaka-san-TOP Tanaka-san-GEN salary-NOM 20% declined said in contrast
Nakamura-san-wa, 20% fueta to itteiru.

Nakamura-san-TOP 20% increased C said

‘Ms. Tanaka said that Ms. Tanaka’s salary declined by 20%, but Mr. Nakamura said that ___ increased by 20%.’

✓ sloppy: ‘...but Mr. Namakura said that Mr. Namakura’s salary increased by 20%.’

(62) Keisityoo-wa, sakunen-no Tookyooto-no hanzairitu-ga agatta to happyoosita.

Tokyo Police-TOP last.year-GEN Tokyo-GEN crime.rate-NOM increased C announced

Fukuoka kenkei-wa ___ sagatta to happyoosita.

Fukuoka Prefectural.Police-TOP declined C announced

‘The Tokyo Police announced that Tokyo’s crime rate increased last year.

Fukuoka Prefectural Police announced that ___ declined.’

✓ sloppy: ‘Fukuoka Prefectural Police announced that Fukuoka’s crime rate declined.’

Bach-Peters sentence (Bach 1967)

(63) Every pilot who shot at it hit the MIG that chased him.

(64) Sizen-bunben-de ___ unda subete-no hahayoa-ga,
natural-birth-by gave.birth all-GEN mothers- NOM
___ egao-o misete-kureta akatyan-o gyutto dakisimeta.
smile- ACC showed baby- ACC tightly hugged

‘Every mother who gave birth to (it) by natural birth tightly hugged the baby that smiled at (her).’

Hoji (1998)

- (65) a. Taroo-wa zibun-no kuruma-o aratta.
Taroo-TOP self-GEN car-ACC wash.Past
‘Taroo washed his car.
- b. Hanako-mo [e] aratta.
Hanako-also washed
‘Hanako also washed ____.’

Saito (2003, 2007)

(66) a. Taroo-wa zibun-no kuruma-o aratta.

Taroo-TOP self-GEN car-ACC wash.Past

‘Taroo washed his car.’

b. Demo Hanako-wa [e] arawanakatta.

but Hanako-TOP wash.not.Past

‘But Hanako didn’t wash it/her car.’

Allows either strict or sloppy interpretation while negating the other.

As Saito notes, Hoji's analysis incorrectly predicts that the meaning for (66b) is the following:

(67) Demo Hanako-wa kuruma-o arawanakatta.

but Hanako-TOP car-ACC wash.not.Past

‘Hanako didn’t wash a car.’

(68) E-type pronoun: [*x kuruma* ‘car’]: *x* either strict or sloppy, and negation can be on one, but not necessarily on both.

E-type pronoun and agreement

(69) Oku's Generalization states that if agreement targets a null argument, it must be *pro*, but if there is no agreement, the null argument may be the result of argument ellipsis. What is the relation of this to E-type pronoun?

(70) Sato (2015a): difficulty of sloppy interpretation for the Chinese subject *pro* has to do with topicalization.

Modern Greek: sloppy interpretation requires a rich context:

(71) Context: Kostas listens to Maria and Eleni talking about their sons. Someone asks him about what they said about their sons future plans and He responds:

I maria ipe oti o jios tis tha spudhasi aglika
the Maria-NOM say- PST. 3SG that the son- NOM her will study-3SG English
ke

and

i eleni oti tha spudhasi ispanika

the Eleni- NOM that will study-3SG study Spanish

Lit. 'Maria said that her son will study English and Eleni said that (he)

(either Maria's or Eleni's son) will study Spanish)

(72) The Agreement Condition

The presence of agreement on *pro* necessitates a rich context/construction for E-type pronoun interpretation.

Agreement asymmetry in northern Italian dialects of Fiorentino and Trentino (Brandi and Cordin 1989:121–122; for Fiorentino, see also Saccon 1993)

- (73) a. Gli è venuto delle ragazze. (F)
b. E' vegnú qualche putela. (T)
is come some girls
'Some girls have come.'

- (74) a. La Maria la parla. (F)
b. La Maria la parla. (T)
the Mary she speaks
'Mary speaks.'

Large-scale survey of Chinese and Japanese speakers for sloppy interpretation

(75) a. *Yi-ge/*yixie/*ji-ge ren zai yuenzi-li zuozhe.

one-CL/some/several-CL person at yard-LOC sit.CONT

‘A man/some men/several men is/are sitting in the yard.’

b. You yi-ge/yixie/ji-ge ren zai yuenzi-li zuozhe.

exist one-CL/some/several-CL person at yard-LOC sit.CONT

‘There is/are a man/some men/several men sitting in the yard.’

(Chou 2004: 194)

Japanese: 100 speakers

Chinese: 103 speakers

(76) a. Shiota-san-wa, zibun-no haizokusaki-ga Ootaku-da to omotteiru.
Shiota-TOP self-GEN assigned location-NOM Ota Ward-COP that think
'Mr. Shiota thinks that the self's assigned location is Ota Ward.'

b. Takahara-san-wa, _____ Suginamiku-da to omotteiru.
Takahara-TOP Suginami Ward- COP that thinks
'Mr. Takahara thinks _____ is Suginami Ward.'

Mr. Shiota's assigned location 86/100 86% (strict)

Mr. Takahara's assigned location 92/100 92% (sloppy)

(78) Li xiansheng shuo ziji bei fenpeidao de didian shi Haidianqu fengongsi,
Mr. Li say self (PASSIVE) allocated (DE) location is Haidian District branch
Wang xiansheng shuo shi Dongchengqu fengongsi.
Mr. Wang say is Dongcheng District branch.

'Mr. Li said that the self's assigned location is Haidian District branch,
Mr. Wang said _____ is Dongcheng District branch.'

Question: Whom is assigned to Dongcheng District branch, according to Mr. Wang?'

A. Mr. Li 79/103 76.7% (strict)

B. Mr. Wang 19/103 18.4% (sloppy)

(79) Context: Mr. Li and Mr. Wang are new employers of a company. The company has just released the document showing the assigned branches of all the new employers.

B. Mr. Wang 66/103 64% (sloppy)

Japanese test sentences

JT-1. Oziisan-wa, zibun-no asagohan-ga pan-da to ii to itteiru.

Grandpa-TOP self-GEN breakfast-NOM bread-COP COMP good that said

‘Grandpa said that it would be good if his breakfast is bread.’

Obaasan-wa, _____ okayu-da to ii to itteiru.

Grandma-TOP porridge- COP COMP good that said

‘Grandma said that it would be good if _____ is porridge.’

a. Grandpa’s breakfast 68/100 68%

b. Grandma’s breakfast 86/100 86%

JT-2. Taroo-wa, zibun-no tesuto-no kekka-ga taihen yokatta to omotteiru.

Taro-TOP self-GEN test- GEN score-NOM very good that thinks

‘Taro thinks that self’s test score was very good.’

Yuko-wa, _____ maamaa-datta to omotteiru.

Yuko-TOP so-so-COP.PAST that thinks

‘Yuko thinks that _____ was so-so.’

a. Taro’s test score 65/100 65%

b. Yuko’s test score 91/100 91%

JT-3. Suzuki-san-wa, zibun-no te-ga ookii to omotteiru.

Suzuki-TOP self-GEN hand-NOM big that thinks

‘Ms. Suzuki thinks self’s hand is big.’

Tanaka-san-wa, _____ tiisai to omotteiru.

Tanaka-TOP small that thinks

‘Ms. Tanaka thinks _____ is small.’

- a. Ms. Suzuki’s hand 71/100 71%
- b. Ms. Tanaka’s hand 81/100 81%

JT-4. Shiota-san-wa, zibun-no haizokusaki-ga Ootaku-da to omotteiru.

Shiota-TOP self-GEN assigned location-NOM Ota Ward-COP that think

‘Mr. Shiota thinks that the self’s assigned location is Ota Ward.’

Takahara-san-wa, _____ Suginamiku-da to omotteiru.

Takahara-TOP Suginami Ward-COP that thinks

‘Mr. Takahara thinks _____ is Suginami Ward.’

- a. Mr. Shiota’s assigned location 86/100 86%
- b. Mr. Takahara’s assigned location 92/100 92%

JT-5. Masao-wa, zibun-ga myuzisyan-to-site katuyaku-dekiru to omotteiru.

Masao-TOP self-NOM musician-as successful at that thinks

‘Masao thinks that self can be successful as a musician.’

Kenta-wa _____ kentikuka-to-site katuyaku-dekiru to omotteiru.

Kenta-TOP architect-as be successful that thinks

‘Kenta thinks that _____ can be successful as an architect.’

a. Masao 86/100 86%

b. Kento 80/100 80%

Example of a filler:

JT-6 Titioya-wa siriai-no katta koukyuusya-ga kakko-ii to omotteiru.

father-TOP friend-GEN bought luxury car-NOM cool-looking that thinks

‘The father thinks that the luxury car that a friend bought is cool-looking’

Musuko-wa, kakko-warui to omotteiru.

Son-TOP unattractive that thinks

‘The son thinks that _____ is unattractive.’

a. the car that a friend bought 95/100 95%

b. the car that the son bought 8/100 8%

Chinese test sentences: Part 1 – without context

CT-1. Yeye shuo ziji-de zaocan shi mianbao,

Grandpa say self's breakfast is bread

'Grandpa said that self's breakfast is bread,'

Nainai shuo shi zhou.

Grandma say is porridge

'Grandma said ____ is porridge'

Question: Whose breakfast is porridge that grandma said?'

A. Grandpa's breakfast 80/141 56.7%

B. Grandma's breakfast 37/141 26.2%

CT-2. Xiao Ming renwei ziji-de kaoshi chengji feichang hao,

Xiao Ming think self's test score very good

'Xiao Ming thinks that self's test score was very good.'

Xiao Wei renwei yibanban.

Xiao Wei think so-so

'Xiao Wei thinks that _____ was so-so.'

'Xiao Ming thinks that self's test score was very good. Xiao Wei thinks that _____ was so-so.)

Question: Whose test score that Xiao Wei thinks is just so-so?

A. Xiao Ming's test score 98/141 69.5%

B. Xiao Wei's test score 25/141 17.7%

CT-3. Xiao Hong juede ziji-de shou hen da

Xiao Hong think self's hand very big

'Xiao Hong thinks self's hand is big,'

Xiao Li juede hen xiao.

Xiao Li think very small

'Xiao Li thinks _____ is small.'

'Xiao Hong thinks self's hand is big. Xiao Li thinks _____ is small.'

Question: Whose hand that Xiao Li thinks is small?

A. Xiao Hong's hand 109/141 77.3%

B. Xiao Li's hand 23/141 16.3%

CT-4. Li xiansheng shuo ziji bei fenpeidao de didian shi Haidianqu fengongsi,

Mr. Li say self (passive) allocated (de) location is Haidian District branch

‘Mr. Li said that the self’s assigned location is Haidian District branch.’

Wang xiansheng shuo shi Dongchengqu fengongsi.

Mr. Wang say is Dongcheng District branch.

‘Mr. Wang said _____ is Dongcheng District branch.’

‘Mr. Li said that the self’s assigned location is Haidian District branch, Mr.

Wang said _____ is Dongcheng District branch.’

Question: Whom is assigned to Dongcheng District branch, according to Mr. Wang?’

A. Mr. Li 107/141 72.3%

B. Mr. Wang 23/141 16.3%

CT-5. Zhang laoshi juede ziji-de xuesheng hen youlimao,

Zhang teacher think self's student very polite

'Teacher Zhang thinks that self's student is polite.'

Li laoshi juede hen mei limao.

Li teacher think very not polite

'Teacher Li thinks ____ is very impolite.'

'Teacher Zhang thinks that self's student are polite. Teacher Li thinks that ____ are impolite.'

Question: Whose students that Teacher Li thinks are impolite?

A. Teacher Zhang's student 123/141 87.2%

B. Teacher Li's student 11/141 7.8%

Chinese test sentences: Part 2 – with context

CT-6. Context: grandpa and grandma are saying what breakfast they think will be.

Yeye shuo ziji-de zaocan shi mianbao,

Grandpa say self's breakfast is bread

'Grandpa said that self's breakfast is bread,'

Nainai shuo shi zhou.

Grandma say is porridge

'Grandma said _____ is porridge'

Question: Whose breakfast is porridge that grandma said?

- A. Grandpa's breakfast 46/141 32%
- B. Grandma's breakfast 67/141 47.5%

CT-7. Context: Xiao Ming and Xiao Wei just knew their test scores. They expressed their opinions on their scores.

Xiao Ming renwei ziji-de kaoshi chengji feichang hao,

Xiao Ming think self's test score very good

'Xiao Ming thinks that self's test score was very good.'

Xiao Wei renwei yibanban.

Xiao Wei think so-so

'Xiao Wei thinks that _____ was so-so.'

Question: Whose test score that Xiao Wei thinks is just so-so?

A. Xiao Ming's test score 30/141 21.3%

B. Xiao Wei's test score 95/141 67.3%

CT-8. Context: Xiao Hong and Xiao Li are expressing their opinions about their hands.

Xiao Hong juede ziji-de shou hen da
Xiao Hong think self's hand very big
'Xiao Hong thinks self's hand is big,'

Xiao Li juede hen xiao.

Xiao Li think very small

'Xiao Li thinks _____ is small.'

Question: Whose hand that Xiao Li thinks is small?

- A. Xiao Hong's hand 31/141 22%
- B. Xiao Li's hand 93/141 66%

CT-9. Context: Mr. Li and Mr. Wang are new employers of a company. The company has just released the document showing the assigned branches of all the new employers.

Li xiansheng shuo ziji bei fenpeidao de didian shi Haidianqu fengongsi,
Mr. Li say self (passive) allocated (de) location is Haidian District branch
'Mr. Li said that the self's assigned location is Haidian District branch.'

Wang xiansheng shuo shi Dongchengqu fengongsi.

Mr. Wang say is Dongcheng District branch.

'Mr. Wang said _____ is Dongcheng District branch.'

- A. Mr. Li 36/141 25.5%
- B. Mr. Wang 91/141 64.5%

CT-10. Context: Teacher Zhang and Teacher Li are talking about their options on whether their students are polite or not.

Zhang laoshi juede ziji-de xuesheng hen youlimao,

Zhang teacher think self's student very polite

'Teacher Zhang thinks that self's student is polite.'

Li laoshi juede hen mei limao.

Li teacher think very not polite

'Teacher Li thinks ____ is very impolite.'

Question: Whose students that Teacher Li thinks are impolite?

A. Teacher Zhang's student 37/141 26.2%

B. Teacher Li's student 78/141 55.3%