

Copulas and Copula Semantics in the World's Languages: A New Project

Nancy Hedberg
(hedberg@sfu.ca)
Simon Fraser University
JNU Visit
June 17, 2014

Outline

- Introduction: Equative vs. Inverse Analysis
- Case Study I: Identity Sentences and Proper Names
- Typology Project I
- Case Study II: Thai
- Case Study III: Kinande
- Typology Project II

JNU VISIT

2

Introduction

Equative vs. Inverse Analysis

Higgins 1973. Classification of Copular Sentences: Four Basic Types

- Predicational**
 - That thing is heavy.
 - That woman is Mayor of Cambridge.
- Specificational**
 - What I don't like about John is his tie.
 - The only girl who helps us on Friday is Mary Gray.
- Identificational**
 - That is Joe Smith.
 - That is the Mayor of Cambridge.
 - The girl who helped us on Fridays is Mary Gray.
- Identity**
 - The morning star is the evening star.
 - Cicero is Tully.

JNU VISIT

4

Higgins 1973. Classification of Copular Arguments

TYPE	SUBJECT	PREDICATE
Predicational	Referential	Predicational
Specificational	Superscriptional	Referential
Identificational	Referential	Identificational
Identity	Referential	Referential

JNU VISIT

5

Traditional Logical Analysis

- BE of predication
 - John is happy: $H(j)$
- BE of identity
 - Cicero is Tully: $c = t$
- BE of existence
 - There is a God: $\exists xG(x)$

JNU VISIT

6

The Uniform *be* Hypothesis

- Williams 1983, Partee 1986
 - The specificational/predicational distinction can be seen as two different argument orderings of a single copula taking one referential (type e) and one predicative (type <e,t>) argument, in either order.
- e + <e,t>: predicational
- <e,t> + e: specificational

JNU VISIR

7

The Inverse Analysis

- The referential and predicative arguments are the subject and complement of an underlying small clause, either of which can raise to a higher position.
 - Heggie 1988 (English)
 - Moro 1997 (Italian)
 - Adger & Ramchand 2003 (Scots Gaelic)
 - Mikkelsen 2005 (English, Danish)
 - Den Dikken 2006 (English)
 - Partee 2010 (Russian)

JNU VISIR

8

The Inverse Analysis: Evidence

- Small clauses:
 - I consider John (to be) the teacher.
 - I consider the teacher *(to be) John.
- Extraction:
 - Who do you think is the teacher?
 - Who/what do you think John is?
 - (NH:?) *Who do you think the teacher is?
 - *Who/*what do you think is John?
- Agreement [Italian]:
 - le foto del muro furono/*fu la causa della rivolta
'the pictures of the wall were/*was the cause of the riot'
 - la causa della rivolta furono/*fu le foto del muro
'the cause of the riot *were/was the pictures of the wall.'

JNU VISIR

9

The Equative Analysis

- There are two different copula-type structures semantically: predicational and equative.
 - Safir 1985 (English)
 - Zaring 1997 (Welsh)
 - Carnie 1997 (Irish)
 - Heycock and Kroch 1999 (English), Heycock 2012
 - Heller 1999 (Hebrew), Rothstein 2001 (Hebrew, English)
 - Partee 1999 (Russian)
 - Hedberg 1990/2000, Han & Hedberg 2008 (English clefts), Hedberg & Potter 2010 (Thai)
 - Lyon 2013 (Okanagan Salish)

JNU VISIR

10

Specificational Sentences

- Specificational and reverse specificational sentences provide a value for a variable.
- Higgins: the value phrase is referential.
- Higgins: the variable phrase is 'superscriptional':
 - Most later work treats it as a higher type than e:
 - Predicative? <e,t>
 - Attributive quantificational definite description? <<e,t>,t>
 - Individual concept? <s,e>
 - The superscriptional phrase is not purely referential (type e)
 - The winner is Molly, isn't it/*she? (Mikkelsen 2005, 5.21)

JNU VISIR

11

Heycock & Kroch 1999: Identity and specificational sentences are equative

- Only referential NPs can be modified by a nonrestrictive relative clause
 - Identity sentences contain two referential arguments:
 - Your opinion of Edinburgh, which you learned from your parents, is my opinion of Philadelphia, which I learned from mine. (Heycock & Kroch 1999, 31b).
 - Small clause predicates can't be so modified:
 - *I consider that your opinion of Edinburgh, which you learned from your parents. (Heycock & Kroch 1999, 32b).
- Superscriptional phrases can occur in non-copular sentences and can antecede pronouns:
 - The best value for a dollar has changed — It used to be one hundred and thirty yen, but now it is only one hundred. (Heycock & Kroch 1999, 27)

JNU VISIR

12

Specificational sentences are reversible

- Specificational sentences are reversible, which is explained if they are equative.
 - Predicational
 - Which profession does John have?
 - John is the TEACHER.
 - #The TEACHER is John.
 - Specificational
 - Which person is the teacher?
 - The teacher is JOHN.
 - Reverse specificational
 - Which person is the teacher?
 - JOHN is the teacher.
- Specificational semantics is tied up with information structure: the variable argument is always the topic and the value argument, the focus.

JNU VisIR

13

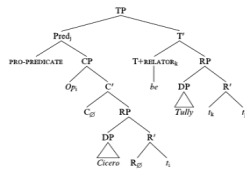
Den Dikken 2006: A Unified Inverse Analysis

- Predicational
 - Referential subject + predicative predicate of a small clause. Subject of small clause raises to SPEC-TP position.
- Inverse
 - Referential subject + predicative predicate of a small clause. Predicate of small clause raises to SPEC-TP position.
 - Identity sentences
 - Specificational sentences

JNU VisIR

14

Den Dikken: Identity Sentences, p. 73, (29)

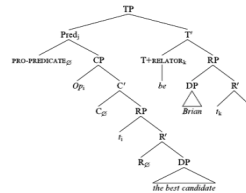


- Raise to SPEC-TP a matrix small-clause predicate,
- which is a reduced relative clause headed by a null pro-predicate.
- The reduced relative clause contains the referential subject of an embedded small clause.

JNU VisIR

15

Den Dikken: Specificational Sentences, p. 95, (32)



- Raise to SPEC-TP a matrix small-clause predicate,
- which is a reduced relative clause headed by a null pro-predicate.
- The reduced relative clause contains the predicative complement of an embedded small clause.

JNU VisIR

16

Case Study I

Identity Sentences and Proper Names

Identity Sentences

- Tautologies:
 - A promise is a promise.
 - War is war.
 - Venus is Venus.
- Identity-establishment sentences:
 - Cicero is Tully.
 - J.A.W. Kamp is Hans Kamp.
 - The morning star is the evening star.

JNU VisIR

18

Identity Sentences (cont.)

- Role-play sentences
 - Who is John? Who does he play?
 - John is Hamlet.
 - Who is [plays] Hamlet?
 - Hamlet is John.
 - John is Hamlet.
- Just because there are two proper nouns flanking the copula doesn't mean that both are of type e.
 - John is Hamlet, which/*who is Shakespeare's most famous role.
 - Type shifting is possible.

JNU VISIT

19

Identity Sentences in Scots Gaelic

- Scots Gaelic doesn't have identity-establishment sentences. (Adger & Ramchand 2003, p. 340-341)
 - *'S e Cicero Tully.
COP-PRES AUG Cicero Tully
'Cicero is [identical to] Tully.'
 - 'S e Cicero agus Tully an aonduine.
COP-PRES AUG Cicero and Tully the same man
'Cicero and Tully are the same person.'

JNU VISIT

20

Scots Gaelic (cont.)

- Scots Gaelic does have role-play sentences in one word order (Adger & Ramchand 2003, p. 340)
 - 'S e Sean Hamlet a-nochd.
COP-PRES AUG Sean Hamlet tonight
'Sean is [playing] Hamlet tonight.'
 - *'S e Hamlet Sean a-nochd.
COP-PRES AUG Hamlet Sean tonight
'Hamlet is [played by] Sean tonight.'
- The role Hamlet is higher-order, e.g. a predicate.

JNU VISIT

21

Identity Sentences in Russian

- Identity-establishment sentences but not predicational sentences take *eto* (Geist 2007, 31, 32):
 - Mark Twain – *(eto) Samuel Clemens
Mark T._{Nom} this Samuel C._{Nom}
'Mark Twain is Samuel Clemens.'
 - Mark Twain (– *eto) pisatel' po professii
Mark T. this writer_{Nom} by profession
'Mark Twain is a writer by profession.'
- Role-play sentences don't take *eto*.

JNU VISIT

22

Identity Sentences in Berber, Arabic

(N. Elouazizi, p.c.)

- Tautologies can occur with the pronominal copula:
 - Tarifyt Berber
 - lwed hwa lwed/*wed
DEF.promise he DEF.promise/promise
'A promise is a promise.'
 - Standard Arabic
 - ?lwaed hwa ?lwaed/waed
DEF.promise he DEF.promise/promise
'A promise is a promise.'
- In neither language can two proper names be identified using the copula.
 - *John hwa Edward.
 - ✓ John and Edward are one and the same person.
 - *John hwa Hamlet.
 - ✓ John is acting as if he is Hamlet.

JNU VISIT

23

Identity Sentences in Hebrew

(Heller 1999, Doron 1983)

- The personal pronominal copula is optional in predicational sentences, but obligatory in identity-establishment sentences.
 - dani (hu) more
Danny he teacher
'Danny is a teacher.'
 - dani *(hu) mar kohen
Danny he Mr. Cohen
'Danny is Mr. Cohen.'
- A demonstrative pronominal copula can equate two phrases of a higher type than e, and can also appear in specificational-type sentences.
 - [AP gavoha] ze/*hu [AP yafe]
tall this/he beautiful
'Tall is beautiful.'

JNU VISIT

24

Okanagan Salish (Lyon 2013)

•Direct predication sentences can occur with predicate and subject in either order (e + <e,t>, <e,t> + e).

•Equative sentences can only have the more referential expression first (e + <s,e>).

- (5) a. stin̓ John i? s-c-kʷ-dí-s?
 what John DET NOM-CUST-make-3SG.POSS
 What does John do (for work)?
- b. John saxʷ-kʷ-dí-ɬxʷ-əm.
 John OCC-make-house-MID
 John is a carpenter.
- c. saxʷ-kʷ-dí-ɬxʷ-əm John.
 OCC-make-house-MID John
 John is a carpenter.

- (28) a. swit ixʔ tə Spike?
 who DEM COMP Spike
 Who is Spike?
- b. swit i? ylmfxʷəm?
 who DET chief
 Who is the chief?
- c. Spike i? ylmfxʷəm.
 Spike DET chief
 Spike is the chief.
- d. *i? ylmfxʷəm Spike.
 DET chief Spike
 The chief is Spike.

JNU VISR

25

Identity Sentences in Okanagan Salish

•Proper names can occur in either order in direct predication sentences (90, 92).

•But not in equative sentences (97b).

•Okanagan has no specificational sentences.

- (90) Spike Čəlxíča? t kl-kláxʷ.
 Spike Chillhitzia OBL RED-evening
 Spike was Chillhitzia last night.

- (92) Čəlxíča? Spike t s-kl-kláxʷ.
 Chillhitzia Spike OBL NOM-RED-evening
 Spike was Chillhitzia last night.

- (97)
 b. Spike i? Čəlxíča? t kl-kláxʷ.
 Spike DET Chillhitzia OBL RED-evening
 Spike was Chillhitzia last night.

JNU VISR

26

Identity Sentences: Summary

- Languages differ in their copula-type syntax:
 - Direct predication, null copula, verbal copula, pronominal copula.
- Languages seem to differ in what kinds of copula-structures they allow from the Higgins paradigm.
 - Not all languages allow identity-establishment sentences with two proper names.
 - Proper names seem to be construable as predicates in some languages.
 - And hence sometimes become allowable in role-play sentences.

JNU VISR

27

Typology Project I

With Patricia Schneider-Zioga
 California State University, Fullerton

The Typology of Copulas Project

- Questionnaires with contexts to control for information structure and the particular sense and use of the copular sentence.
- Distinguish all four of Higgins' types, in both orders.
- Distinguish different uses of proper names.
- Later extend to clefts/pseudoclefts and locative sentences.

JNU VISR

29

Case Study II

Thai

Thai: Kuno & Wongkhomthong 1980: Two Copulas

- (9a) yípùn **pen/*khi**: pràthê:d ùd̥sa:hàkam.
Japan is country industry
'Japan is an industrial country.'
- (9b) khon thî: chán rág ***pen/khi**: cɔ:n
person that I love is John
'The person that I love is John.'
- (10) cɔ:n **pen/khi**: khon thî: chán rág
John is person that I love
'John is the person that I love.'

JNU VISIT

31

Thai: Hedberg & Potter 2010: Sentence 1

- *Actor that I like best kheuu/bpen person tall*
 - **Context A**: "Suppose that you are describing a number of qualities about your favorite actor. She is sweet, brunette, Canadian and witty. Then you say that the actor you like best is tall."
 - **Context B**: "Out of a room full of actors, you are asked to identify the actor that you like the most. You identify the tallest person in the room as your favorite actor."
- Out of context: *bpen* (5/5)
- *bpen* (5/5): e + <e,t> predicational
- *kheuu* (5/5): <<e,t>,t> + e specificational

JNU VISIT

32

Sentence 2

- *Actor that I like best kheuu/bpen Mr. Sun.*
 - **Context A**: "Out of a roomful of actors, you are asked to identify the actor that you like the most. You identify Mr. Sun."
 - **Context B**: "Suppose that you are huge movie fan. "You have always had a favorite actor, but the identity of your favorite actor changes constantly. Last year, actor that I like best was Mr. Jones. Last month, actor that I like best was Mrs. Kim. Currently actor that I like best is Mr. Sun."
- Out of context: *kheuu* (5/5)
- Context A: *kheuu* (5/5) <<e,t>,t> + e specificational
- Context B: *kheuu* (5/5), *bpen* marginal (2/5) <<e,t>,t> + e specificational

JNU VISIT

33

Sentence 3

- *Mr. Sun kheuu/bpen actor that I like best*
 - **Context A**: "Suppose that you are talking about the famous actor Mr. Sun. You say that he is short, fat and has a reputation for being short tempered. Nevertheless, you continue your description by saying that Mr. Sun is the actor that you like best."
 - **Context B**: "I'm asking about different people in your life. I ask who your mother is and who your best friend is. Then I ask who the actor that you like best is."
- Out of context: *bpen* or *kheuu*
- Context A: *bpen* (5/5) e + <e,t> predicational
- Context B: *kheuu* (4/5), *bpen* (1/5) e + <<e,t>,t> reverse specificational

JNU VISIT

34

Sentence 4

- *He kheuu/bpen person tall*
 - **Context A**: "You witness a crime. The police officer asks you to describe the culprit. You list a number of traits, including that he is tall."
 - **Context B**: "You witness a crime. Out of a police lineup, you are asked to identify the culprit. You identify the tallest person as him."
- Out of context: *bpen* (5/5)
- Context A: *bpen* (5/5) e + <e,t> predicational
- Context B: *kheuu* (5/5) e + e identity

JNU VISIT

35

Sentence 5

- *He kheuu/bpen Mr. Sun.*
 - **Context A**: "You are introducing your friends to a group of people. You say, 'She is Jill. He is John. He is Mr. Sun'."
 - **Context B**: "Suppose that you find yourself face to face with King Rama (who can change his shape at will). At first he appears in his true form. Then suddenly, he changes to look like your best friend. Then he changes to look like Mr. Sun."
- Out of context: *kheuu*
- Context A: *kheuu* (4/5), neither (1/5) e + e identity
- Context B: *kheuu* (3/5), *bpen*+become (1/5), neither (1/5) e + e identity

JNU VISIT

36

Thai: Summary

- Predicational sentences: *bpen*
- Specificational, reverse specificational, identity sentences: *kheuu*.
- It looks like *bpen* is a predicational copula and *kheuu* is an equative copula.
- The inverse analysis can't easily capture *kheuu* used with a post-copular superscriptional phrase.

JNU VISIT

37

Case Study III

Kinande

Kinande (Schneider-Zioga & Mutaka, in progress)

- Predicational copula: NI
 - Magulú ni mú:li (Adjective Phrase)
1Magulu COP 1tall
'Magulu is tall.'
 - Johani ni mugalimu (Noun Phrase)
1John COP 1teacher
'John is a teacher.'
 - Magulu ni w' eButembo (Prepositional Phrase)
1Magulu COP 1of 24Butembo
'Magulu is from Butembo.'

JNU VISIT

39

Kinande (cont.)

- Specificational copula: YO
 - Copula agrees with value, which must contain an augment.
 - Augment marks definiteness/specificity.
 - What is the problem?
 - (15a) émbugá lô lúhi
aug.9problem 11COP aug.11war
'The problem is the war.'
 - (15b) olúhi lô mbúga
aug.11war 11COP 9.problem
'The war is the problem.'

JNU VISIT

40

Kinande (cont.)

- When a proper name is a post-copular value, NI is used.
 - Names don't contain augments, so can't trigger post-copular agreement.
 - NI is perhaps borrowed from the predicational paradigm for this specificational use.
 - Possible reverse specificational uses occur, but the post-copular variable phrase lacks an augment (22), and YO could be a focus marker here.
 - (16a) iyondi yo wib'ebitabu?
1who 1COP stole 8book
'Who stole the books?'
 - (16b) ómwibí ni Magulu (22)Magulú yó mwibí
aug.1thief COP Magulu 1Magulu 1COP 1thief
'The thief is MAGULU.' 'MAGULU is the thief'
 - (19a) ómwibí y' ómulámya
aug.1thief 1COP aug.1doctor
'The thief is the DOCTOR.'

JNU VISIT

41

Kinande (cont.)

- The fact that the post-copular variable phrase in (15b) and (22) lack an augment, which is consistent with them being predicates, type <e,t>, supports the inverse analysis, whereby the superscriptional (variable) phrase is the predicate of a small clause.
- Even a proper name can surface in this position, indicating that proper names can perhaps also be predicates.
- (20) ómwibí yo Magulú
aug.1thief 1COP 1Magulu
'The THIEF is [named] Magulu.'
[Reverse specificational on inverse analysis: e + <e,t>]

JNU VISIT

42

Kinande (cont.)

- Tautologies are predicational.
 - obwira ni bwira, n' ekasi ni kasi
aug.14friendship COP 14friendship and aug.9duty COP 9duty
'friendship is friendship, but duty is duty.'
- Informative identity sentences fit the specificational pattern.
 - Eririma ky' ekihugo; n'embuto yowene b' abana b'Obwami
5field 7COP aug.7world; &9seed 9of good 2COP 2child 2of 14chieftancy
'The field is the world, and the good seed stands for the people of the kingdom.' (from Matthew 13:38)

JNU VISIT

43

Identity Sentences in Kinande

- Role-play and informative identity statements with proper names could be either specificational or predicational.
 - Hamlet ni Magulu
Hamlet COP Magulu
'Hamlet is [played by] MAGULU.'
 - Jorge Bergoglio ni Pape François
'Jorge Bergoglio [who you know] is POPE FRANCIS.'
- But they can also be reverse specificational, with the post-copular name, then, possibly a predicate.
 - Pape François yo Jorge Bergoglio.
1Pope Francis 1COP 1Jorge Bergoglio
'POPE FRANCIS is [named] Jorge Bergoglio.'

JNU VISIT

44

Kinande: Summary

- Kinande has a complete copula sentence paradigm.
- Two basic types of copulas: NI (non-agreeing, predicational), YO (agreeing, pronominal).
- YO is tied up with focus marking.
- The system of augments has a role to play in copular semantics.
- Proper names lack augments, in which case they can't trigger agreement in post-copular position and therefore exhibit a different syntax in copular sentences.
- The inverse analysis seems to capture the Kinande copular sentence facts, but the NI/YO distinction also patterns in the direction of a predicational/equative distinction within the Higgins paradigm.

JNU VISIT

45

Typology Project II

Language Typology of Copulas

- English, Italian:
 - One copula, many functions
- Russian:
 - No predicational copula in present tense, demonstrative pronominal identity copula
- Thai:
 - No copula for adjectives; two copulas for NPs, predicational vs. identity/specificational
- Arabic, Berber
 - Verbal copula (null in present tense), pronominal copula.
- Hebrew
 - Verbal predicational copula (null in present tense), Two pronominal copulas—personal pronoun (predicational, identity), demonstrative pronoun (identity, specificational)?
- Kinande
 - Predicational copula, specificational (pronominal) copula
- Okanagan Salish
 - Direct predication, null equative copula

JNU VISIT

47

Project Summary

- Explore the realization of copular-type sentences cross-linguistically: no copula (null?), one copula (verbal, pronominal), two copulas (verbal, pronominal).
- Do the syntactic patterns used to express different semantic/pragmatic types of copular sentences descriptively line up the same in all languages?
- If they do line up, how far can we collapse the Higgins' paradigm?
 - Do some languages support the equative analysis while others support the inverse analysis?
 - Aim at transcending theoretical differences by comparing how the different accounts capture the descriptive base, which we propose to expand.
- Formal semantics (with type shifting) + generative syntax (Minimalism).

JNU VISIT

48

Conclusion

- What about languages of India?
- How many and what kinds of copular systems are there in the different languages?
- Looking for collaboration from JNU.

JNU VISIT

49

Haiku

Be has no meaning
 What's the non-meaning of be?
 Search outside Europe.

– Patricia Schneider-Zioga, 6/6/14

JNU VISIT

50

Selected References

- Adger, David & Gillian Ramchand. 2003. Predication and equation. *Linguistic Inquiry* 34. 325-359.
- Den Dikken, Marcel. 2006. *Relators and Linkers: The syntax of predication, predicate inversion and copulas*. MIT Press.
- Geist, Ljudmila. 2007. Predication and equation in copular sentences: Russian vs. English. In I. Comorovski & K. von Stechow (eds.), *Existence: Semantics and Syntax*, 79–105. Dordrecht: Springer.
- Heycock, Carolyn & Anthony Kroch. 1999. Pseudocleft connectedness: Implications for the LF interface level. *Linguistic Inquiry* 30. 365-397.
- Hedberg, Nancy and David Potter. 2010. Equative and Predicational Copulas in Thai. Presented at the Berkeley Linguistics Society, BLS 36, University of California at Berkeley, Feb. 6-7, 2010. To be published in *BLS Proceedings*.
- Heller, Daphna. 1999. *The syntax and semantics of specificational pseudoclefts in Hebrew*. MA Thesis. Tel Aviv University.
- Higgins, F. Roger. 1973. *The pseudo-cleft construction in English*. Doctoral dissertation, MIT, Cambridge, Mass.
- Mikkelsen, Lene. 2005. *Copular Clauses: Specification, predication and equation*. John Benjamins.
- Moro, Andrea. 1997. *The raising of predicates: Predicative noun phrases and the theory of clause structure*. Cambridge: Cambridge University Press.
- Partee, Barbara. 1986. Ambiguous pseudoclefts with unambiguous *be*. In *Proceedings of NELS 16*, 354–366. GLSA, University of Massachusetts, Amherst.
- Schneider-Zioga, Patricia & Philip Ngesimo Mutaka. In progress. *The linker and other copular constructions in Kinande*.
- Williams, Edwin. 1983. Semantic vs. syntactic categories. *Linguistics and Philosophy* 6. 423–446.

JNU VISIT

51