

Nanzan University, November 25, 2010

Identificational Sentences

Friederike Moltmann

IHPST (Paris 1/ ENS / CNRS)

1. Identificational sentences (Higgins 1973)

bare demonstratives:

(1) a. This is Mary.

b. That is a beautiful woman.

discourse-related *it*:

(2) Someone entered. It was the same man as had entered yesterday.

apparent relative identity statements:

(3) This is the same book, but not the same copy as that.

the approach:

Bare demonstratives as subjects of identificational sentences refer to tropes and denote a function identified by the trope referred to: a function from conceivable worlds to bearers of the trope in those worlds.

Identificational sentences ‘identify’ the bearer of the trope.

the notion of a trope

examples of tropes:

the wisdom of Socrates, the whiteness of the snow, the beauty of the landscape

other terms for tropes:

‘particularized properties’, ‘property instances’, ‘accidents’, ‘modes’, ‘moments’

characteristics of tropes

- particulars, not universals

- instances of (‘adjectival’ or qualitative) universals

- dependent on a bearer: the individual having the property
 - causally efficacious
 - object of (direct) perception (Williams, Campbell, Lowe)
 - temporally located, spatially located (??)
-

2. Presentational pronouns

presentational pronouns:

pronouns *this*, *that* or *it* in the subject position of identificational sentences, in which they play a particular semantic role

characteristic: exceptional neutrality

presentational pronouns in other languages:

ce in French, *das*, *dies*, *es* in German

(4) a. C'était une femme.

this (neut) was a woman

b. Das / Das da ist eine Frau.

this (neut.) is a woman

2.1. Presentational pronouns are not referential terms

[1] coordination

(5) a. * Mary and that are a beautiful couple.

b. * Mary and that are the two people I admire most.

c. * Bill or that was the chairman of the session.

d. * Bill and that will walk home.

ordinary neutral demonstratives:

(6) a. I bought this and the cake. (pointing at a melon)

b. Do you want this or the cake? (pointing at a melon)

c. You have to decide between this and me. (pointing at a pack of cigarettes)

[2] incompatibility with ordinary variables

(7) * That, whom I first did not recognize, was John.

(8) a. * Everyone except that came to the party.

b. * Everyone came, even that.

ordinary neutral demonstratives:

- (9) a. Everything except this is poisoned. (pointing at a cake)
 b. Everything is poisoned even that. (pointing at a cake)

ordinary variables in postcopula position:

- (10) a. Whoever *that* was *e* should be identified quickly.
 b. Who was that *e*?
 c. * What was that *e*? (referring to a person)

[3] the interpretation of modals

Presentational pronouns allow only for an epistemic interpretation of a modal:

- (11) a. John must be a student.
 b. This must be a student.
 (12) a. Mary could be a gymnast.
 b. This could be a gymnast.

2.1.2. Identificational sentences are not predicational

[1] choice of the main verb

restricted to the subject position of the verb *be*:

- (13) a. * I saw that. (looking at a man)
 b. * I was looking for that.

no copula verbs other than *be*:

- (14) a. * This remained a beautiful women.
 b. * This will never become a very good teacher.
 c. * This seems a very good teacher.

[2] small clauses

presentational pronouns cannot occur as subjects of small clauses:

- (15) a. I consider John a very good teacher.
 b. * I consider this / that / it a very good teacher

2.1.3. The ‘referential’ status of the postcopula NP in identificational sentences

restriction on postcopula position, in first approximation:

Presentational pronouns require either a sortal or a proper name in postcopular position:

- (16) a. That is a beautiful woman.
 b. * That is beautiful. (looking at a woman)
 c. That woman is beautiful.
- (17) a. A woman entered. It was a beautiful woman.
 b. A woman entered. * It was beautiful.
 c. A woman entered. The woman was beautiful.
- (18) a. That / This is Mary.
 b. A woman entered. It was Mary.

neutral 'ordinary' pronouns not subject to the constraint:

- (19) a. That is red (looking at a surface).
 b. John discovered something in the bag. It was red.

Is the sortal-non-sortal distinction really at play?

[1] proper names

That proper names having sortal content is not a generally accepted view: goes against common direct-reference theories of proper names

but other views: Geach (1957), Lowe (2007): the name *John* has the sortal content 'person'.

[2] NPs that have both a predicative use (without a determiner) and an individual-introducing or referential use (with a determiner)

- (20) a. * That is mayor of Cambridge.
 b. That is the mayor of Cambridge. (Higgins 1973)

no difference in sortal content

[3] presentational pronouns allow for expressions in the postcopula position that do not have sortal content.

German: postcopula position of identificational sentences may contain pronouns whose gender depends entirely on agreement, rather than being tied to a sortal concept:

- (21) Das Maedchen, das muss es sein.
 the girl (neut.), that must *it* (neut) be

[4] The generalization that terms without sortal content require a sortal in postcopula position is wrong.

count noun phrases that fail to have sortal content, but are not subject to a restriction to sortal predicates:

(22) The target of his attention / The cause of his distress (namely Mary) is very beautiful.

[5] same constraint on the postcopula NP obtains when the presentational pronoun is anaphoric to a proper name or full sortal NP in topic position, as in German and French:

(23) a. Diese Frau, das war meine Tante / * das was schoen.

‘This woman, that was my ant / that was beautiful.’

b. Cette femme, c’était ma tante / * c’était belle.

‘This woman, that was my ant / that was beautiful.’

→ Postcopula position of identificational sentences is referential, not predicative.

further evidence: coordination with proper names:

(24) a. This was John or one of his friends.

b. Who could have painted that painting? This / It must have been Rembrandt or a student of Rembrandt.

views on which indefinite NPs are of the same type as referential NPs.

- Discourse Representation Theory (Kamp 1981) and (certain versions of) dynamic semantics (Heim 1982).

- approaches using choice functions for the semantic analysis of indefinites (Reinhart 1997, Winter 1997, Kratzer 1998):

(25) A function f is a *choice function* (CF(f)) iff f maps any nonempty set onto an element of that set.

(26) a. Mary met a man.

b. $\exists f(\text{CF}(f) \ \& \ \text{meet}(\text{Mary}, f([\textit{man}])))$

semantic contribution of an indefinite in the postcopula position of an identificational sentence:

(26) c. $\exists f(\text{CF}(f) \ \& \ \textit{this is } f([\textit{wellknown man}])))$

3. A semantic analysis of identificational sentences

3.1. Reference to tropes with presentational pronouns

reference to properties?

- (27) a. Someone had come in. That was Mary.
 b. That was John who solved the problem.

Properties may have many instances, but *this* and *that* can only make reference to a presentation of a unique individual.

(28) * Did you see that? That was Mary and it also was Sue. (looking at a single blue figure in the distance)

- (29) a. * There was a beautiful woman in the garden. That was Mary, and that was also Sue.
 b. * There were beautiful women in the garden. That was Mary, and that was also Sue.

the involvement of tropes, as the objects of direct perception:

- (30) a. (introducing someone:) This is my sister. (trope: visual appearance)
 b. (looking at a figure in the distance:) That is John. (trope: visual appearance)
 c. (talking on the phone:) This is me. (trope: sound of the voice)

cases where presentational *this* and *that* are not possible:

- (31) a. (pointing at a house and meaning Mary, who is in the house:) This is Mary.
 b. (pointing at a dress and meaning Mary, who owns the dress:) This is Mary.
 c. (a man talking and Mary being what the man is talking about:) This is Mary.

reference to representations of tropes: *this* and *that* referring to parts of a photograph

This and *that* relating to events:

- (32) a. (a car passing by:) Who is this?
 b. (looking at a broken glass:) Who was that?
 c. (looking at some writing on the board:) Who was that?

Further evidence for reference to tropes or events: choice of tense

Choice of tense of identificational sentences driven by the time of the event or the trope referred to, not the lifespan of the individual identified.

Choice of tense with reference to representations of tropes:

determined by either the trope itself or the time of the representation of the trope
looking at a photograph, talking about a deceased person:

- (33) a. This is my grandfather. He was / * is a teacher
b. This was my grandfather. He was / * is a teacher.

3.2. The formal semantics of identificational sentences

By using a presentational pronoun, the speaker refers to a trope; but the presentational pronoun as subject of an identificational sentence does not have the trope as its denotation:

- (34) a. * That feature is Mary.
b. * That noise is Sue.
c. * That drive is Sue.

more like demonstrative predicates (Heal 1997):

- (35) a. John sang thus.
b. Mary placed the vase so.
c. John painted the picture that way.
d. The house is this color.

the two-stage denotation of presentational *this* (or *that*):

- (36) a. the referential denotation of presentational *this*

For a context of utterance c and a world w ,

$[this]_{ref}^{c,w}$ = the trope that the speaker of c refers to with the utterance of *this* in c .

- b. the presentational denotation of presentational *this*

$[this]^{c,w}$ = the function that maps any conceivable world w' , compatible with what is known in w , to the sum of entities that according to w' are the bearers of $[this]_{ref}^{c,w}$

c. $\langle C, d \rangle \in [is_{ident}]^{c,w} = 1$ iff $C(w) \leq d$.

- (37) the denotation of discourse-related *it* (and *that*, *this*)

For a context of utterance c containing a unique discourse-driven (partial) description D and a world of evaluation w ,

$[it]^{c,w}$ = the function that maps any world w' to the sum of entities in w' of which D holds in w' , if there are such entities; undefined otherwise.

4. Reference to tropes with referential pronouns

4.1. ordinary trope-referring uses of *this* and *that*

(38) a. This is pure elegance.

b. This is injustice.

(39) Did you see that? That might be Mary.

the *like this*-construction:

(40) a. Mary looks like this.

b. Sue's present sounds / smells / feels like that.

c. Pain feels like this.

type-demonstrative adverbials: *like this, that way, so, thus*

identity statements:

(41) a. This is what Sue looks like.

b. This is what incense smells like.

4.2. a more difficult case

(42) a. This looks like Mary. (Carlson 1991)

b. This sounds / smells / feels like Sue. (Carlson 1991)

constraints:

(43) a. * This sings like Mary (Carlson 1991).

b. * This moves like Mary.

(44) a. * This sounds similar to Mary. (Carlson 1991)

b. * This sounds just / exactly like Mary.

(45) a. This sounds similar to that.

b. This car sounds similar to that car.

anaphoric connections with identificational sentences

(46) a. This looks like Mary. But in fact it is Sue.

b. This is Sue. But it looks like Mary.

more difficult with trope-referring *this* or *that*:

(47) a. ? Mary looks like this. But it is in fact Sue.

b. ?? This is Sue. Mary does not look like it.

(42a) as an identificational sentence:

natural paraphrase:

(48) a. This looks as if it was Mary.

derived from (47b):

(48) b. It looks as if this was Mary.

sketch of an analysis: *looks* acts as a sentential operator, with the *as*-clause specifying the content of an epistemic state.

(42) c. looks like [this (is) Mary]

5. The connection to specificational sentences

5.1. specificational sentences

(49) a. What John saw was Mary.

b. What John is is happy.

c. The best player is John.

characteristic specificational sentences: syntactic connectedness (Higgins 1973):

(50) a. What John_i is is proud of himself_i.

b. * John_i's wife is proud himself_i.

(51) a. What every man admires most is his mother. (bound-variable reading of *his* possible)

b. Every man's mother is proud of him. (bound-variable reading of *him* impossible)

5.2. shared properties of identificational and specificational sentences

- restricted to the verb *be*

- constraint on postcopula NP:

(52) a. What John saw was a woman.

b. * What John saw was beautiful (if referring to a woman)

- impossible as small clauses (Mikkelsen 1994):

(53) a. * I consider the best player John.

b. I consider John the best player.

5.3. differences between identificational sentences and specificational sentences

- order of subject and postcopula NP can be reversed in specificational sentences, but not in identificational sentences (Higgins 1973),:

(54) a. Mary is what John saw.

b. * Mary is that / this / it.

- VP deletion (Higgins 1973, Heller 2005, Heller/Wolter 2008):

(55) a. This is Mary; this isn't.

b. * What John saw was Mary; what Bill saw wasn't.

5.4. connections between identificational sentences and (certain types of) specificational sentences

- tag questions

tag questions considered indicative of specificational sentences:

(56) a. The best player is John, isn't it / * he?

b. The best player is American, isn't it / ok isn't he?

Tag questions are identificational sentences, displaying VP deletion !

- presentational pronouns can anaphorically relate to a previously given question or wh-phrase in a specificational sentence (cf. Schlenker 2003, Mikkelsen 2004):

(57) What did John see? Was *that* Bill or Mary?

left dislocation of the free relative in subject position is obligatory in French and sometimes obligatory in German, requiring presentational pronoun in subject position:

(58) a. Ce qui j'ai rencontré, *(c') était Jean.

‘That whom I met that was John.’

b. Wen ich getroffen habe, *(das) war Hans.

‘Whom I met, that was John.’

- specificational sentences with definite NPs as subjects:

(59) The chairman is John. It / * He is not Joe.

- left dislocation of *as for* phrases in English

(60) a. As for the best player, it / * he is John.

b. As for the best player, * it / he is American.

→ presentational pronouns can have just the kind of denotation that wh-clauses or definite NPs have in specificational sentences

→ unified semantics of specificational and identificational sentences in relevant cases.

6. Exceptionally neutral free relatives

6.1. Exceptionally neutral free relatives as trope-referring terms

(61) What I saw was John.

Exceptionally neutral free relatives are subject to the same constraints as presentational pronouns:

- occur only in the subject position of sentences with the verb *be*

(62) a. * John loves what you see here.

b. * What you see here studies in Munich.

- cannot be coordinated with ordinary referential NPs

c. * What you see here and Bill are a nice couple.

- incompatible with ordinary variables

d. * What you see here, whom I have known for a long time, is a very beautiful woman.

- require a referential NP (in the relevant sense) in postcopula position:

e. * What you see here is very beautiful. (referring to a woman)

f. What you see here is a very beautiful woman.

g. What you see here is Mary.

- allow only for an epistemic interpretation of a modal:

(63) a. What you see must be a student.

b. What you see could be a gymnast.

restriction to verbs describing (visual, tactile, or auditory) perception:

(64) a. What Mary noticed was John.

b. What Mary touched / ran into was John.

c. What Mary just heard was John.

(65) * What Mary greeted / shook hand with / met was John.

but perception verbs implying object recognition are not good:

(66) * What Mary recognized was John.

(67) The denotation of exceptionally neutral free relatives

a. the referential denotation

For a context of utterance c and a world of evaluation w ,

$$[What\ NP\ V\ t]_{ref}^{c,w} = \text{sum}(\{t \mid \langle [NP]^{c,w}, t \rangle \in [V]^{c,w}\})$$

b. the presentational denotation

$[What\ NP\ V\ t]^{c,w}$ = the function that maps any world w' compatible with what is known in w to the sum of entities x such that x is a bearer of $[What\ NP\ V\ t]_{ref}^{c,w}$.

sums needed in case the postcopula NP is plural:

(68) What I saw were John and Mary.

sums may also be involved if the postcopula NP is singular:

the postcopula NP may just specify part of what was perceived

→ exhaustive reading and a mention-some reading of specificational sentences (Romero 2005)

(69) For a context c , a world w , an individual concept C , and an individual d ,

$$\langle C, d \rangle \in [iS_{spec}]^{c,w} = 1 \text{ iff } C(w) \leq d. \text{ (Romero 2005)}$$

obligatory epistemic interpretation of a modal:

condition is in fact not entirely correct: the subject of an identificational or specificational sentence (of the relevant sort) must be interpreted as an individual concept within the scope of the modal.

modal may also be interpreted as deontic modal:

- (70) a. The chairman could be Bill, couldn't it?
 b. The president must be a US citizen. It may not be a German citizen.

interpretation of modal must match the kind of individual concept the subject stands for:

$$(71) [\text{NP}_1 \text{ might be NP}_2]^{c,w} = 1 \text{ iff } \exists w'(w'Rw \rightarrow [\text{NP}_1]^{w,c}(w') \leq [\text{NP}_2]^{w,c})$$

6.2. Other specificational subjects: proper names

(72) John Miller is him. Isn't it / he? (Mikkelsen)

German left dislocation of a proper name:

- (73) Maria, das is eine schoene Frau.
 'Mary, that is a beautiful woman.'

standard direct-reference view of proper names:

the intension of a proper name is a constant function

proper name as the subject of a specificational sentence:

stands for an individual concept: a non-constant function mapping an epistemically possible world to the object that according to that world is the bearer of the proper name

further evidence:

interaction with an epistemic modal:

- (74) a. Maria M, das koennte Anna oder aber auch Susanne sein.
 'Mary M, that could be Ann or else Sue.'
 b. Mary M could be Ann or Sue.

5.3. Explaining exceptional neutrality

choice of gender determined at level of referential, not presentational denotation

the case of proper names:

Referential denotation is the use of the proper name (quotation)

Compare:

(75) She is called Mary. That is a nice name.

7. Presentational pronouns and apparent relative identity statements

apparent statements of sortal-relative identity:

(76) a. This is the same lump of clay but not the same statue as that.

b. This is the same man as that.

Recognizing (76a) as an identificational sentence allows for semantic analysis without sortal-relative identity

making use only of reference to tropes and the possibility of tropes having multiple bearers
the trope of roundness and brownness:

bearer1: the lump of clay, bearer2: the statue

apparent relative identity statements with cases of lack of bearer uniqueness discussed in the literature (Levinson 1980, Schnieder 2004):

(77) a. This is the same wool, but not the same sweater as that. (looking at two photographs of a sweater)

b. This (looking at a wound) was the same blade, but not the same knife as that. (looking at another wound)

philosophical literature on constitution-related 'property inheritance':

question which properties constituted objects 'inherit' from constituting ones, discussed only with respect to properties conceived of as universals (Fine 1982, Koslicki 2004)

e.g. a statue inherits its location, weight, color, shape, texture, and chemical composition from the clay from which it is made.

claim: constitution-related property-inheritance yields tropes with multiple bearers, rather than generating different tropes with different bearers.

- same quality

- same causal relations

- spatio-temporally coincident

- intuition: 'feature' the same

- intuition very sharp with corresponding events:

John's carrying the statue = John's carrying the clay from which the statue is made

formal analysis:

(78) $[This\ is_{spec}\ the\ same\ lump\ of\ clay,\ but\ not\ the\ same\ statue\ as\ that]^{c,w} =$
 $[This\ is_{spec}\ (a\ lump\ of\ clay\ and\ the\ same\ as)\ and\ (a\ statue\ and\ not\ the\ same\ as)\ that]^{c,w}$
 $=\ true\ iff\ \exists g \exists f (CF(g) \ \& \ CF(f) \ \& \ g([lump\ of\ clay]^{c,w}) \leq [this]^{c,w}(w) \ \&$
 $f([lump\ of\ clay]^{c,w}) \leq [that]^{c,w}(w) \ \& \ \langle g([lump\ of\ clay]^{c,w}), f([lump\ of\ clay]^{c,w}) \rangle \in$
 $[same]^{c,w}) \ \& \ \exists f \exists g (CF(f) \ \& \ CF(g) \ \& \ f([statue]^{c,w}) \leq [this]^{c,w}(w) \ \&$
 $g([statue]^{c,w}) \leq [that]^{c,w}(w) \ \& \ \neg \langle f([statue]^{c,w}), g([statue]^{c,w}) \rangle \in [same]^{c,w})$

apparent relative identity statements with free relative clauses:

(79) a. What you see here is the same lump of clay, but not the same statue as what you see there.

b. What Heraclitus stepped in today and what Heraclitus stepped in yesterday is the same river, but not the same water. (Perry 1970)

(80) What John saw was both a statue and a lump of clay.

objects with different physical manifestations:

(81) a. This is the same dress, but not the same piece of clothing as that.

b. This is the same copy, but not the same book as that.

c. This is the same bank, but not the same building as that.

case where no sortal-relative identity could be involved:

looking at two photographs of the same woman, taken at the same time:

(80) This is the same woman as that.

References

Beyssade, C. / C. Sorin (2005): 'A Syntax-Based Analysis of Predication'. *Proceedings of SALT 15*, Los Angeles.

- Campbell, J. (1981): 'The Metaphysics of Abstract Particulars'. Reprinted in D.H. Mellor / A. Oliver (eds.): *Properties*. Oxford UP, Oxford, 1997.
- Carlson, G. (1991): 'Cases of Really Direct Reference: Perception or Ostention', handout of a talk given at SALT 1.
- Den Dikken, M. (2006): *Relators and Linkers*. MIT Press.
- Deutsch, H. (2002): 'Relative Identity'. *Stanford Encyclopedia of Philosophy*, online.
- Dummett, M. (1973): *Frege. Philosophy of Language*. Duckworth, London.
- Geach, P. (1957): *Mental Acts*. Routledge and Kegan.
- (1962): *Reference and Generality*. Ithaca, NY.
- (1972): 'Identity'. P. Geach: *Logic Matters*. Blackwell, Oxford, 238-246.
- Groenendijk, J. / M. Stokhof (1982): 'Semantic Analysis of Wh Complements'. *Linguistics and Philosophy* 5, 175-233.
- Fine, K. (2003): 'The Non-Identity of a Thing with Its Matter'. *Mind* 112, 195-234.
- Hawthorne, J. (2003): 'Identity'. In M. Loux / D. Zimmermann (eds.): *The Oxford Handbook of Metaphysics*. Oxford UP, Oxford.
- Heal, J. (1997): 'Indexical Predicates and their Uses'. *Mind* 106, 619-640.
- Heim, I. (1982): *The Semantics and Definite and Indefinite Noun Phrases*. Ph D dissertation, University of Amherst.
- Heller, D. / L. Wolter (2008): 'That is Rosa. Identificational Sentences and Intensional Predication'. A. Groen (ed.): *Proceedings of Sinn und Bedeutung* 12, Oslo.
- Heycock, C. / A. Kroch (1999): 'Pseudocleft Connectedness: Implications for the LF Interface Levels'. *Linguistic Inquiry* 30, 365-397.
- Higgins, F. R. (1973): *The Pseudo-Cleft Construction in English*. Indiana University Linguistics Club.
- Kamp, H. (1981): 'A Theory of Truth and Representation'. In J. Groenendijk et al. (eds.): *Truth, Interpretation and Information*. Foris, Dordrecht.
- Kratzer, A. (1998): 'Scope or Pseudo-scope? Are there Wide-Scope Indefinites?' In S. Rothstein (ed.): *Events in Grammar*. Kluwer, Dordrecht, 163-196.
- Levine, J. (2010): 'Demonstrative Thought'. *Mind and Language* 25.2., 169-195.
- Levinson, J. (1980): 'The Particularization of Attributes'. *The Australasian Journal of Philosophy* 58, 102-115.
- Lowe, E. J. (2007): 'Sortals and the Individuation of Objects'. *Mind and Language* 22, 5, 514-33.
- (2008): 'Tropes and Perception'. In S. Gozzano / F. Orilia (eds.): *Tropes*,

- Universals and the Philosophy of Mind: Essays at the Boundary of Ontology and Philosophical Psychology*, Ontos Verlag, Frankfurt, 175-92.
- Mertz, D. (1996): *Moderate Realism*. Yale UP, New Haven.
- Mikkelsen, L. (2004): *Specifying Who: On the Structure, Meaning, Use of Specificational Copula Sentences*. Ph D thesis University of Santa Cruz.
- Moltmann, F. (1992): 'Reciprocals and *Same/Different*. Towards A Semantic Analysis.' *Linguistics and Philosophy* 15, 411-462.
- (2009): 'Degree Structure as Trope Structure A Trope-Based Approach to the Semantics of Positive and Comparative Adjectives'. *Linguistics and Philosophy* 31, 51-94.
- Noonan, H. (1997): 'Relative Identity'. In B. Hale / C. Wright (eds.): *Philosophy of Language*. Blackwell, Oxford. 634-652.
- Perry, J. (1970): 'The *Same F*'. *The Philosophical Review* 79.2., 181-200.
- Reinhart, T. (1997): 'Quantifier Scope: How Labour is Divided between QR and Choice Functions'. *Linguistics and Philosophy* 20, 335-395.
- Romero, M. (2005): 'Concealed Questions and Specificational Subjects'. *Linguistics and Philosophy* 25, 687-737.
- Schlenker, P. (2003): 'Clausal Equations (A Note on the Connectivity Problem)'. *Natural Language and Linguistic Theory* 21, 157-214.
- Schnieder, B. (2004): 'A Note of Particularized Qualities and Bearer-Uniqueness'. *Ratio* 17, 218-228.
- Williams, D. C. (1953): 'On the Elements of Being'. *Review of Metaphysics* 7, 3-18.
- Woltersdorff, N. (1970): *On Universals*. Chicago UP, Chicago.
- Winter, Y. (1997): 'Choice Functions and the Scopal Semantics of Indefinites'. *Linguistics and Philosophy* 20, 399-467.