

Relations R Us: Semantics and Pragmatics of Adnominal Constructions in Korean and Japanese

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Contents

1. Introduction
 1. Basic facts, issue, direction/claim
2. Lexicalism
 1. Previous studies
 2. Distributional characteristics of ‘의’ and ‘의’
3. Contextualism
 1. Proposal
 2. Argumentation: Discourse, Lexical ontology, Common sense
 1. Interpretation model
4. Conclusion

Adnominal expressions

1. *Anna-no-ie* / Annaのいえ (Japanese)

2. *Anna-ui cip* / Anna의 집 (Korean)

Anna – ADN –house ‘Anna’s house’

- typical interpretation
 - the house that Anna lives in
- Question: How do we get the reading? How do we know the relationship between ‘Anna’ and ‘house’ is that of ‘living-in’?

1. Introduction

Interpretation of adnominal construction

- *Anna's hand*
 - the hand that Anna possesses
- Where does the reading 'possess/own' come from?
- rich lexical information vs. contextual narrowing
 - Semantically encoded in the lexicon of the word
vs.
 - Contextually provided

1. Introduction

Issue

• Anna の/은|/'s house

• Anna lives in the house.

owns

....

???

Direction of the talk

- A model which accommodates the strong discourse sensitivity
 - “interpretation of noun phrases with *no* is in fact context and situation dependent, and is not lexically driven” Tsuda & Harada (1996)
 - To argue for an approach where the discourse and pragmatics play an active and larger role in the process of interpretation

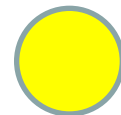
Lexical approach

- (Strong) lexicalism
 - Most of the relevant information are encoded in the lexical entries.
 - Choi 1998 for Korean
 - Nishiguchi 2009 for Japanese

2. Lexicalism

Extended Generative Lexicon (Nishiguchi 2009)

- “The Japanese *NP1-no NP2* ‘NP1-gen NP2’ construction expresses a wider range of relations between two entities than does the English possessive ‘*NP1’s NP2*,’ such that the Pustejovskian qualia roles encoded in *NP2* do not supply the necessary relations between two entities,.... Possessive relation disambiguation requires enriching lexical entries by incorporating more information.



Relation Disambiguation by Possessor Noun (NP1)

- “With the exception of the part-whole relation, it is the possessor nominals rather than the possessee nominals that specify the relations between two arguments.
 - “Japanese possessives need to consider the qualia structure of the possessor noun.
 - “The qualia roles of *NP1* ... provides a key to disambiguation of possessive meanings.
- “to apply Pustejovsky's qualia roles to *NP1*

Argument Reversal

- “The controller-controllee relation is reversed.”
- (I) *Naomi-no kaban* ‘Naomi-GEN bag’: The possessor argument is NP_1 .
- (V) *kaban-no hito* ‘bag-GEN person’: The possessor of the bag is NP_2 *hito* ‘person’
- (VI) *kaban-no Kochi* ‘bag-GEN Coach’: *Coach* is a store, and therefore the possessor of a bag.
 - If *Coach* is a bag store, the TELIC role of *Coach* lies in the act of selling, and *bags* are the theme of the selling event.
 - a need to go beyond the Pustejovskian qualia structure

2. Lexicalism

Modification of Inherent Property

- *Kaban-no Kochi* ‘bag-GEN Coach’
 - “the TELIC role of *Coach* lies in the act of selling

Kochi “COACH”	
TYPESTR =	[ARG1 = [x]STORE]
ARGSTR =	[D-ARG1 = [y]HUMAN D-ARG2 = [z]PHYS_OBJ D-E1 = [e1]PROCESS D-E2 = [e2]PROCESS]
QUALIA =	[FORMAL = [x] TELIC = SELL_ACT([e1], [y], [z])]

Modification of Non-inherent Property

- *Tokyo-no shinseki* ‘Tokyo-GEN relatives’
 - “it probably implies that he/she currently resides in Tokyo.

$\left[\begin{array}{l} \text{shinseki "RELATIVE"} \\ \text{TYPESTR} = \left[\begin{array}{l} \text{ARG1} = [x]\text{RELATIVE} \\ \text{ARG2} = [y]\text{HUMAN} \end{array} \right] \\ \text{EVENTSTR} = \left[\begin{array}{l} \text{E1} = [e1]\text{STATE} \\ \text{D-E1} = [e2]\text{TRANSITION} \\ \text{D-E2} = [e3]\text{STATE} \end{array} \right] \\ \text{ARGSTR} = \left[\begin{array}{l} \text{D-ARG1} = [z]\text{HUMAN} \\ \text{D-ARG2} = [l]\text{LOCATION} \end{array} \right] \\ \text{QUALIA} = \left[\begin{array}{l} \text{FORMAL} = \text{KINSHIP_RELATION}([e1], [z], [y]) \\ \text{AGENTIVE} = \text{KINSHIP_RELATION}([e2], [z], [z]) \end{array} \right] \\ \text{EXT} = \left[\text{LOC} = \text{IN}([e3], [z], [l]) \right] \end{array} \right]$	$\left[\begin{array}{l} \text{Tokyo} \\ \text{TYPESTR} = \left[\text{ARG1} = [x]\text{LOCATION} \right] \\ \text{ARGSTR} = \left[\text{D-ARG1} = [w]\text{PHYSOBJ} \right] \\ \text{QUALIA} = \left[\begin{array}{l} \text{FORMAL} = \text{IN}([w], [x]) \\ \text{CONSTITUTIVE} = \text{IN-JAPAN}([x]) \end{array} \right] \end{array} \right]$
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Selecting R Out of Qualia Structure

- how to decide which qualia role to take → Saliency
- How to disambiguate between more than one available qualia role:
 - *Maaruboro-no kuni* “Marlboro Country”
 - the country that manufactures Marlboro cigarettes (AGENTIVE role)
 - the country whose people smoke the Marlboro brand (TELIC role)
 - the most salient property of y in the utterance context is predicated by $R-X$
 - $\lambda Y. \iota y [Y(y) \ \& \ R-X(\epsilon x.X)(y)]: R-X(\epsilon x.X)$ —the most salient one
 - In *Maaruboro-no kuni* “Marlboro Country,” the AGENTIVE role, the “make act” of Marlboro, is the more salient characteristic of the country than the TELIC role, the smoking act.

Problems

- The role of the context including the discourse is still critical for ‘predicting’ the correct reading.
 - In order for the context to be able to select the most appropriate information from among the many candidates, it has to be able to evaluate every aspect of the information encoded in the lexicon. → a very powerful role
- The ‘defeasibility’ of the semantic information seems to require a drastic redrawing of the boundary between semantics and pragmatics. (Lascarides & Copestake 1998)
 - how to distinguish between defeasible information from the lexicon vs. pragmatically defined defeasible information

Problems

- The case of proper names

- *Tokyo-no shinseki*

- ‘Tokyo-GEN relatives

Tokyo	
TYPESTR =	[ARG1 = [x]LOCATION]
ARGSTR =	[D-ARG1 = [w]PHYSOBJ]
QUALIA =	[FORMAL = IN ([w], [x])]
	[CONSTITUTIVE = IN-JAPAN([x])]

- Do proper names have descriptive contents in the lexicon?
 - the boundary issue between a lexicon and an encyclopedia
- Other issues with the GL approach to the genitive construction (cf. Asher & Denise 2004)

2. Lexicalism

Distribution of the J/K adnominal structures: Table from Nishiguchi (2009)

Relation	Japanese	Gloss/Eng-Gen	Korean
I possession	<i>Naomi-no kaban</i>	<i>Naomi's bag</i>	<i>Naomi-ui gabang</i>
II part-whole	<i>Naomi-no kao</i>	<i>Naomi's face</i>	<i>Naomi-ui eolgul</i>
III location 'in'	<i>Tokyo-no shinseki</i>	<i>*Tokyo's relative</i>	<i>Tokyo-ui chincheog</i>
IV time	<i>yugata-no koen</i>	<i>*evening's park</i>	<i>?jeonyeog-ui gong-won</i>
	<i>natsu-no kyuka</i>	<i>*summer's vacation</i>	<i>?yeoleum-ui banghag</i>
	<i>7-ji-no nyusu</i>	<i>*7 o'clock's news</i>	<i>(?)7si-ui nyuseu</i>
V accompaniment 'carry'	<i>kaban-no hito</i>	<i>*bag's man</i>	<i>*gabang-ui salam</i>
	<i>boshi-no fujin</i>	<i>*hat's lady</i>	<i>?moja-ui yeoin</i>
VI trade 'sell' / 'for'	<i>kaban-no Kochi</i>	<i>*Bags' Coach</i>	<i>*gabang-ui kochi</i>
	<i>ningyo-no Morishige</i>	<i>*Dolls' Morishige</i>	<i>*inhyeong-ui molisige</i>
VII activity 'dominant characteristic'	<i>Maaruboro-no kuni</i>	<i>*Marlboro's country</i>	<i>Malbolo-ui nala</i>
	<i>biiru-no machi</i>	<i>*the beer's city</i>	<i>maegju-ui dosi</i>

2. Lexicalism

Distribution of the J/K adnominal structures: Table from Nishiguchi (2009)

Relation	Japanese	Gloss/Eng-Gen	Korean
VIII property	<i>chisee-no hito</i>	* <i>intelligence's man</i>	* <i>jiseong-ui salam</i>
	<i>osu-no tora</i>	* <i>male's tiger</i>	? <i>susnom-ui holangi</i>
	<i>aoi-me-no ningyo</i>	* <i>blue eyes' doll</i>	<i>puleunnun-ui inhyeong</i>
	<i>tsutsuji-no koen</i>	* <i>azaleas' park</i>	? <i>jindallae-ui gong-won</i>
IX quantity	<i>1-kiro-no pasokon</i>	* <i>1 kg's computer</i>	? <i>1 kg-ui computer</i>
	<i>3-bon-no pen</i>	* <i>three's pen</i>	<i>sejalu-ui pen</i>
X intensional property	<i>nise-no fukahire</i>	* <i>fake's shark fin</i>	? <i>gajja-ui sang-eojineule omi</i>
	<i>nise-no keisatsukan</i>	* <i>impersonator's policeman</i>	? <i>bunjang-ui gyeongchal gwan</i>
XI kind	<i>osu-no tora</i>	* <i>male's tiger</i>	? <i>susnom-ui holangi</i>

Proposal

- An adnominal construction projects an R relation that needs to be resolved by an immediate discourse or other knowledge.
 - A certain similarity to pronouns
 - “In most cases the reference of a context-sensitive expression is determined on a pragmatic basis. That is true not only of standard indexical expressions, but also of many constructions involving something like a free variable. For example, a possessive phrase such as *John’s car* arguably means something like “the car that bears relation R to John”. (Recanati 2004:454)

Proposal

- The free variable R must be contextually assigned to a particular value; but that value is not determined by a rule and it is not a function of a particular aspect of the narrow context. What a given occurrence of the phrase *John's car* means ultimately depends upon what the speaker who utters it means. It therefore depends upon the wide context. That dependence upon the wide context is a characteristic feature of semantically indeterminate expressions, which are pervasive in natural language. Their semantic value varies from occurrence to occurrence, ... (Recanati 2004:454)
- The 'default' reading is typically defined on the basis of some WordNet style lexical ontology, or the speakers' knowledge concerning the referents of the relevant nouns.

Proposal

1. Lexicon: no defeasible information
2. Discourse for the utterance
3. Lexical ontology: part-whole, etc. (cf. WordNet)
 1. *My hand* (hand PART OF person)
4. Common sense/world knowledge

A: The role of discourse

- Primary dependence on discourse context
 - We can be sure of the meaning relationship between nouns in the adnominal/genitive construction only to the extent that the context provides any relevant hints for it.

3. Contextualism

Example 1: “*my building*”

- *“Returning from his first trip to Libya this past March, Tim came to visit me in the South Bronx, where I had recently moved into an old, landmarked house.*
- *“We stood in front of my building looking at the empty storefront and talked about a long-held dream: to open a photo gallery and educational space.*
- <http://lens.blogs.nytimes.com/2011/10/20/a-show-of-respect-for-a-fallen-friend/>

3. Contextualism

ambiguity or vagueness

1. the building that I own
2. the building that I rented
3. the building that my friend let me use for free
4. the building that I simply occupied
5. the building that ...
6. ...
7. the building that I recently moved into

Example 2: “*his room*”

- *She fumbled through her purse until she found the crumpled envelope. Scanning the return address, she drove five more blocks and found **his building**. When she was about to ring the doorbell, a laughing couple exited, leaving the door to close on its own. She slipped inside and rode the elevator up to **his floor**. Exiting, she followed the apartment numbers until she came to **his door**. [... Finally she entered **his room**....*

How to: Discourse factors

- Discourse Representation
Structure (Van Eijck&Kamp 2011)

1. *A man entered.*
2. *He smiled.*

x
x is man. x entered.

- terms
 - discourse referents /
reference markers (x, y)
 - conditions
 - linking (\approx)

x, y
x is man. x entered. y smiled. $y \approx x$

How to: Discourse Representation

1. *“Tim came to visit me in the South Bronx, where I had recently moved into an old, landmarked house.”*
2. *“We stood in front of my building looking, ...”*

x, y, p, z, q
x move-into y
p = x move-into y
y house
x R z
q = x R z
z ≈ y
q ≈ p

contextual variations

- No limit in the possible variation
 - Because of the heavy dependence on the pragmatic/discourse context, it is not realistic or virtually impossible to exhaustively list all the possible meanings in the lexicon

3. Contextualism

Example 4: “*my book*”

1. *So, as I say in my book, it's not about the weight.*
2. *A friend had convinced me to publish my book under her new fledgling publishing company.*
3. *After a while she looked down at my book and asked me what I intended to do after I graduated.*

B: The role of lexical ontology

- Inalienable possession
 - *kanozo-no te, her hand, my teeth, my legs*
 - the strongest relation possible that is the most prototypical type of meaning for the adnominal or genitive construction
- As part of the speaker's knowledge, some kind of lexical ontology as shown in WordNet can be assumed to play a role in determining the meaning relation in the adnominal construction.

3. Contextualism

How to:

- WordNet style lexical ontology
 - not necessarily encoded in each lexical entry
- ex.: *Anna-no te* ‘Anna’s hand’

x, y
x is Anna. y is hand. x R y R ≈ part-of

WordNet 3.1

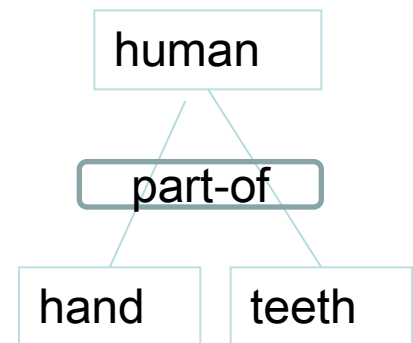
S: (n) **hand**

part holonym

S: (n) arm

S: (n) homo, man, human

being, human



3. Contextualism

Example 5: "*that little stinker stole my teeth.*"

1. Bill Exner is determined to catch the mouse he claims stole **his lower dentures** and hid them inside a wall. ...
 2. Exner went to bed Tuesday night and instead of putting his lower dentures in the bathroom as he usually does, he was so tired he took them out and laid them on his nightstand, he said.
 3. The next morning, **the false teeth** were gone. ...
 4. "We moved the bed, moved the dressers and the nightstand and tore the closet apart," Exner said. "I said, I knew that little stinker stole **my teeth**' -- I just knew it."
- http://findarticles.com/p/articles/mi_8137/is_20070324/ai_n50650307/

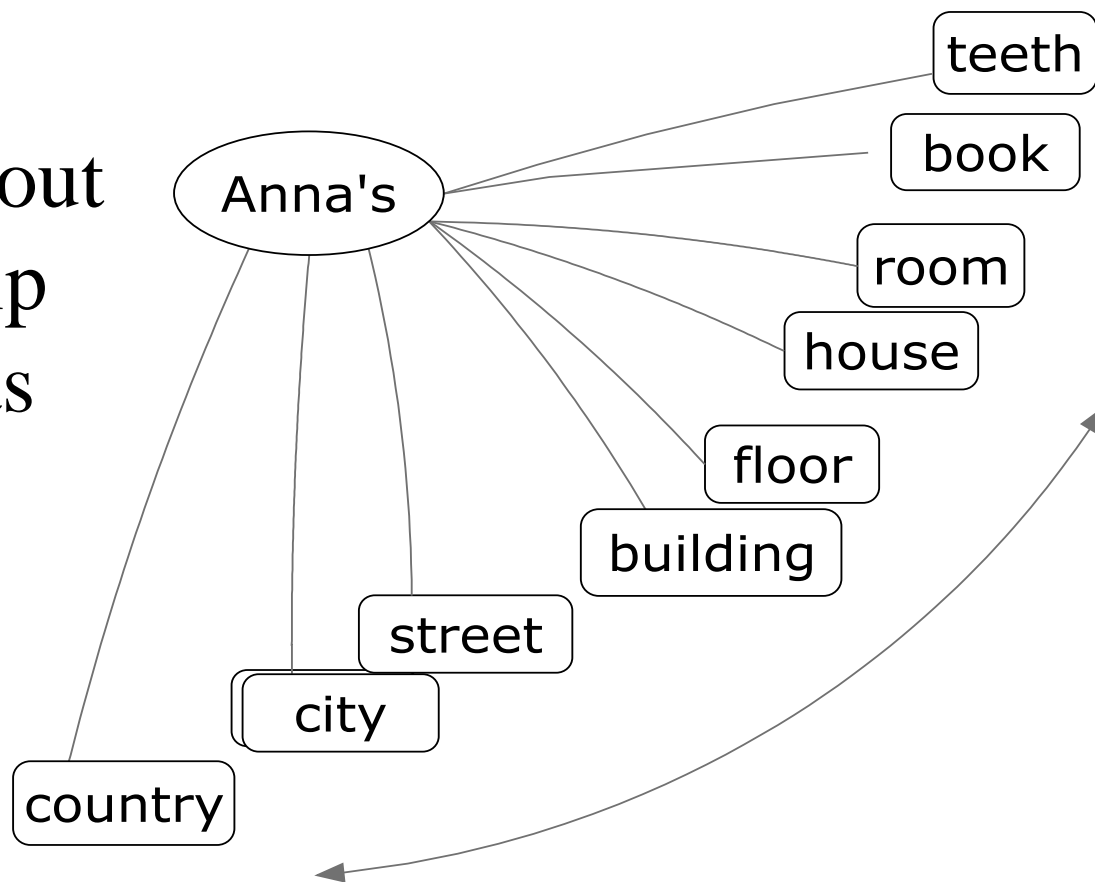
3. Contextualism

C: The role of speaker's world knowledge in general

- the speaker's knowledge about some salient relation between the referents.
 - This knowledge is transferred from the context and may play a role in tentatively determining the meaning relations in the interpretation of the expression.
 - This information is inferential rather than definitive.
 - The process can be thought of as a kind of accommodation.

Gradient nature

- Speaker's knowledge about the relationship of the referents of the (pro)nouns involved.



3. Contextualism

Example 6: “*Jiwhan’s room*”

1. 지환의 방의 블라인드의 색깔은 전형적인 녹청색이다. [...]
2. 志煥의 部屋의 블라인드의 색は、典型的な緑青色です。 [...]
3. The blinds in **Jiwhan's room** have the typical color of greenish blue.
4. 이 방의 주인은 댄디이고 신사이며 정의감과 다방면의 예술에 대한 소양을 갖춘 관찰은 남자인데. [...]
5. この部屋の主はダンディで紳士であり、正義感と多方面の芸術に対する素養を備えたいい男なのに。 [...]
6. The owner/occupant of this room is dandy, gentle,..., a cool guy.
7. 원룸에 입주할 때 [...]
8. ワンルームマンションに入居する時 [...]
9. When [he] moved in to [this] studio

3. Contextualism

“Jiwhan의 방”

- What kind of relationship is assigned between ‘Jiwhan’ and ‘room’ in line 1/2/3?
- Three possibilities:
 1. We first assign an ‘possession’ relationship, and then later on reassign a ‘renting’, overriding the initial assignment.
 2. Leave the relationship as R until it becomes a bit clearer.
 3. Starting with R, tentatively assign a somewhat broader relationship like ‘occupant’ or mere ‘assignment’ based on the speaker’s world knowledge regarding the referents of *Jiwhan* and *room*, and narrow it further if/when the discourse makes it more definitive.

3. Contextualism

Example 7: *Tokyo-no shinseki*

1. *Tokyo-no shinseki* ‘Tokyo-ADN relatives’
"relatives in/from/visiting/... Tokyo"
 2. *Tokyo-no Anna* ‘Tokyo-ADN Anna’
"Anna in/from/visiting/... Tokyo"
- Apparently of the same semantic relationship
 - The semantic relation between *Tokyo* and *Anna* cannot be attributable to the semantics of the proper names which is presumably devoid of any descriptive content.

3. Contextualism

Example 8: *Obama-ui America*

1. *obama-ui migug* ‘Obama-ADN America’
2. *migug-ui obama* ‘America-ADN Obama’
3. *oneul-ui seoul* ‘today-ADN Seoul’ "Seoul today/the current Seoul“
4. *seoul-ui oneul* ‘Seoul-ADN today’ "Seoul today/these days in Seoul“
5. *ius-ui anna* ‘neighbor(hood)-ADN Anna’ "Anna in the neighborhood" / 近所のAnna
6. *anna-ui ius* ‘Anna-ADN neighbor(hood)’ "(the) neighbor(hood) of Anna" / Annaの隣人

3. Contextualism

D: The role of the lexical semantic information

- Lexically encoded
- The case of relational nouns
 - *Anna's father, Anna's sister, Anna's relative*
- The case of predicative nouns
 - *Anna's fall, Anna's marriage*
 - Cf. *Anna's wedding ceremony*
- Q: Can the meaning relation in these cases also be cancelled due to some discourse factor?

Conclusion

- There are infinite number of possible meaning relations between NP1 and NP2 in the adnominal construction.
- It is not plausible to assume that all those possibilities should be encoded in the lexical information of the nouns involved.
- Some of the relations are constrained by the discourse, some by the salient relation drawn from the lexical ontology, some by lexically encoded information, and others based on the speaker's world knowledge about the possible relation between the referents.

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