

Introduction

- Relational adjectives classify the nominal according to the sense provided by the adjective.

- (1) a. medical doctor
b. French invasion
c. electrical tape

- RAs that denote **social roles**.

- (2) a. presidential election
b. presidential mansion
- (3) a. senatorial district
b. senatorial career
- (4) a. papal succession
b. papal authority
- (5) a. royal marriage
b. royal family

- Typically, parallelism between possessors and relational adjectives modifying deverbal nouns.

- (6) a. French invasion of Russia
b. France's invasion of Russia

- The use of the nominal form of the adjective in a verbal predication allows an inference to the RA in some cases.

- (7) France invaded Russia \rightsquigarrow There was a French invasion of Russia

- Role-denoting RAs break this pattern. **No equivalence** between a possessor and an RA.

- (8) a. the president's visit (to his mother)
b. a presidential visit (#to the president's mother)

- No inference** generally allowed from the verbal predication to the relational adjective as well.

- (9) The president visited his mother
 \neq There was a presidential visit to the president's mother.

- Similar facts hold with other nominals, where modification by the RA relates to the office, while possessors relate to the individual holding the office.

- (10) a. the presidential desk
b. the president's desk (his personal desk)

- (11) a. a presidential advisor
b. the president's advisor (a personal finance advisor)

Questions

- What is the semantic representation of relational adjectives?
- How do predications related to roles differ from predications with ordinary individuals?

Criticism of previous theories

- McNally & Boleda (2004): RAs are properties of Carlsonian kinds. Common nouns have kind-level arguments.

- (12) a. $\llbracket \text{architect} \rrbracket = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge \text{architect}]$
b. $\llbracket \text{technical} \rrbracket = \lambda x_k [\text{technical}(x_k)]$

- (13) $\llbracket \text{technical architect} \rrbracket = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge \text{architect}(x_k) \wedge \text{technical}(x_k)]$

- Arsenijevic et al. (2014) extend this account to ethnic adjectives such as *French*. **Origin** relation asserts that the kind arises in the nation denoted by the adjective.

- (14) $\llbracket \text{French wine} \rrbracket = \lambda y_o \exists x_k [R(y_o, x_k) \wedge \text{wine}(x_k) \wedge \text{Origin}(x_k, \text{France})]$

- Predicts that RAs should be able to be used predicatively when their argument is a kind.

- Some RAs cannot be used predicatively even with kind-referring expressions, but others can be used predicatively even when their argument is not a kind.

- (15) *Doctors/a doctor can be medical. (cf. *medical doctor*)

- (16) **This university is public**, but there are also some private universities and colleges on the island. (Google)

- RAs show different relations adjective and noun, calling into question the strategy of specifying relational internally.

- (17) a. neurological clinic (clinic for neurological problems)
b. neurological textbook (textbook about neurology)
c. neurological conference (conference for neurologists)

What's in a role?

- Ontology contains **role individuals**, sortally distinct from **concrete individuals** (compare de Swart et al. 2007).

- Abstract individuals who act according to the duties, customs, et cetera of an institution. "Grounded" by concrete individuals.

- Certain institutionalized activities and events entail the existence of a role individual for those events.

- Mapping functions** between institutional events, role individuals, and concrete individuals.

ROLE : events \rightarrow role individuals

- ROLE is a partial function from events to role individuals participating in those events.

IMPL : role individuals \rightarrow concrete individuals

- IMPL is a total function from role individuals to concrete individuals grounding those roles.

Decomposition of the adjective

- RAs are constructed from a role-denoting nominal.

- Example: *presidential* = *president* + *-al*

- Consider role denoting nouns such as *president* to include reference to an institutional activity or event.

- Morphological shift (*president* \rightsquigarrow *presidency*) provides evidence for this event.

- Presidency* is eventive: possible to make predications with respect to duration and location in time.

- (18) a. Barack Obama's presidency lasted eight years.
b. Because **his presidency occurred between those of Grover Cleveland and Theodore Roosevelt**, McKinley's accomplishments have often been overlooked. (Google)

- Lexically decompose** the nominal core of role-denoting RAs to expose this event (**lead** event).

- Decomposition represented as a frame (Löbner, 2017).

- ROLE provides mapping from events to role individuals.

- IMPL maps role individuals to concrete individuals.

- (19) $\llbracket \text{the president (of France)} \rrbracket = \lambda x \exists e \left[\begin{array}{l} \text{IMPL}(\text{ROLE}(e)) = x \quad \wedge \\ \text{lead}(e) \wedge \text{THEME}(e) = \text{France} \end{array} \right]$

- DPs such as *the president* usually have the concrete individual as their referent.

Analysis

- Modification by the RA links the modifier's decomposition with the modifiee's decomposition.

- When modifying eventive nouns (*presidential visit*), event in the modified noun is asserted to be a **subevent of the institutional event**.

- (20) $\llbracket \text{presidential visit} \rrbracket = \lambda e' \exists x \exists e \left[\begin{array}{l} \text{IMPL}(\text{ROLE}(e)) = x \quad \wedge \\ \text{lead}(e) \wedge \text{visit}(e') \wedge e' \sqsubseteq e \end{array} \right]$

- Representation does not entail that *president* must be the agent of the visiting event.

- (21) Will NBA champions continue to visit the White House under Donald Trump? One of the first players to make **the presidential visit** gives his opinion. (Google)

- As event is subpart of the institutional event, inferred to also be "official" or role-related in some way, explaining the lack of inference to the RA:

- (9) The president visited his mother
 \neq There was a presidential visit to the president's mother.

Analysis

- Divorcing the role individual from the concrete individual allows for **predications involving the role individual**.

- Inference that objects like *presidential desk* have an "official" or role-related nature are due to this.

- (22) $\llbracket \text{presidential desk} \rrbracket = \lambda y \exists x \exists e \left[\begin{array}{l} \text{IMPL}(\text{ROLE}(e)) = x \wedge \text{lead}(e) \quad \wedge \\ \text{desk}(y) \wedge \text{POSSESSOR}(y) = \text{ROLE}(e) \end{array} \right]$

- Examples such as *presidential advisor* also derive their role-related nature from this.

- Role individual participates as the theme of advising event in the decomposition of *advisor*.

- (23) $\llbracket \text{presidential advisor} \rrbracket = \lambda y \exists x \exists e \exists e' \left[\begin{array}{l} \text{IMPL}(\text{ROLE}(e)) = x \wedge \text{lead}(e) \wedge \\ \text{advise}(e') \wedge \text{AGENT}(e') = y \quad \wedge \\ \text{THEME}(e') = \text{ROLE}(e) \end{array} \right]$

Conclusion

- Modification by relational adjectives relate aspects of the lexical semantics of the adjective with that of the noun.

- Predications involving relational adjectives are more complex than simply kinds; they also involve roles and events.

- Lexical decomposition allows for a fuller understanding of how the meaning of the adjective interacts with that of the modified nominal.

- Although focused on *presidential*, strategy is generalizable to other role-denoting adjectives.

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