The Lexical Semantics of Role-Denoting Relational Adjectives
Curt Anderson
DFG SFB 991, Heinrich-Heine-Universität Düsseldorf

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
  c. senatorial district
• Typically, parallelism between possessors and relational adjectives modifying deverbal nouns.
  (6) a. French invasion of Russia
  b. France’s invasion of Russia
• 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. ~ 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. # 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 president’s desk
  b. the president’s desk (his personal desk)
• No inference generally allowed from the verbal predication to the relational adjective as well.
  (11) a. a presidential advisor
  b. the president’s advisor (a personal finance advisor)

Criticism of previous theories

• McNally & Boleda (2004): RAs are properties of CARLONIAN kinds.
  Common nouns have kind-level arguments.
  (12) a. [architect] = λx, y.(R(y, x) ∧ architect)
  b. [technical] = λx, y.(technical(x) ∧ x)
• Role-denoting RAs break this pattern.
  (13) [technical architect] = λx, y.(R(y, x) ∧ architect(x) ∧ technical(x))
  (14) [French wind] = λy, x.(R(y, x) ∧ win(x) ∧ (Origin(x) = France))
• Role-denoting RAs break this pattern. ❮No equivalence❯ between a possessor and an RA.
  (15) *Doctors/doctors can be medical. (cf. medical doctor)
• RAs show different relations adjective and noun, calling into question the strategy of specifying relationally internally.
  (16) This university is public; but there are also some private universities and colleges on the island.
• Role-denoting RAs break this pattern. ❮No equivalence❯ between a possessor and an RA.
  (17) a. a clinical neurologist (clinical for neurological problems)
  b. neurological textbook (textbook about neurology)
  c. neurological conference (conference for neurologists)

What’s in a role?

• Ontology contains role individuals, essentially distinct from concrete individuals (compare de Swart et al. 2007).
• Abstract individuals who act according to the duties, customs, etc. 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 → role individuals
• ROLE is a partial function from events to role individuals participating in those events.
  IMPL: role individuals → 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 → presidency) provides evidence for this event.
• Presidency is evocative: 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.
• 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.

Analysis

• Modification by the RA links the modifier’s decomposition with the modifier’s decomposition.
• When modifying eventive nouns (presidential visit), event in the modified noun is asserted to be a subevent of the institutional event.
  (20) [presidential visit] = λx, y.(R(x) ∧ lead(y) ∧ visit(c) ∧ c ∈ e)
  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.
• The president visited his mother. # There was a presidential visit to the president’s mother.

Questions

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

References


• Impl.

Acknowledgements and Contact

This research is funded by German Research Foundation (DFG) SFB 991, project C10, at Heinrich-Heine-Universität Düsseldorf. I thank Sebastian Löbner, Wiebke Petersen, Willi Geuder, Ai Taniguchi, and Ekaterina Gabrovska for their input at various stages.

• Web: www.sfb991.uni-duesseldorf.de/en/c10/
• Email: andersw@hhu.de