Movement of properties and properties of movement

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**Overview**
- It is well-known that our semantic machinery generates many meanings that are not utilized in natural language.
- This paper contributes a novel argument that one way in which semantics that are not utilized in natural language.
- Evidence for these arguments comes from a detailed investigation of movement that targets property-denoting DPs.
- This thus provides a novel argument for the economy hypothesis.

**Π-positions**
Postal (1994) observes that there are syntactic environments in English that can be targeted by only some types of A'-movement, such as wh-movement but not topicalization. I will refer to these environments as Π-positions:

- **Existential constructions** (Landman 2006)
  - Variables in the LFs of natural languages are only of individual types, e.g. entities, situations/worlids, and degrees.

**Quantifier Raising (QR)**
This generalization is further supported by Π-positions prohibiting QR over the subject or negation from a Π-position:

**Type shifting and traces**
- Property denotations can be achieved via type shifting (Partee 1986):
  - Property types can be shifted into property-type meanings.
- Traces are interpreted via Trace Conversion (TC), the LF rule that interprets traces under the Copy Theory of Movement (Fox 2002):

**Type shifting and traces**
- Property denotations can be achieved via type shifting (Partee 1986):
  - The movement types that can target Π-positions, e.g. wh-movement, shift scope optionally:
    - How many books, should Nina read __? (4) a. Megan painted the house magenta.
    - What color, did Megan paint the house __? (4) a. Helen called the cat Snowball.
    - What kind of teacher, did Erika become __? (4) a. Erika became a teacher.
    - A math teacher, Erika became __?

**Generalization I: Properties**
- DPs in Π-positions denote properties (e, t).
- Existential constructions (Mil'sark 1974; Heim 1987; McNally 1997, 1998)
- Change-of-color verbs (resultatives) (Krämer 2005)
- Naming verbs (Matushansky 2008)
- Predicate nominals (Williams 1983; Partee 1986)

**Generalization II: Scope**
- Scope-shifting movement cannot target a Π-position.

**Generalization III: Weak definites**
- The important difference between weak and strong definites is that strong definites are anaphoric (i.e. have an index/variable) and weak definites are not (Schwarz 2009):
  - Definities in Π-positions cannot be anaphoric, as shown below with quantificational covariance with an indefinite.

**Analysis**
Scope-shifting movement → Trace of type e
- Scope-shifting movement, under standard assumptions, must leave a trace of type e in order to shift scope.
- An e-type trace does not denote a property and therefore is incompatible with the property-type requirement of a Π-position.
- This incompatibility yields a type mismatch and hence ungrammaticality:
  - [DP, x ↦ x] in Π-position.

Non-scope-shifting movement → Reconstructs
- Movement that does not shift scope instead reconstructs syntactically.
- Therefore, if a DP would not ordinarily violate the property-type requirement of a Π-position, then it will not do so under reconstruction either:

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