Propositional Interpretations of Derived Nominals
Ilaria Frana\(^1\) and Keir Moulton\(^2\)
\(^1\)University of Enna “Kore”, \(^2\)Simon Fraser University

Vendler (1967) claimed that derived nominals (DNs) like *Mary’s arrival* are ambiguous between denoting events and propositions. When they combine with event-selecting predicates (1a), which propositional *that*-clauses cannot (1c), they have event readings (1b). When they combine with proposition-selecting predicates (2a), they have propositional readings (2b)—hence, Conceded Propositions (ConPs). We defend an analysis of DNs/ConPs in which they uniformly denote (or quantify over) events. In doing so, we solve a challenge discovered by Zucchi (1993) to the unambiguous event approach. We show that a copy-theoretic account (Chomsky 1993, Fox 2002) overcomes the problem and aligns ConPs with concealed questions (CQs) in the analysis of Frana (2013, 2017).

1) a. Mary’s arrival was postponed/sudden/…
   b. = The event of Mary’s arrival has the property (of events) of being sudden/…
   c. # (The fact) that Mary arrived was postponed/sudden.

2) a. John knew /was informed /was aware of the collapse/ing of the Germans. (ConP)
   b. = John knew /was informed /was aware (of the fact) that the Germans collapsed.

**Problems for Vendler’s ambiguity hypothesis:** A) The over-generation problem: Zucchi notes that if DNs could denote propositions, (3a) should have a ConP-reading equivalent to (3b). However, while (3b) is compatible with a scenario in which John did not witness the event, but was simply informed about it, (3a) is not.

3) a. John remembers *Mary’s arrival.*
   b. John remembers (the fact) that Mary arrived.

The over-generation problem extends to a range of verb types. The ambiguity approach wrongly predicts equivalence of (5a) and (5b) in perception reports (Barwise 1981) and that of CP and DP complements of *explain* (contrary to fact, Pietroski 2000, Elliott 2016):

4) a. John saw the arrival of the package from Amazon, *but he didn’t witness the arrival.*
   b. John saw that the package arrived from Amazon, **but he didn’t witness the arrival.**

5) a. John explained Mary’s resignation.  
   b. John explained that Mary resigned.

These data indicate that the selecting predicates are responsible of the meanings available to the DNs, not an ambiguity in the DN itself. B) Factivity: The verbs *tell/inform* are not factive when they take *that*-clauses, but are factive when they take DNs with ConP-interpretations, this is puzzling if ConPs were propositions:

6) a. Julia was informed/told that Cicero died, **when in fact he was alive.**
   b. Julia was informed/told of Cicero’s death, **#when in fact he was alive.**

**Zucchi’s event approach** has DNs uniformly denote events; ConPs are derived by manipulating the verb’s lexical entry. Event-selecting *inform of* in (7b) derives ConPs without assuming DNs denote propositions (note the DN takes wide scope wrt. the verb).

7) a. John is informed of Mary’s arrival. (= J. is informed of the fact that M. arrived)
   b. [[be informed of ]\(x\)] = \(\lambda x. (x \text{ is informed’} (\text{occur’}(e))).
   c. [The arrival of Mary], is such that John is informed that this event occurred.

**The problem of co-extensional events:** Zucchi himself discusses the entailment pattern in (8) as a fatal problem. Given that Jocasta is Oedipus’ mother, then the arrival of Jocasta and the arrival of Oedipus’ mother are the same event. However, there is an interpretation of (9a) under which it does not entail (9c). Zucchi’s analysis does not give justice to this. On the other hand, if DNs could denote propositions, then the lack of entailment would follow.

8) a. Oedipus knew /was aware / was informed of the arrival of Jocasta.
   b. Jocasta (unbeknownst to Oedipus) is Oedipus’ mother.
   c. # Oedipus; knew /was aware / was informed of the arrival of his mother.

9) [The arrival of Jocasta (= O’s mother)], is s.t. O. is informed that this event, occurred.
The problem extends to quantified ConPs, and with more severe consequences. Suppose Charlie watches the magician make a rabbit disappear several times. Each disappearance of the rabbit actually consists of a quick jump of the rabbit inside a box, which his eyes do not register. In this scenario, (10a) does not entail (10c). However, given that each ‘disappearing event’ is also a ‘jumping event’, Zucchi’s analysis predicts the entailment.

10) a. Charlie knew of/was aware of every disappearance of the rabbit.
   b. Every disappearance of the rabbit was a jumping of the rabbit inside the box.
   c. Charlie knew of/was aware of every jumping of the rabbit inside the box.

When ConPs undergo QR, the event descriptive, ends up being evaluated only at the actual world. As Zucchi notes, a revised lexical entry, where the verb combines with a generalized quantifier and interprets the DN entirely in the scope of inform/aware (11) would correctly predict the lack of entailments above, but wrongly predict (12a) to be equivalent to (12b):

11) \[ \text{[be informed/aware of } e] = \lambda Q, \lambda x. (x \text{ is informed/aware’} (Q \text{ occur’})\]

12) a. John is informed of only three arrivals of Mary ≠
   b. John is informed that only three arrivals of Mary occurred.

An analogous conundrum arises in Concealed Questions (CQs), i.e., DP complements of question-embedding verbs that have question/proposition-like readings (J. knows the capital of Italy under the reading J. knows what the capital of Italy is). Just like ConPs, although syntactically DPs, CQs can be complements of attitude verbs and not allow for substitution of equivalents. Moreover, quantified CQs pose the same puzzle as quantified ConPs: the quantificational force takes wide scope but the descriptive content of the CQ is intensional (Frana 2013). Solution to the problem of quantified DN: We extend Frana (2013, 2017)’s analysis of CQs with quantified DPs to ConPs with quantified DN. The additional ingredient for ConPs is that the descriptive portion of DN are Event Concepts (just as in the Individual Concepts analysis of CQs, Heim 1979, Romero 2005). Frana’s innovation for quantified CQs is a novel application the Copy Theory of movement. In Fox (2002) lower QP copies are converted to definite descriptions containing a bound variable (13).

13) [Every disappearance of the rabbit] \( \lambda e. \) Charlie knows [the disappearance of the rab. e]

For Fox, the value of a descriptive trace is provided by the variable assignment function, but with the presupposition that this value is in the extension of the NP-predicate. However, in order to avoid false sentences coming out undefined when the attitude holder has false beliefs regarding NP-pred. at w, Frana replaces the definite with the maximality operator (14). Descriptive traces are interpreted as in (15); Pred is a predicate of individuals or events, and \( x \) ranges over individuals/events. (11a) is analyzed in (16). DIS = disappearance of the rabbit.

14) For any set A (i.e. the extension of a predicate NP in w) if A ≠ \( \emptyset \) then, \( \text{max} (A) = \chi \{ x \in A \wedge \forall x' \in A [x' \leq x] \}; \) if A = \( \emptyset \) then, \( \text{max}(A) = * \) (the null individual, which is not in any Natural Language denotation)

15) \( \llbracket \text{the}_{\text{max}} \text{Pred } x_i \rrbracket ^{w,g} = g(i) \) if \( \llbracket \text{Pred} \rrbracket ^{w,g} (g(i)) \), otherwise \( \llbracket \text{the}_{\text{max}} \text{Pred } x_i \rrbracket ^{w,g} = * \)

16) a. For any constituent \( \alpha \) and variable assignment \( g, [\lambda x, \alpha]^{w,g} = \lambda x. [\alpha]^{w,g[1/e]} \)
   b. \( \llbracket (11a) \rrbracket ^{w,g} = \forall e (\text{DIS} (e) \text{ in } w \rightarrow \forall w' \in \text{Doc}_C (w) [\lambda w_2. \llbracket \text{the}_{\text{max}} \text{DIS } e_1 \rrbracket ^{w_2,g[1/e]} (w') = (\lambda w_3. [\text{the}_{\text{max}} \text{DIS } e_1]^{w_3,g[1/e]} (w)] \rrbracket ^{w,g[1/e]} \rrbracket ^{w,g[1/e]} ) \]

Even if every disappearing event is a jumping event at w, (11a) is true iff for every actual disappearing event e, (the counterpart) of e is also a disappearing event – not a jumping event –in all of Charlie’s belief worlds w’. Thus, in the context (11a) does not entail (11c). To conclude, building on existing analyses of CQs, we provide an analysis of ConPs in which definite DN denote (intensions of) events, thus solving the problem of co-extensional events. The analysis is also extended to cover ConPs with quantified DN – which do not denote event concepts – within Frana’s copy-theoretic account. In such cases, it is the copy-trace left by the QR-ed DN that supplies the event concept to the verb.