

NOMINAL RESTATEMENT*

Ekaterina Jasinskaja,
University of Potsdam

jasinsk@uni-potsdam.de

Abstract

This paper identifies, explores and provides a formal analysis to a phenomenon that I will call *nominal restatement*. Nominal restatement (NR) bears a certain similarity to nominal apposition (NA). However, whether an equality sign can be put between these notions depends largely on our assumptions about the range of facts pertaining to apposition, which is not a matter of perfect consensus. This paper shows that NR goes beyond the notion of NA developed by Potts (2005) and is not covered by his analysis. It also presents a purely pragmatic account of NR in terms of the discourse relation of restatement (Jasinskaja 2006b), which both explains the new observations concerning NR (e.g. quantification and scope behaviour) and provides a better explanation to some old observations about NA that are also valid for NR (e.g. case). Finally, I address the question whether the notion of NA can ultimately be done away with by subsuming it under the more general notion of NR and discuss some related problems.

The term *restatement* goes back to Mann and Thompson (1988, cf. p. 277) and originally refers to a rhetorical relation that holds between two discourse segments where the second *reformulates* the first in different words, or *restates* the same content:

(1) A well-groomed car reflects its owner. The car you drive says a lot about you.

I will use this term in somewhat broader sense to include cases where the second sentence redescribes the event or situation presented by the first (2), even when one sentence gives more specific information on that situation than the other, cf. (3) from Danlos (1999), or when one of the discourse segments considerably differs from the other in bulk, e.g. by describing the event as a sequence of its subevents which are represented by separate clauses as in (4):¹

(2) Alena broke her skis. She lost her main means of transport.

(3) John damaged a garment. He stained a shirt.

*I would like to thank Cornelia Endriss, Sam Hellmuth, Stefan Hinterwimmer, Shinichiro Ishihara, Elke Kasimir, Özgür Şahin, Henk Zeevat, and the anonymous reviewers for productive ideas, helpful comments on the earlier versions of this paper, as well as native speaker judgements.

¹In classical Rhetorical Structure Theory, RST (Mann and Thompson 1988), descriptions of the same state of affairs that differ in bulk are not covered by the notion of restatement. If the first segment is considerably “bigger” the relation is classified as *summary*, and if the second segment is “bigger,” as in (4), the relation is classified as *elaboration*. For the present purposes this distinction is irrelevant (cf. related discussion in Blakemore (1997)) and all three cases are subsumed under the notion of restatement. However, it should be noted that in (4) restatement holds only between the first and the *whole* of the second sentence, rather than each of its individual conjoined subclauses. Thus our definition does not encompass the notion of elaboration assumed in Segmented Discourse Representation Theory, SDRT (Asher and Lascarides 2003) which defines it as a relation between an event description and description of its subevent.

- (4) John made a salad.
He cut some vegetables, mixed them together in a big bowl and added some dressing.

The above examples illustrate restatement holding between whole sentences, but this notion can easily be extended to fragment utterances, in particular DPs in answers to *wh*-questions, in which case we usually have to do with redescrptions of the same individual or set of individuals, rather than the same situation:

- (5) a. What does this piece start with?
b. An anacrusis. An unaccented note which is not part of the first full bar.
- (6) a. Who came to the party?
b. My best friends. John, Mary and Bill.

Discourses like (5-b)² and (6-b) are instances of what we will call *nominal restatement* (NR). This paper will explore their properties (see sections 1 and 2), and since they look very similar to what is known in linguistics as *nominal apposition* (NA),³ special attention will be paid to comparing these two phenomena in section 2. I will argue against reducing nominal restatement to apposition, in particular if the latter is understood along the lines of Potts (2005), by demonstrating a range of cases that are not covered by his theory. Then section 3 will address the question how the “coreference” relation between the DPs in (5-b) and (6-b) comes about. The proposed account is entirely based on pragmatic inference and treats the nominal and the sentential cases in a uniform way, reducing the problem to that of inferring restatement in general. Finally, section 4 returns to the issue of relationship between restatement and apposition and discusses some problems related to reanalysing apposition in terms of restatement.

1 Nominal restatement as restatement

This section looks at nominal restatements as instances of restatement in general, i.e. the properties that all kinds of restatements share. First of all, it should be said that there is no clear-cut boundary between nominal and the canonical sentential restatement. On the one hand, mixed cases are possible (small caps in (7) indicate nuclear stress):

- (7) a. Who ate the cake?
b. MARY ate the cake. My SISTER.
- (8) a. What happened?
b. An accident. John fell from the ladder.

On the other hand, there is nothing special about DPs in their ability of forming restatements. Almost any syntactic category can do this, as long as it is able to appear as a fragment utterance in an appropriate context:⁴

- (9) a. When is John leaving?
b. On Monday. On the 5th of February.

²This example is adapted from Blakemore (1997, p. 8).

³By NA I will only refer to *loose*, or *non-restrictive* variety of apposition, as opposed to *close*, or *restrictive* apposition, e.g. *the poet Burns, Prince Charles, we students*, etc. (Burton-Roberts 1999).

⁴Example (11) is adapted from Burton-Roberts (1999), who makes the same observation on the cross-categorical character of apposition.

- (10) a. Why did John start drinking?
b. Out of boredom. Because he did not know anything better to do.
- (11) a. What did John do?
b. He took it without permission. Filched it.

Second, restatements of all syntactic categories show more or less the same behaviour with respect to the usage of connectives, most notably the conjunction *and*, as well as list intonation. It is a common view that *and* can block the inference of certain discourse relations between the sentences (Blakemore 1987, Carston 1993, Blakemore and Carston 1999, Txurruka 2003). Restatement is one of such relations, as shown by the contrast between (12-a) and (12-b). The most natural interpretation of (12-a) is that Alena lost her main means of transport *by* breaking her skis, whereas the presence of *and* (12-b) makes a different reading most accessible: Alena broke her skis and *apart from that* she lost her main means of transport (e.g. her car was stolen). Notice that a similar effect is produced by rising enumeration intonation (↗) in (12-c), which is interpreted as a continuing list of independent events.⁵

- (12) a. Alena broke her skis (↘) . She lost her main means of transport (↘) .
b. Alena broke her skis, *and* she lost her main means of transport.
c. Alena broke her skis (↗) , she lost her main means of transport (↗) ...

The observations cited in Txurruka (2003, p. 282) suggest that the nominal case is parallel. While (13-a) implies that Joyce *is* the author of *Ulysses*, this does not hold in (13-b) and (13-c).⁶

- (13) a. Joyce (↘) . The author of *Ulysses* (↘) .
b. Joyce *and* the author of *Ulysses*.
c. Joyce (↗) , the author of *Ulysses* (↗) ...

Finally, both nominal and sentential restatements (as well as restatements of other categories) constitute the environments that license deviant behaviour of indefinite descriptions of the kind described by Danlos (1999). As is well-known, indefinites normally introduce *new* referents into the discourse (Heim 1982). However, indefinites in restatements can refer to previously introduced individuals, as is shown by example (3) above, where the DP *a shirt* refers to the same object as the DP *a garment* in the previous sentence. Examples like (5) and (14) below demonstrate the same phenomenon in NRs:

- (14) a. What did John damage?
b. A garment. A shirt.

Some accounts of NA, e.g. Potts (2005) and Nouwen (2007), could explain this by saying that *a shirt* in (14) is not a referring expression, but a predicative use of an indefinite as in *John is a student*. Thus the apparent “coreference” between *a garment* and *a shirt* would follow from

⁵Notation: (↗) indicates rising enumeration intonation, sometimes also called *progradient* intonation, such as H-L% in English [reference]; (↘) indicates a default declarative intonation, which normally has a falling shape, e.g. H* L-L%.

⁶A similar observation is made by de Vries (2002, pp. 212–214) with regard to NA. He suggests that “specification” is the default interpretation for asyndetic conjuncts, whereas conjunction and disjunction need explicit marking on the last conjunct or disjunct. Within the specification class, only equivalence relations, like (13-a), and attribution relations, like *John, a nasty liar*, can be expressed asyndetically. Appositions based on set inclusion must be signalled by connectives such as *for example*, *especially*, cf. *many people, for example my neighbour* vs. *??many people, my neighbour*.

an analysis that derives (14) from something like *a garment, which was a shirt*. However, this explanation would not work for indefinites that are embedded in a larger NR. On its most natural interpretation, the DP *a rather dubious financial enterprise* describes the insurance company mentioned in the previous utterance:

- (15) a. Who is Mary dating these days?
 b. A guy working in an insurance company.
 A representative of a rather dubious financial enterprise.

In sum, these observations support a uniform approach to NR and restatements of other types within a general theory of restatement as a discourse relation.

2 Nominal restatement vs. nominal apposition

Since nominal restatement (NR) looks so much like nominal apposition (NA) it is tempting to try to reduce the former to the latter. This section considers a selection of features of NA discussed by Potts (2005) and addresses the question to what extent NRs can be accounted for as instances of NA in Potts' sense. I will argue that his theory does not (and is not intended to) cover a number of phenomena around NR, including: the focus-sensitive character of non-adjacent NRs (section 2.2); NRs in left-adjoining languages (section 2.3); and some observations on their quantification and scope behaviour (section 2.4). But first I will discuss one feature in which NR and NA are similar—the formal parallelism between the DPs, which is manifested most clearly by case marking (section 2.1). I will argue that viewing these constructions as NRs gives a better explanation to this phenomenon.

2.1 Formal parallelism

In appositions the anchor and the appositive share values of the features that determine their function in the sentence.⁷ The most well-known feature is grammatical case (Potts 2005, p. 107), which becomes evident especially in languages with rich case marking such as German or Russian. The same holds for NR—for obvious reasons. Since both parts of a restatement must be congruent answers to a question, e.g. *Wen hast du gesehen?* ‘who did you see?’ in (16), and congruence in particular involves “agreement” of the answer with the *wh*-phrase, both answers necessarily inherit the same case from it.

- (16) Meinen Freund. Den Pfarrer.
 my.ACC friend the.ACC parson
My friend. The parson.

Or putting it otherwise, the restatement in (16) is derived from something like *Ich sah meinen Freund. Ich sah den Pfarrer*. ‘I saw my friend. I saw the parson.’ where both DPs get the accusative case from the verb *sehen* ‘see,’ which is covertly present in both utterances. This derivation is inspired by the old—and in my opinion unjustly forgotten—idea of Burton-Roberts (1975) towards the analysis of NA.⁸ However, in approaches where the appositive is “predicated” of the anchor in one way or another, (16) is reconstructed roughly as *I saw my friend,*

⁷I adopt the terminology of Huddleston, Payne and Peterson (2002) and Potts (2005) and refer to the first DP in an apposition as the *anchor*, and the second as the *appositive*.

⁸In more recent studies a related idea is developed by de Vries (2004), who treats NA as a type of coordination. This approach provides a syntactic explanation to case copying that is largely compatible with the present view.

who/he/my friend is the parson. On this type of analysis, explaining the copying of case from the anchor to the appositive appears less straightforward.

Besides, case is apparently not the only feature in which the formal parallelism between the DPs in NR and NA is manifested. For example, Wichmann (2000) talks about intonational parallelism in NA, which seems true for NR as well. According to Wichmann, it is a common pattern for NA when the anchor and the appositive are realised with the same intonational tune. Again, this generalisation follows naturally from the structure of NR and the fact that the DPs constitute answers to the same question, or alternatively, that the DPs occupy the same place in the syntactic and prosodic structure of otherwise parallel sentences. Predication-based approaches to NA need a separate story for this observation.

2.2 Adjacency and focus-sensitivity

Our notion of NR includes cases like (7) mentioned in section 1, where the “coreferring” DPs are not linearly adjacent. Such cases are not consistently included into the notion of NA, cf. Potts (2005, p. 104). They can be viewed as right-dislocated NAs, but also as free adjuncts or instances of “afterthought.” Whatever the terminological assumptions, the fact that *Mary* and *my sister* in (7) refer to the same individual nevertheless needs to be modelled. Moreover, one should explain the apparent focus-sensitivity of NR illustrated in (17). Notice that in (17-a) where the nuclear (focal) stress is on *Lance, the famous cyclist* refers to *Lance*, although *John* is immediately adjacent. However, in (17-b) where *John* is stressed, the famous cyclist is John.

- (17) a. LANCE is talking to John. The famous CYCLIST.
 b. Lance is talking to JOHN. The famous CYCLIST.

Potts’ account of NA is not designed to cover such cases, so they should be explained by a theory of NR.

2.3 Right adjunction

Potts (2005, pp. 106–107) proposes that nominal appositives are right-adjoined to their anchors. His main argument is the apparent absence of such constructions in languages that forbid right adjunction categorically, e.g. Turkish or Japanese. The closest construction in Turkish is a left-adjoining version, illustrated in (18), similar to the English *the bicyclist Hasan*. Note that the NP *ünlü bisikletçi* ‘the famous bicyclist’ does not copy the case marker *-la*, cf. *Hasanla* ‘Hasan.’

- (18) Ün-lü bisiklet-çi Hasan-la yarış-tan önce konuş-tu-k
 fame-ous bicycle-ist Hasan-with race-ABL before speak-PAST-we
We spoke with Hasan, the famous bicyclist, before the race.

However, NR is available in Turkish, which suggests that it is not dependent on right adjunction. The examples below look entirely like NRs in English and German: the case marking is the same on both DPs. Furthermore, the ‘famous bicyclist’ and ‘Hasan’ are interpreted as referring to the same individual, so these are not lists or conjunctions either.

- (19) Kim ile siz konuş-tu-nuz ?
 who with you.2PL speak-PAST-2PL
With whom did you speak?

- (20) a. Ü-n-lü bisiklet-çi-yile. Hasan-la.
 fame-ous bicycle-ist-with Hasan-with
With the famous bicyclist. With Hasan.
 b. Hasan-la. Ü-n-lü bisiklet-çi-yile.
 Hasan-with fame-ous bicycle-ist-with
With Hasan. With the famous bicyclist.

Cross-linguistic evidence of this sort is essential for an analysis of NR as a discourse relation. Since pragmatics is believed to be universal, we expect to find NR in more or less all languages.⁹

2.4 Quantifiers and scope

It is an old and rather widely spread view, also discussed by Potts (2005, pp. 114–115), that NAs are semantically unembeddable—they are always interpreted outside the scope of any operators occurring in the sentence, and they do not take scope over anything beyond themselves. Here I will especially concentrate on the scope of quantifiers like *every* and *most*. Example (21) illustrates the case in point: the universal quantifier does not take scope over the indefinite *an experienced adventure*, so the latter cannot be understood as part of the restrictor *every climber who is an experienced adventurer...*

- (21) *Every climber, an experienced adventurer, took the best equipment.

The apparent “scopelessness” of NAs is modelled by making them part of an entirely different level of meaning—conventional implicature—which is separate from at-issue content.

Moreover, Potts (2005, pp. 122–131) makes an even more general assumption, that quantified expressions (as well as bound variables) make neither good anchors, nor good appositives. Thus in (22), although the universal quantifier in the appositive does not need to take scope over anything beyond the the appositive for the sentence to receive a coherent interpretation, the sentence is nevertheless not entirely felicitous.

- (22) *We spoke with Tanya, Ashley, and Connie, every secretary in the department, about the broken printer.
 (23) *Every student spoke with a psychiatrist of hers, a caring individual who welcomes housecalls.

A careful look at NR shows that they only partly share these properties. Like the anchor and the appositive in a NA, the DPs that form a NR do not take scope over one another. However, they can be quantified DPs, and they both can take scope over variables occurring in the question (or the elided part of the sentence), and be bound by quantifiers occurring in the question (or the elided part of the sentence). For example, the following sequences are all quite felicitous, they imply that the set of all timely applicants coincides with the set described by the other DP, and quantifier *every* in the answer obviously binds the variable *their* in the question—everyone got their own costs reimbursed.¹⁰

⁹Possible sources for exceptions are cultural pragmatics, as well as syntactic or other language-specific constraints on what can appear as a fragment utterance. For example, in Japanese NR in its “pure form” is problematic because short answers to *wh*-questions always appear with a copula, e.g. *desu*.

¹⁰It is true though that such examples are not easy to construct. However, this seems to be due to pragmatic rather than syntactic or semantic constraints. NRs with quantifiers will only be felicitous in contexts where both the quantified and the (in)definite answer contribute in a relevant way to making the point, as in (25). Such contexts are obviously rather special.

- (24) Who got their travel costs reimbursed?
- (25) a. 13 employees. Everyone who submitted their application in time.
 b. Every employee who submitted their application in time. 13 people.
 c. John, Mary, Bill, and Sue. Everyone who submitted their application in time.
 d. Everyone who submitted their application in time. John, Mary, Bill, and Sue.

It is also clear that NRs like (26) will not work, because their interpretation is derived from something like *Every climber took the best equipment. An experienced adventurer took the best equipment.* rather than *every climber who is an experienced adventurer* etc. There is no reason why the universal would take scope over the indefinite since they originate from two different utterances, and if we try to establish coreference between the set of all climbers and the DP *an experienced adventurer*, we get a clash by trying to identify a plurality with a singularity.¹¹

- (26) a. Who took the best equipment?
 b. #Every climber. An experienced adventurer.

Finally, NR can be formed by DPs that are both bound by a quantifier occurring in the question.

- (27) a. Who did every student meet with?
 b. Her supervisor. The professor overseeing her research.
- (28) a. What do most guards have?
 b. A dog. A German shepherd.

These examples show that NR, unlike NA in Potts' sense, is not completely scopeless. It should be noticed though that the scopelessness generalisation for NA was questioned by Wang, Reese and McCready (2005). We will briefly return to this issue in section 4.

3 Inferring restatement

Many of the properties of NR discussed in the previous sections are readily explained by the assumption that the DPs are overt parts of two separate elliptic sentences, whose elided portions are the same (cf. Burton-Roberts' syntax for NA). However, this assumption does not tell us anything about how "coreference" between the DPs is established. In other words, the question is how we infer the discourse relation of restatement. This section presents an application of the approach developed in Jasinskaja (2004, 2006a,b) to the case of NR. I will outline the general approach in section 3.1, demonstrate how it works on selected examples of NR in section 3.2, and give a brief comparison to previous accounts of restatement in section 3.3.

3.1 The pragmatics of restatement

The proposal is embedded in a framework which is based on the assumption that utterances in discourse address discourse topics—explicit or implicit questions under discussion, QUD (Klein and von Steutterheim 1987, van Kuppevelt 1995, Ginzburg 1996, Roberts 1996, Büring 2003). There are different ways to define what is a question: e.g. (a) the question predicate, or the question abstract, e.g. $\lambda x[kissed(john, x)]$ for *Who did John kiss?*; (b) the set of alternative (mutually compatible) propositions, e.g. { John kissed Mary, John kissed Sue,... }, cf. Hamblin (1973); or (c) a partition of the space of epistemic possibilities (Groenendijk and Stokhof 1984), among

¹¹This derives largely from Rick Nouwen's (2007) explanation of the infelicity of NAs like (21).

others. For the present purposes let's assume that the discourse topic is a question predicate. If the question is explicitly asked the topic can be derived from the interrogative sentence by abstracting over the *wh*-element and adding some domain restrictions if necessary. If the question is implicit, the choice of topic is constrained by the information-structural partition of the sentence into focus and background. Thus the sentence *LANCE is talking to John* will be naturally assumed to address a topic like $\lambda x[x \text{ is talking to John}]$, but if the nuclear stress and narrow focus is on *John*—*Lance is talking to JOHN*—the topic is $\lambda x[\text{Lance is talking to } x]$. For sentences with broad focus that report events I will assume that they address questions like *What happened?* and the corresponding question predicate is therefore *happen*, again possibly with some additional domain restrictions. Adding domain restrictions that are not explicitly given by the question or by the background part of the sentence is useful to account the effects of relevance. So when the interrogative sentence is e.g. *What happened to John?* the speaker is in fact usually interested what happened to John on a particular occasion (at a certain time and place, leading to certain consequences, etc.), rather than all the events that involved John. I will assume that such domain restrictions can be added more or less freely to the predicate derived from the question or the information structure of the sentence. Although there may be lots of non-trivial contextual factors that affect this process, for the present purposes the constraints discussed below will be sufficient.

Discourse interpretation is governed by a number of default principles, among which the following two play a central role for the inference of restatement:

- (29) *The Principle of Exhaustive Interpretation:*
By default, an utterance is interpreted exhaustively wrt. the discourse topic it addresses.
- (30) *The Principle of Topic Continuity:*
By default, the discourse topic does not change.

Exhaustive interpretation is a standard way of strengthening the literal meaning of a sentence: what is not explicitly said (but is relevant for the current topic) is not the case. Thus it can be viewed as resulting from a combination of the Gricean Quantity and Relevance maxims.¹² For example, the exhaustive interpretation of a sentence *LANCE is talking to John* with respect to the question *Who is talking to John?* is 'Lance and no one else is talking to John.' Similarly, the exhaustive interpretation of the sentence *Alena broke her skis* with respect to the question *What happened (on a particular occasion)?* is 'Alena broke her skis and this is the *only* event that happened (on that occasion).' There exists a vast variety of more or less successful formalisations of exhaustivity (Groenendijk and Stokhof 1984, von Stechow 1991, Bonomi and Casalegno 1993, Zeevat 1994, van Rooij and Schulz 2004, to name just a few), which are all with occasional limitations applicable to the current problem. For demonstration purposes I will use the well-known definition of Groenendijk and Stokhof (1984). The exhaustification operator EXH applies to a generalised quantifier Q (a set of sets of individuals) which constitutes the literal meaning of the DP in focus, e.g. *every linguist*, and generates its exhaustive meaning, e.g. 'every linguist and no one else' by throwing out all non-minimal sets P' from Q , cf. (31). Then the exhaustivized DP is applied to the topic predicate, so for instance the exhaustive interpretation of *Joyce* with respect to the question *What is this book about?* is $[\text{EXH}(\lambda P[P(\textit{Joyce})])](\lambda x[\text{This book is about } x])$.¹³

¹²The generalisation of exhaustivity proposed by van Rooij and Schulz (2004) attempts to interpret it as the implementation of the Gricean pragmatic inference in general.

¹³The meanings of sentential answers to questions like *What happened?* need to be lifted to existential quantifiers over events, e.g. $\lambda P\exists e[\text{Alena broke her skis}(e) \wedge P(e)]$. So the exhaustive interpretation of the sentence is: $[\text{EXH}(\lambda P\exists e[\text{Alena broke her skis}(e) \wedge P(e)])](\textit{happen})$.

$$(31) \quad \text{EXH}(Q) = \{P \mid P \in Q \wedge \neg \exists P' [P' \in Q \wedge P' \subset P]\}$$

The Principle of Topic Continuity (30) is inspired by Givón’s cross-linguistic generalisation: “The more disruptive, surprising, discontinuous or hard to process a topic is, the more coding material must be assigned to it” (Givón 1983, p. 18), but Givón’s original notion of topic referred to prominent individuals or protagonists. This idea has found its way into optimality-theoretic pragmatics as a violable constraint *_{NEW} (Beaver 2004), and has recently been extended to QUDs by Zeevat (2006) in connection with the analysis of rhetorical relations. The principle basically forbids to switch topic in an uncontrolled and unpredictable way. Technically, in the current setting it plays a role in constraining the addition of implicit domain restrictions to the topic (cf. above). So for example, if for whatever reason you had assumed that the previous sentence *Alena broke her skis* addressed the question *What unlucky event happened to Alena yesterday during her walk in the forest?*, then you should normally also assume that the current sentence *Alena lost her main means of transport* addresses the same question.

The combination of Exhaustive Interpretation (29) and Topic Continuity (30) form the basis for the inference of restatement. Informally this works as follows. Suppose that according to (29) the first sentence of (2) *Alena broke her skis* is interpreted exhaustively with respect to the question mentioned above, so Alena breaking her skis is the *only* unlucky event that happened to Alena yesterday during her walk in the forest. Since according to (29) and (30) the next sentence *Alena lost her main means of transport* is interpreted exhaustively with respect to the same question, we get that Alena losing her main means of transport is also the only unlucky event that happened to Alena yesterday during her walk in the forest. If both events are the only one satisfying the topic predicate, then they must be the same event. Thus the two sentences describe the same event and therefore stand in a restatement relation. It should be obvious that the application to DP answers to constituent questions is completely parallel. The next section demonstrates the inference of NR more formally for a number of selected examples.

Finally, note that in the present approach the inference of restatement is a consequence of applying two default principles, which makes it *the* default discourse relation. This is a rather non-standard move considering previous proposals, such as SDRT (Asher and Lascarides 2003). For space reasons it is not possible to give full credit to this point here, but see Jasinskaja (2006b) for extensive argumentation. In the next section, however, I will discuss some examples of how the restatement default is cancelled, which might shed some light on this controversial issue.

3.2 Examples

Consider example (14) in section 1 once again. The NR consists of two indefinite descriptions referring to the same individual contra the standard novelty assumption. As long as our semantics for indefinites does not directly encode novelty, the coreference of the DPs can be inferred as a restatement. Let’s assume that indefinites are existentials, i.e. *a garment* is translated simply as $\lambda P \exists x [\textit{garment}(x) \wedge P(x)]$. The exhaustive interpretation of both utterances is computed with respect to the topic *What did John damage?*: $\lambda x [\textit{damage}(j, x)]$:

$$(32) \quad [\text{EXH}(\lambda P \exists x [\textit{garment}(x) \wedge P(x)])](\lambda x [\textit{damage}(j, x)]) \wedge \\ [\text{EXH}(\lambda P \exists x [\textit{shirt}(x) \wedge P(x)])](\lambda x [\textit{damage}(j, x)])$$

The exhaustive interpretations of the first and the second utterance are equivalent to (33-a) and (33-b), respectively (Groenendijk and Stokhof 1990, pp. 34–35). The conjunction of these two propositions is in turn provably equivalent to (34), which says that there is an object which is both a garment and a shirt and whatever John damaged is that object. Thus it follows that the

two indefinites describe the same object.

- (33) a. $\exists x[\textit{garment}(x) \wedge \forall y[\textit{damage}(j,y) \leftrightarrow x = y]]$
 b. $\exists x[\textit{shirt}(x) \wedge \forall y[\textit{damage}(j,y) \leftrightarrow x = y]]$

- (34) $\exists x[\textit{garment}(x) \wedge \textit{shirt}(x) \wedge \forall y[\textit{damage}(j,y) \leftrightarrow x = y]]$

Of course, if the semantics of *a shirt* contained a condition like $x \neq z$ where z resolved to the variable introduced by the first indefinite then the above inference would end up in an inconsistency. Therefore the present proposal is only compatible with a view where the novelty condition associated with indefinites is also a result of pragmatic inference of some sort rather than part of their semantic content. An account that accommodates both for the novelty of indefinites and for their deviant behaviour in restatements could work roughly as follows. By default, restatement is inferred as shown above, which leads to coreference of compatible DPs, including indefinites. If some independent considerations (constraints ranked higher than Exhaustivity and Topic Continuity, e.g. Plausibility in an OT setting) suggest that the relation between the utterances is other than restatement, then definites or other anaphoric expressions must be used to indicate that the DPs nevertheless corefer. In this case, the presence of an indefinite signals that the speaker does not intend to reinforce coreference, so it makes sense to assume that there is none (by blocking). In a restatement, however, this inference does not go through since there is no pressure to use definites in the first place.

The focus-sensitive character of coreference in restatements discussed in section 2.2 also follows from our proposal, since the choice of topic predicate depends on focus, cf. above. The exhaustive interpretations of (17-a) and (17-b) using Groenendijk and Stokhof's approach are shown in (35-a) and (35-b), respectively. (35-a) entails $\textit{lance} = \iota y[\textit{famous cyclist}(y)]$, whereas (35-b) entails $\textit{john} = \iota y[\textit{famous cyclist}(y)]$.¹⁴

- (35) a. $\forall x[\textit{talk}(x, \textit{john}) \leftrightarrow x = \textit{lance}] \wedge \forall x[\textit{talk}(x, \textit{john}) \leftrightarrow x = \iota y[\textit{famous cyclist}(y)]]$
 b. $\forall x[\textit{talk}(\textit{lance}, x) \leftrightarrow x = \textit{john}] \wedge \forall x[\textit{talk}(\textit{lance}, x) \leftrightarrow x = \iota y[\textit{famous cyclist}(y)]]$

Finally, the inference of “coreference” between a universal quantifier and a list as in (25-d) in section 2.4 is illustrated (somewhat simplified) below. The DPs *everyone who applied...*, $\lambda P \forall x[\textit{applied}(x) \rightarrow P(x)]$, and *John, Mary and Bill*, $\lambda P[P(j) \wedge P(m) \wedge P(b)]$, get exhaustivized with respect to the topic *Who got reimbursed? (reimbursed)*. The conjunction of the exhaustive interpretations is equivalent to (36) entailing $\forall x[\textit{applied}(x) \leftrightarrow [x = j \vee x = m \vee x = b]]$, which is the same as saying that the set of all individuals who applied is the set of John, Mary, and Bill.

- (36) $\forall x[\textit{applied}(x) \leftrightarrow \textit{reimbursed}(x)] \wedge \forall x[\textit{reimbursed}(x) \leftrightarrow [x = j \vee x = m \vee x = b]]$

More sophisticated machinery is required to account for bound NRs like (27) and (28). E.g. in (27), for every student the DP *her supervisor* should be exhaustivized with respect to the question *Who did that student meet with?* In other words, the quantifier under exhaustification is $\lambda P[P(\iota y[\textit{supervisor}(y,x)])]$, the topic predicate is $\lambda z[\textit{meet}(x,z)]$, and they both contain a free variable x that gets bound by the universal quantifier *every student*, which outscopes them both, cf. (37). For the correct account of such NRs, one has to assume that Topic Continuity may apply within the scope of that quantifier, so the free variable in the topic gets the same interpretation.

¹⁴I agree with Potts (2005) that the interpretation of *the famous cyclist* as the unique (contextually salient) famous cyclist is not the most accessible (though a possible) reading of these examples. Just like in appositives, the definite article in the second DP of an NR often loses the uniqueness presupposition. This fact still awaits a proper explanation, and my usage of the ι -operator in (35) is not intended to imply anything wrt. this issue.

$$(37) \quad \forall x[\textit{student}(x) \rightarrow [\text{EXH}(\lambda P[P(\textit{ty}[\textit{supervisor}(y, x)])])](\lambda z[\textit{meet}(x, z)])]]$$

The above examples show how to infer restatement from applying the default principles of Topic Continuity and Exhaustive Interpretation. The next question is how to prevent this inference where we do not want it, e.g. in conjunctions or in lists, cf. (12) and (13) in section 1. There are a number of mechanisms that can be involved in this process. Thinking of Topic Continuity and Exhaustive Interpretation as violable OT constraints, their effect may be overridden by a higher ranked constraint, e.g. Plausibility or Faithfulness. The latter means in particular that the presence of linguistic expressions that conventionally signal a violation of Topic Continuity or Exhaustivity would block the inference of restatement. This is probably the case with rising enumeration intonation (\nearrow), which can be assumed to signal non-exhaustivity. So the rise in (13-c), for instance, indicates that the DPs should be interpreted non-exhaustively with respect to the topic *What is this book about?* Thus, this book is about Joyce and maybe something else, and this book is about the author of *Ulysses* and maybe something else. From this it does not follow that Joyce is the author of *Ulysses*.

Another factor that can interfere with the inference of restatement is the segmentation of the discourse flow into utterances, assuming that utterance is the unit subject to exhaustive interpretation. This is the simplest what one can do about the effect of the conjunction *and* in (12-b) and (13-b).¹⁵ Following Blakemore and Carston (1999), one can assume that *and* makes one sentence/utterance out of two. Therefore unlike (13-a), *Joyce* and *the author of Ulysses* do not get exhaustivized separately with respect to *Who is this book about?*, but the conjoined DP *Joyce and the author of Ulysses*, $\lambda P[P(\textit{joyce}) \wedge P(\textit{ix}[\textit{author of Ulysses}(x)])]$, is interpreted exhaustively as a whole. This means that *Joyce and the author of Ulysses* are the only individuals this book is about, cf. (38), which again does not entail that *Joyce is the author of Ulysses*.

$$(38) \quad \forall x[\textit{this book is about}(x) \leftrightarrow [x = \textit{joyce} \vee x = \textit{ty}[\textit{author of Ulysses}(y)]]]$$

3.3 Discussion

The approach to the inference of restatement presented above does not have many competitors. SDRT is as good as the only alternative theory that gives a formal account of the semantics of discourse relations. Within SDRT event coreference relations, which are subsumed under our present notion of restatement, were studied in particular by Danlos (1999). There are two rather independent aspects in which our approaches differ. One aspect concerns the default status of restatement. As was already mentioned, space considerations do not allow us to discuss this issue in full, but one related empirical observation should be pointed out. Danlos derives event coreference on the basis of rich lexical cues such as the presence of synonymy, hyponymy, hyperonymy and anaphoric relations between the expressions occurring in the sentences, rather than by default. She argues that taking lexical relations into account is essential for the inference of event coreference in order to be able to distinguish infelicitous discourses like (39-a) from felicitous cases like (39-b)–(39-e):

- (39) a. #John took care of a cedar. He pruned a tree.
 b. John pruned a tree. He took care of a cedar.
 c. John pruned a cedar. (Therefore,) he took care of a tree.
 d. John took care of a cedar. He pruned the tree.
 e. John took care of a tree. He pruned a tree.

¹⁵An alternative, more general approach is to analyse *and* as a violator of Topic Continuity (Jasinskaja 2006b).

Indeed, in all the above cases our theory predicts a restatement relation by default and the infelicity of (39-a) remains unexplained. However, also in Danlos' proposal such cases have the status of exceptions. We have to admit that the constraints at work here are yet poorly understood. They may well have to be stated in terms of lexical relations. This does not automatically mean, however, that the general case must be stated in the same terms.

The second difference concerns the type of object whose continuity is assumed to form the basis for restatement relations. For Danlos this object is the eventuality. Once the lexical conditions are met, the coreference of eventualities is established immediately. In our approach, coreference of eventualities or individuals is inferred from the continuity of the QUDs. One might consider an alternative approach in which Topic Continuity would be formulated directly in terms of eventualities and individuals, i.e. the notion of topic would be defined as the eventuality/individual described by the utterance, rather than the question it addresses, and this is what is continued in the default case. This move would make the theory much simpler. However, the focus-sensitive character of restatement discussed in section 2.2 would then need an independent explanation, whereas it falls out automatically if Topic Continuity operates on questions.

4 Nominal apposition as nominal restatement?

In the previous sections I tried to show that the class of phenomena under the label *nominal restatement* is best analysed in terms of the discourse relation of restatement rather than nominal apposition, in particular if the latter is understood along the lines of e.g. Potts (2005). Then I presented a pragmatic account of restatement that also captures the behaviour of NR. The next question to ask is: once we have a theory of NR as the one proposed here, do we really need a theory for NA? Or in other words, can NA be treated as a kind of NR?

A lot can be said in favour of this idea. First and foremost, all the NRs discussed in section 2 work in just the same way if they are embedded in a sentence, in which case they become virtually indistinguishable from NA. For instance, the generalisations concerning the scope behaviour of NR are equally applicable to "NRs" occurring in the middle of a sentence, cf. (40).¹⁶

- (40) a. In spite of the difficult financial situation, John, Mary, Bill, and Sue—everyone who submitted their application in time—got their travel costs reimbursed.
 b. In spite of the difficult financial situation, everyone who submitted their application in time—John, Mary, Bill, and Sue—got their travel costs reimbursed.
 c. Every student met with her supervisor, the professor overseeing her research.
 d. Most guards have a dog, a German shepherd.

Moreover, sentence-internal NRs—DPs that share case and describe the same individual or group—can be found in left-adjoining languages like Turkish (41) and Japanese (42).

- (41) Ben ün-lü bisiklet-çi-yi, Hasan-ı gör-dü-m
 I fame-ous bicycle-ist-ACC Hasan-ACC see-PAST-1sg
I saw the famous bicyclist, Hasan.

- (42) Taro-ga Tokyo totizi-ni, Ishihara Shintaro-ni atta
 Taro-NOM Tokyo mayor-DAT Ishihara Shintaro-DAT met
Taro met the mayor of Tokyo, Ishihara Shintaro.

Notice that *the famous bicyclist* and *Hasan* in (41) are both accusative, and *the mayor of Tokyo*

¹⁶See also Wang et al. (2005) and Nouwen (2007).

and *Ishihara Shintaro* in (42) are both dative. This way of expressing apposition is felicitous in these languages only if a clear prosodic break is inserted between the first and the second DP. This is not required in the more standard, hypotactic construction, cf. the Turkish (18).

Of course, if we claim that NA *is* NR, we are still in need of an explanation for the infelicity of Potts' examples (22) and (23) involving quantifiers and bound variables. Answering this question goes beyond the scope of the present paper, though it should be remarked that some minor changes can improve (22), e.g. if the preposition is repeated in the appositive (43-a), or the appositive is uttered in a "more expressive" way, e.g. by using expressives like *bloody* (43-b), or just emphatic stress on the quantifier (43-c).

- (43)
- a. We spoke with Tanya, Ashley, and Connie, *with* every secretary in the department, about the broken printer.
 - b. We spoke with Tanya, Ashley, and Connie, every *bloody* secretary in the department, about the broken printer.
 - c. We spoke with Tanya, Ashley, and Connie, EVERY secretary in the department, about the broken printer.

Intuitively, it seems that these means help setting the appositive apart of the rest of the sentence, perhaps in the same way as the particularly strong prosodic break does in Turkish and Japanese. Still it remains puzzling why this extra effort is needed in these cases, but not in others. In any case, it is clear that the solution should be based on a more systematic study of the prosody of these constructions than those available to date.

Besides, adapting the proposed theoretical account to cover sentence-internal NAs as instances of NR is not straightforward, particularly if the NA does not constitute the narrow focus of the sentence. If the NA is part of a broad focus, one possible solution is to establish event coreference via exhaustification wrt. a *What happened?*-type topic and then identify the participants in the matching roles along the lines of Danlos' (1999) proposal. Another possibility is to assume nested F-markings within the focused constituent (Schwarzschild 1999) each of which is associated with a topic question subject to Exhaustivity and Topic Continuity constraints. For example, supposing that (40-a) has broad focus on the whole sentence, it does not only address the topic *What happened?*, but also the topics *What happened in spite of the difficult financial situation?*, *What happened to John, Mary, Bill, and Sue?*, *Who got their travel costs reimbursed?*, etc. The latter question is the one we need for the inference of the NR *John, Mary, Bill, and Sue, everyone who submitted their application in time*. The theoretical consequences of both approaches still need to be explored. As for backgrounded NAs, they are altogether ruled out by the present theory. This makes sense to a certain extent, cf. Potts' discussion of the "antibackgrounding" property of NAs (Potts 2005, pp. 148–149), but our specific predictions might nevertheless appear too strong. For instance, NAs where the anchor is given and the appositive is new sound quite felicitous:

- (44)
- a. What did Mary say?
 - b. Mary, a nasty liar, said that she solved the problem.

In sum, there are still lots of open questions on our way to an account of NA in terms of NR. But even if in the end we come to the conclusion that a proper analysis of NA in languages like English and German requires a special syntactic construction with its conventional NA semantics, it is still worth considering the hypothesis that that construction is a grammaticalisation of the pragmatic pattern studied in this paper as *nominal restatement*, of whose existence and relevance to the study of NA I hope to have convinced the reader.

References

- Asher, N. and Lascarides, A.: 2003, *Logics of Conversation*, Studies in Natural Language Processing, Cambridge University Press.
- Beaver, D. I.: 2004, The optimization of discourse anaphora, *Linguistics and Philosophy* **27**(1), 3–56.
- Blakemore, D.: 1987, *Semantic Constraints on Relevance*, Basil Blackwell.
- Blakemore, D.: 1997, Restatement and exemplification: A relevance-theoretic reassessment of elaboration, *Pragmatics and Cognition* **5**, 1–19.
- Blakemore, D. and Carston, R.: 1999, The pragmatics of *and*-conjunctions: The non-narrative cases, *UCL Working Papers in Linguistics* **11**, 1–20.
- Bonomi, A. and Casalegno, P.: 1993, *Only*: Association with focus in event semantics, *Natural Language Semantics* **2**, 1–45.
- Büring, D.: 2003, On D-trees, beans and B-accent, *Linguistics and Philosophy* **26**, 511–545.
- Burton-Roberts, N.: 1975, Nominal apposition, *Foundations of Language* **13**, 391–419.
- Burton-Roberts, N.: 1999, Apposition, in K. Brown and J. Miller (eds), *Concise Encyclopedia of Grammatical Categories*, Elsevier, Amsterdam, pp. 25–29.
- Carston, R.: 1993, Conjunction, explanation and relevance, *Lingua* **90**, 27–48.
- Danlos, L.: 1999, Event coreference between two sentences, *Proceedings of the 3rd International Workshop on Computational Semantics*, Tilburg.
- de Vries, M.: 2002, *The Syntax of Relativization*, PhD thesis, University of Amsterdam. Published by LOT, Utrecht.
- de Vries, M.: 2004, Parataxis as a different type of asymmetric merge, *Proceedings of IPSI-2004*. The Interfaces Conference, hosted by the International Conference on Advances in the Internet, Processing, Systems, and Interdisciplinary Research.
- Ginzburg, J.: 1996, Dynamics and the semantics of dialogue, in J. Seligman and D. Westerståhl (eds), *Logic, Language and Computation*, Vol. 1, CSLI Publications, Stanford, CA.
- Givón, T.: 1983, Topic continuity in discourse: An introduction, in T. Givón (ed.), *Topic Continuity in Discourse*, John Benjamins, Amsterdam, pp. 1–42.
- Groenendijk, J. and Stokhof, M.: 1984, *Studies in the Semantics of Questions and the Pragmatics of Answers*, PhD thesis, University of Amsterdam.
- Groenendijk, J. and Stokhof, M.: 1990, Partitioning logical space, Annotated handout. Second European Summer School on Logic, Language and Information. Leuven.
- Hamblin, C. L.: 1973, Questions in Montague English, *Foundations of Language* **10**, 41–53.
- Heim, I.: 1982, *The Semantics of Definite and Indefinite Noun Phrases*, PhD thesis, University of Massachusetts, Amherst.

- Huddleston, R., Payne, J. and Peterson, P.: 2002, Coordination and supplementation, in R. Huddleston and G. K. Pullum. (eds), *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge, chapter 15, pp. 1273–1362.
- Jasinskaja, E.: 2004, Exhaustification and semantic relations in discourse, in B. Geurts and R. van der Sandt (eds), *Proceedings of the ESSLLI'2004 Workshop on Implicature and Conversational Meaning*, Nancy, France, pp. 14–19.
- Jasinskaja, E.: 2006a, Non-canonical applications of topic continuity: Restatement and elaboration, in Sidner, Harpur, Benz and Kühnlein (2006), pp. 107–115.
- Jasinskaja, E.: 2006b, *Pragmatics and Prosody of Implicit Discourse Relations: The Case of Restatement*, PhD thesis, submitted to the University of Tübingen.
- Klein, W. and von Stutterheim, C.: 1987, Quaestio und die referentielle Bewegung in Erzählungen, *Linguistische Berichte* **109**, 163–185.
- Mann, W. C. and Thompson, S.: 1988, Rhetorical Structure Theory: Toward a functional theory of text organization, *Text* **8**(3), 243–281.
- Nouwen, R.: 2007, On appositives and dynamic binding, *Research on Language and Computation*.
- Potts, C.: 2005, *The Logic of Conventional Implicatures*, Oxford University Press.
- Roberts, C.: 1996, Information structure in discourse: Towards an integrated formal theory of pragmatics, *OSU Working Papers in Linguistics* **49**, 91–136.
- Schwarzschild, R.: 1999, Givenness, AvoidF and other constraints on the placement of accent, *Natural Language Semantics* pp. 141–177.
- Sidner, C., Harpur, J., Benz, A. and Kühnlein, P. (eds): 2006, *Proceedings of the Workshop on Constraints in Discourse*, National University of Ireland, Maynooth, Ireland.
- Txurruka, I. G.: 2003, The natural language conjunction *and*, *Linguistics and Philosophy* **26**, 255–285.
- van Kuppevelt, J.: 1995, Discourse structure, topicality and questioning, *Journal of Linguistics* **31**, 109–147.
- van Rooij, R. and Schulz, K.: 2004, Pragmatic meaning and non-monotonic reasoning: The case of exhaustive interpretation, © Kluwer Academic Publishers.
- von Stechow, A.: 1991, Focusing and backgrounding operators, in W. Abraham (ed.), *Discourse Particles*, John Benjamins, pp. 37–84.
- Wang, L., Reese, B. and McCready, E.: 2005, The projection problem of nominal appositives, *Snippets*.
- Wichmann, A.: 2000, *Intonation in Text and Discourse: Beginnings, Middles and Ends*, Pearson Education.
- Zeevat, H.: 1994, Applying an exhaustivity operator in update semantics, in H. Kamp (ed.), *Ellipsis, Tense and Questions*, ILLC, Amsterdam, pp. 233–269. Dyana-2 deliverable R2.2.B.
- Zeevat, H.: 2006, Discourse structure in optimality theoretic pragmatics, in Sidner et al. (2006), pp. 155–161.