Appendix B: Indefinite NMNs as GQs

In section 3.2.3. of the paper I proposed that the existential quantifier that binds the event argument of NMNs is introduced by the functional head θ_{Th}. An alternative to this is treating indefinite nominalizations as generalized quantifiers. Under this approach, indefinite NMNs are formed by combining participles with the semantics in (1), abbreviated later as $\lambda e'_e.NMN_{w,t_N<t}(e')$, with a null existential generalized quantifier in (2).

(1) $[\![\text{Badma's breaking.PART.PAST the cart}]\!]^{w,t,g} = \lambda e'_e.\ \exists t_N [RB(t_N) < t \wedge \text{break}_{w,t_N}(e') \wedge \text{Theme}(e') = \text{the cart} \wedge \text{Agent}(e') = \text{Badma}]$

(2) $[\![\emptyset_a]\!]^{w,t,g} = \lambda p_{et}.\lambda q_{et}$: $\exists x\ [p(x) = 1\ \&\ q(x) = 1] \vee \forall x\ [p(x) = 1 \rightarrow q(x) = 0]$. $\exists x\ [p(x) = 1 \wedge q(x) = 1]$

Such an existential quantifier takes two predicates of individuals as its arguments and asserts that there is an individual that makes both of these predicates true. Like all existential quantifiers in the trivalent system, it has a disjunctive presupposition: it presupposes that either there is an individual which makes both predicates true, or any individual who makes the first predicate true, makes the second one false. It turns out that assuming that the NMN combines with an existential quantifier leads to incorrect predictions with respect to presupposition projection. Here I briefly illustrate the derivation and where it runs into a problem.

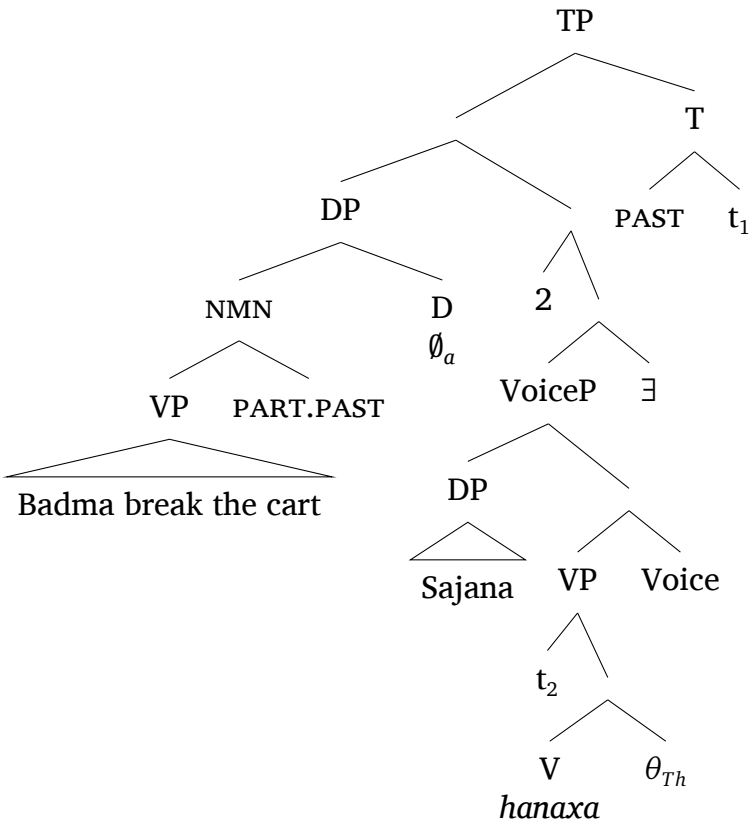
The NMN saturates the first argument of $\emptyset_a$, giving rise to the DP in (3).

(3) $[\![\emptyset_a\ \text{NMN}]\!]^{w,t,g}$
$= \lambda q_{et}.$
$$\begin{cases} 1 \text{ iff } \exists e'[\text{NMN}_{w,t_N<t}(e') = 1 \wedge q(e') = 1] \\ 0 \text{ iff } \forall e'[\text{NMN}_{w,t_N<t}(e') = 1 \rightarrow q(e') = 0] \\ \# \text{ otherwise} \end{cases}$$

This DP is a quantificational phrase, so I assume that it needs to undergo QR from its base-generated position as the Theme argument. In that case, sentences like in (4) have LFs like in (5).

(4) Sajana [Badm-i:n tərgə əmdl-ə:ʃ-i:jə] han-a:
Sajana.NOM Badma-GEN cart break-PART-ACC think-PST
'Sajana remembered that Badma broke the cart.'

(5)



Under this implementation, the meaning of the functional head θ_{Th} when it combines with *hanaxa* is in (6).

(6) $[\![\theta_{Th}]\!]^{w,t,g} = \lambda P_{et}.\lambda x_e.\lambda e_e$: LB($\tau$(x)) $<$t. P(e) $\wedge$ ABOUT(e)=x.

θ_{Th} takes a predicate of events P and an individual x as its arguments and returns a predicate of events such that P is true of them and they are about x. It also introduces the pre-existence presupposition: the left boundary of the *about*-argument has to be before the matrix time.

The attitude verb combines with θ_{Th}, with the trace of the QR-ed nominalization, the Voice head, the external argument, and finally the existential closure, resulting in (7):

(7) $[\![\text{VoiceP } \exists]\!]^{w,t,g} =$

$$\begin{cases} 1 \text{ iff } \exists e[LB(\tau(g(2))) < t \wedge \text{think}_{w,t}(e) \wedge \text{ABOUT}(e) = g(2) \wedge Exp(e) = \text{Sajana}] \\ 0 \text{ iff } \forall e[LB(\tau(g(2))) < t \wedge \neg[\text{think}_{w,t}(e) \wedge \text{ABOUT}(e) = g(2) \wedge Exp(e) = \text{Sajana}]] \\ \# \text{ otherwise} \end{cases}$$

Predicate Abstraction happens over g(2), which creates a predicate of individuals out of (7). This predicate then saturates the argument of the QR-ed existential quantifier in (3), the simplified result of which is in (8).[1]

(8) $[\![\text{NMN} + \text{Predicate}]\!]^{w,t,g} =$

$$\begin{cases} 1 \text{ iff } \exists e'[\text{NMN}_{w,t_N<t}(e') = 1 \wedge LB(\tau(e')) < t \wedge \exists e[\text{think}_{w,t}(e) \wedge \text{ABOUT}(e) = e' \\ \qquad\qquad \wedge Exp(e) = \text{Sajana}]] \\ 0 \text{ iff } \forall e'[\text{NMN}_{w,t_N<t}(e') = 1 \rightarrow LB(\tau(e')) < t \wedge \neg\exists e[\text{think}_{w,t}(e) \wedge \text{ABOUT}(e) = e' \\ \qquad\qquad \wedge Exp(e) = \text{Sajana}]] \\ \# \text{ otherwise} \end{cases}$$

Finally, contextually restricted tense, (9), combines with the proposition in (8). This results in (10).

(9) $[\![\text{PAST } t_1]\!]^{w,t,g}$

$= \lambda p_{sit}.$ $\begin{cases} 1 \text{ iff } \exists t' < t \wedge t' \subseteq g(1) \quad [p(w)(t') = 1] \\ 0 \text{ iff } \forall t' < t \wedge t' \subseteq g(1) \quad [p(w)(t') = 0] \\ \# \text{ otherwise} \end{cases}$

(10) $[\![\text{TP}]\!]^{w,t,g} =$

$$\begin{cases} 1 \text{ iff } \exists t' < t \wedge t' \subseteq g(1) \quad [\exists e'[\text{NMN}_{w,t_N<t'}(e') = 1 \wedge LB(\tau(e')) < t' \\ \quad \wedge \exists e[\text{think}_{w,t'}(e) \wedge \text{ABOUT}(e) = e' \wedge Exp(e) = \text{Sajana}]]] \\ 0 \text{ iff } \forall t' < t \wedge t' \subseteq g(1) \quad [\forall e'[\text{NMN}_{w,t_N<t'}(e') = 1 \rightarrow LB(\tau(e')) < t' \\ \quad \wedge \neg\exists e[\text{think}_{w,t'}(e) \wedge \text{ABOUT}(e) = e' \wedge Exp(e) = \text{Sajana}]]] \\ \# \text{ otherwise} \end{cases}$$

(10) states that the sentence "Sajana remembered Badma's breaking the cart", (4), is true iff there is a past time within a salient interval such that there is a thinking event by Sajana at that time and there is an event e' which the thinking is about, and e' is an event of Badma's breaking the cart which pre-existed the thinking event. This result is correct.[2]

However, (10) gives us a problematic falsity condition. The problem stems from the universal quantification over events. Whenever the restrictor of a universal quantifier is empty, the whole statement is true. This

[1] The simplification can be done provided that the domain D_e is not empty and given that "$LB(\tau(e')) < t$" contains no free occurences of "e". The equivalence statements used for the simplification are: (i) $\exists x[\psi \wedge \phi(x)] \equiv \psi \wedge \exists x[\phi(x)]$; (ii) $\forall x[\psi \wedge \phi(x)] \equiv \psi \wedge \forall x[\phi(x)]$; (iii) $\forall x[\neg\psi(x)] \equiv \neg\exists x[\psi(x)]$.

[2] If we "unwrap" the abbreviated meaning of the NMN, the result will be the following:

means that if there are no events of Badma breaking the cart, the falsity condition of (10) will be satisfied, and the sentence "Sajana remembered Badma's breaking the cart", (4), will be predicted to be false.

This is an incorrect prediction. Section 2.2 of the paper shows that the inference about the existence of a NMN-event projects over negation and in questions. If there is no event of Badma breaking the cart, the sentence in (4) is considered by native speakers to be infelicitous, not false.

A way to "save" (10) is to assume that the null existential quantifier that the NMN combines with comes with the presupposition that its restrictor is not empty. It has been argued (Diesing 1992; von Fintel 1998) that some indefinites are presuppositional: maybe $\emptyset_a$ produces such indefinites.

A problem with this solution is that the nominalization under consideration is not presuppositional across the board. For example, when it occurs as a direct object of verbs like *xaraxa* 'see', the inference about the existence of an event denoted by the nominalization does not project over negation, suggesting that it is not a presupposition in this case.

(11) Bi [Badm-i:n tərgə əmdəl-ə:ʃ-i:jə] xar-a:-güj-b, ju:n-də-b
1SG Badma-GEN cart break-PART-ACC see-PST-NEG-1SG what-DAT-Q
gə-xə-də Badma tərgə əmdəl-ə:-güj
say-POT-DAT Badma cart break-PAST-NEG
'I didn't see Badma's breaking the cart, because Badma didn't break the cart.'

The sentence in (11), according to my consultants, has a different status with respect to the similiar sentence with *hanaxa* in (12): while the latter is perceived as being contradictory, the former does not. However, (10) predicts them to have the same status.

(i) $[\![\text{Sajana thought of Badma's breaking the cart}]\!]^{w,t,g} =$

$$\begin{cases} 1 \text{ iff } \exists t' < t \wedge t' \subseteq g(1) \\ \quad [\exists e'[\exists t_N[RB(t_N) < t' \wedge break_{w,t_N}(e') \wedge Theme(e') = \text{the cart} \\ \quad \wedge Agent(e') = \text{Badma}]] \wedge LB(t_N) < t' \\ \quad \wedge \exists e[\text{think}_{w,t'}(e) \wedge \text{ABOUT}(e) = e' \wedge Exp(e) = \text{Sajana}]]] \\ 0 \text{ iff } \forall t' < t \wedge t' \subseteq g(1) \\ \quad [\forall e'[\exists t_N[RB(t_N) < t' \wedge break_{w,t_N}(e') \wedge Theme(e') = \text{the cart} \\ \quad \wedge Agent(e') = \text{Badma}]] \rightarrow LB(t_N) < t' \\ \quad \wedge \neg\exists e[\text{think}_{w,t'}(e) \wedge \text{ABOUT}(e) = e' \wedge Exp(e) = \text{Sajana}]]] \\ \# \text{ otherwise} \end{cases}$$

(12) **Context:** The speaker wants to convey that Sajana's thoughts are consistent with reality.
[Badm-i:n tərgə əmdəl-ə:ʃ-i:jə] Sajana han-a:-güi,
Badma-GEN cart break-PART-ACC Sajana.NOM think-PST-NEG
Badma tərgə əmdəl-ə:-güi
Badma.NOM cart break-PST-NEG
Intended: 'Sajana didn't think/remember that Badma broke the cart, (and) Badma didn't break the cart.'

It could be the case that verbs like 'see' select for non-presuppositional indefinites, while verbs like *hanaxa* select presuppositional ones. However, postulating this accidently co-occuring difference in selectional requirements of verbs seems like missing a generalization: the presuppositional nature of the existential inference is dependent on the verb.

References

Diesing, Molly. 1992. *Indefinites*. MIT press.
von Fintel, Kai. 1998. Evidence for presuppositional indefinites. MIT.