Anaphoric Potential of Bare Nouns in Persian

Fereshteh Modarresi & Manfred Krifka
Leibniz-Zentrum Allgemeine Sprachwissenschaft (ZAS) Berlin

Bare noun (BN) objects in Persian with the object marker *-ra* typically refer to entities that are uniquely identifiable in the common ground (definite). However, BN objects not marked with *-ra*, have been argued to be pseudo-incorporated, being interpreted as number-neutral and indefinite, but with at most limited potential for anaphoric uptake (Modarresi, 2014). We argue that, in fact, BNs are always interpreted as singular definites, and that the apparent number-neutral indefinite interpretation arises by a functional dependency of the definite BN on an indefinite quantifier over events similar to weak definites in languages that express definiteness not by BNs but definite articles. This dependency also explains why anaphoric update is limited.

More specifically, we propose an existential closure over events with VP scope (Diesing 1992). BN are always interpreted as functionally dependent definites. The *-ra* marker indicates that the BN is interpreted outside of existential closure, leading to a functional dependence on the common ground and resulting in an overall definite interpretation. BNs without *-ra* marker are interpreted VP internally (Modarresi, 2014), leading to a functional dependence on the event, and an overall indefinite and number-neutral interpretation (Krifka & Modarresi 2016). In languages with definite article, this correspond to the regular definite and the weak definite interpretation (cf. for weak definites the overview in Schwarz 2013; cf. papers in Aguilar-Guevara e.a. 2014). This similarity between the interpretation of pseudo-incorporated bare nouns and weak definites has been noticed before (Klein et al. 2013, Scholten & Aguilar-Guevara 2010).

In the current presentation we focus on the anaphoric potential or discourse transparency of BN objects without *-ra* marking in contrast to objects marked with the singular indefinite article *-yek*. While the latter allow for regular anaphoric uptake, the former allow for limited anaphoric uptake depending on how it is achieved (e.g. zero anaphora, overt pronouns, or definite DPs), whether it happens in the planned discourse by one speaker or involves speaker turn-takes, and whether default assumptions about the numerosity of the referent nominal are met (Farkas & de Swart 2003, Modarresi 2014). There are a number of theories that have been proposed for the limited discourse transparency of such pseudo-incorporated or weakly definite nominals (e.g., they are kind-referring, Aguilar-Guevara & Zwarts 2010; they are property denoting with an embedded existential quantifier, McNally 1995; they do not bind but just restrict a verbal argument position or a thematic role, cf. de Hoop 1996, Dayal 2011, Espinal & McNally 2011; they construct a discourse referent from the antecedent DRS, cf. Farkas & de Swart 2003; they refer number-neutrally to the sum of entities dependent on an event, Schwarz 2014; they are indefinites introducing number-neutral discourse referents, Modarresi 2015; they uncover an existing but not directly accessible discourse referent by thematic argument abstraction, cf. Yanovich 2008, Krifka & Modarresi 2015).

The current presentation tries to shed some light on the proper choice of theories by presenting experimental results on the difference in anaphoric uptake between pseudo-incorporated BN objects and objects marked with the indefinite article *yek*. We tested the naturalness of anaphoric uptake by overt singular, overt plural, or number-neutral covert anaphors (a 2x3 design). Antecedent sentences were chosen in a way that the BN object did not create a bias towards a singular or plural interpretation (as e.g. in 'apartment bought' or 'carrot bought').

(1)   *Ali*   ***ketab / yek ketab*** *kharid.*   *Leila* (i) *khand.* / (ii) *khand-esh*. / (iii) *khand-eshoon.*
      Ali   book   a   book   bought.   Leila   read Ø   read-**it**. /   read-**them**.

A first experiment involved self-paced reading (following a similar experiment by Syrett & Law 2017 on Mandarin), with no significant results. The experiments reported here involved an acceptability judgement task and a selection task.

The results of the acceptability judgment experiment (36 participants, 48 items, Likert scale 1 very bad – 5 very good) revealed that *yek*-objects make the best antecedents (a) except for plural anaphora (b) due to number incompatibility. However, BN objects make surprisingly good antecedents as well (c) and are more compatible with plural anaphora (d) than *yek*-objects (a).
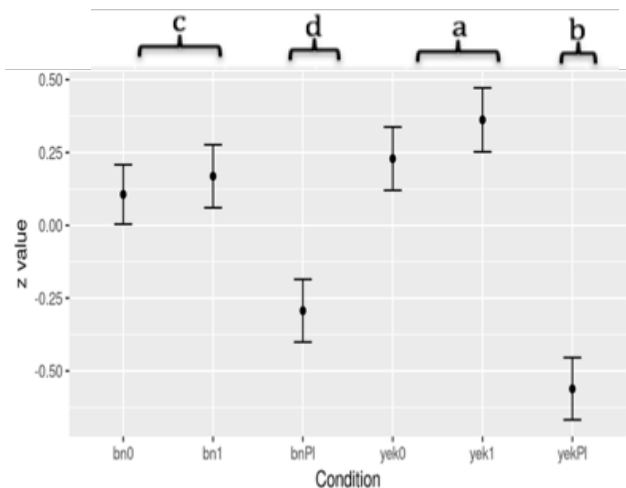
The selection task does not tell how good anaphoric reference with BN object antecedents actually are, but gives additional evidence for the preferred anaphora type. In the experiment (90 participants in 6 different lists, 48 items in two conditions), participants were presented with similar antecedent sentences and three continuations involving a zero, singular, or plural anaphor; they should select the best option.

(2) *Banna   too   Sakhteman **divar** / **yek-divar**   Sakht, modati baad….*
     builder in   building   wall / a wall   built, sometime later….
     ☐ *Kharab-kard* ☐ *Kharab-esh-Kard* ☐ *Kharabeshoon-kard*
     destroyed-∅   destroyed-**it**   destroyed-**them**

The results largely corroborated the first study (cf. Figure 2). With *yek*-marked antecedents, subjects strongly preferred singular pronouns but did allow for zero anaphors (e). With BN antecedents, subjects only slightly preferred singular anaphors and selected many zero anaphors (f). The difference between *yek*-marked and BN antecedents is significant. Plural pronouns were strongly disfavoured for *yek*-marked antecedents, but a bit less strongly for BN antecedents (g). This difference is also significant.
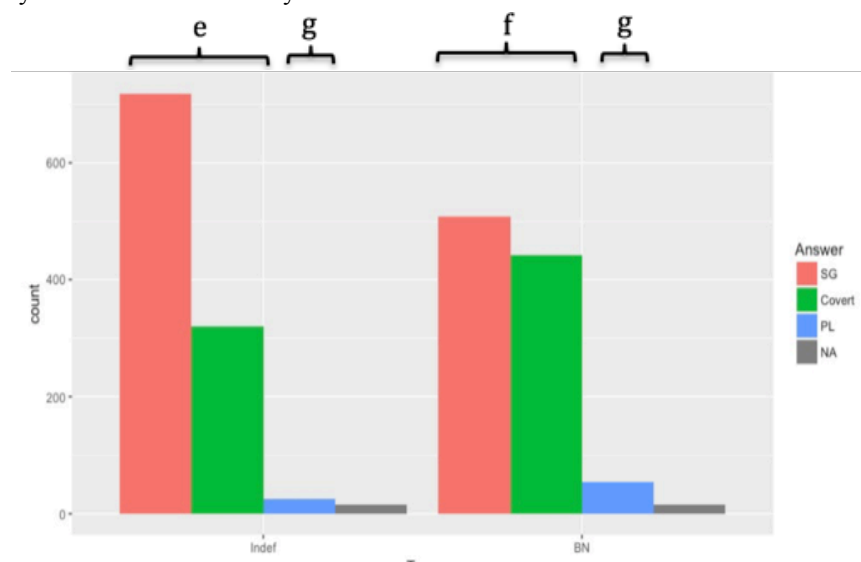
We also will present a second selection experiment, in which the anaphor type was fixed and the antecedent was selected, and a third discourse completion experiment in which subjects had to freely continue an initial discourse with BN and *yek*-marked antecedents.

We see the results as evidence that BN objects without *ra*-marking do introduce discourse referents (contrary to McNally 1995, de Hoop 1996, Farkas & de Swart 2003, Dayal 2011, Espinal & McNally 2011), otherwise the judgement task would have delivered worse results for BN objects. But the discourse referents are less accessible than the ones of *yek*-marked objects, as the judgement task shows. The low acceptance of plural anaphors we take as evidence that these discourse referents are not kind-referring (as in Aguilar-Guevara & Zwarts 2010) or number-neutral (as in Modarresi 2014), and that the combination of verbal predicate and BN does not contain a built-in sum operator (as in Schwarz 2014). The data are compatible with Yanovich 2008 and Krifka & Modarresi 2015, who assume that BN introduce singular discourse referents that have to be recovered by a general, but slightly more complex process.