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Dvořák, Věra

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Anna E. Jurgensen Hannah Sande Spencer Lamoureux Kenny Baclawski Alison Zerbe

Berkeley Linguistics Society Berkeley, CA, USA Berkeley Linguistics Society University of California, Berkeley Department of Linguistics 1203 Dwinelle Hall Berkeley, CA 94720-2650 USA

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Foreword

This monograph contains a number of the talks given at the 41st Annual Meeting of the Berkeley Linguistics Society, held in Berkeley, California, February 7-8, 2015. The conference included a General Session and the Special Session Fieldwork Methodology. The 41st Annual Meeting was planned and run by the second-year graduate students of the Department of Linguistics at the University of California, Berkeley: Kenny Baclawski, Anna Jurgensen, Spencer Lamoureux, Hannah Sande, and Alison Zerbe.

The original submissions of the papers in this volume were reviewed for style by Anna Jurgensen and Hannah Sande. Resubmitted papers were edited as necessary by Anna Jurgensen and Kenny Baclawski, and then compiled into the final monograph by Anna Jurgensen. The final monograph was reviewed by Spencer Lamoureux. The endeavor was supported by Alison Zerbe's management of the Berkeley Linguistic Society's funds for publications.

The BLS 41 Executive Committee
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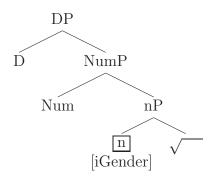
Syntax of generic null objects revisited

VĚRA DVOŘÁK Rutgers University, New Jersey*

1 Introduction

Phonologically null arguments, and silent elements in general, have a stable place in the study of language.¹ This paper focuses on one specific type of null internal arguments, the so-called generic null objects (GNO), utilizing novel data from Czech and building on the minimalist program (Chomsky 1993, 1995). It has been argued in the literature that GNO are syntactically pronouns (Rizzi 1986; Authier 1992a,b), consisting of a D-feature and/or a set of ϕ -features (Landau 2010); it has been also assumed that they have a semantic feature [+human], which is why they denote only in the domain of people and personified entities.

(1) Nominal projection with a GNO-corresponding node (framed)



I show that even though the syntactic properties of Czech GNO are parallel to those of GNO in Italian and French, their syntactic structure is extremely limited, corresponding to a single syntactic node n, bearing an interpretable gender feature but no other ϕ -features, as captured in the tree on the left. Such a nominal head corresponds semantically to a property (determined by the value of the gender feature) introducing a variable that gets bound by a sentence-level generic operator (GEN), along the lines of Heim (1982) and Krifka et al. (1995). The advantage of the proposed analysis over the existing ones is that it can systematically account for both genericity and humannes of GNO without having to stipulate them.

The paper is structured as follows: First, I briefly review the previous proposals regarding the syntax of GNO and I provide several tests showing that GNO in Czech are syntactically represented. After that, I revise Authier's semantic analysis of GNO, employing the dyadic generic operator (Krifka et al. 1995) rather than the non-selective adverbial operator (Lewis 1975). Subsequently, I give evidence for the presence of a gender feature in the structure of GNO and evidence against the presence of number, person and determiner features/categories in GNO. I also discuss the theoretical merit of replacing the semantic feature [+human] with the interpretable gender feature. Finally, I sum up the syntactic composition of GNO and compare it to the syntactic structure of regular pronouns.

^{*}I would like to thank my thesis supervisor Mark Baker and the audiences at OLinCo 2014, BLS 41, and FASL 24 for their comments on the earlier stages of the work presented here.

¹The list of abbreviations used throughout the text: NOM = nominative, GEN = genitive, ACC = accusative, INST = instrumental, SG = singular, PL = plural, M = masculine, F = feminine, N = neuter, REFL = reflexive, PF = perfective, IMPF = imperfective, nP = nominal phrase, NumP = number phrase, DP = determiner phrase, GNO = generic null objects, GEN = generic quantifier.

2 Previous Accounts

2.1 Rizzi (1986): GNO as pro_{arb}

The existence of null generic objects was systematically acknowledged for the first time by Luigi Rizzi in an article from 1986. Rizzi showed that generic null direct objects in Italian can control into infinitival clauses (2-a), bind anaphors (3-a), and count as subjects of small clauses, both argumental (4-a) and adjoined (4-b) small clauses. The parallel episodic sentences do not allow non-overt objects, as (2-b) and (3-b) confirm.

- (2) Null direct objects in Italian as controllers
 - a. Un generale può costringere a [PRO obbedire ai suoi ordini]. a general can force to obey to the his orders 'A general can force one to obey his orders.'
 - b. *Alle cinque il generale ha costretto__ a [PRO obbedire].
 at five the general has forced to obey
 'At five the general forced to obey.'
 Rizzi 1986:(9-c),(10-b)
- (3) Null direct objects in Italian as anaphor binders
 - a. La buona musica riconcilia con se stessi. the good music reconciles with oneself 'Good music reconciles one with oneself.'
 - b. *Il concerto di ieri ha riconciliato___ con se stessi.
 the concert of yesterday has reconciled with oneself
 'Yesterday's concert has reconciled with oneself.' Rizzi 1986:(11-a),(38-b)
- (4) Null direct objects in Italian as small clause subjects
 - a. Questa musica rende__ allegri.
 this music renders happy.PL
 'This music renders one happy.'
 - b. Un dottore serio visita nudi.
 a doctor serious visits nude.PL
 'A serious doctor visits one nude.'

Rizzi 1986:(16-a),(14-a)

Working in the framework of Government and Binding (Chomsky 1981), Rizzi analyzed GNO as pro_{arb}, i.e. [+pronominal, -anaphoric] empty categories. The subscript 'arb' stands for the features [+human, +generic, \pm plural, default gender, default person], where the number feature is subject to parametrization in different languages; it happens to be [+plural] in Italian. (Rizzi assumed that the same set of features defines PRO_{arb} as well.) In addition, pro_{arb} is Case-marked and θ -marked by its licensing head V.

GNO are analyzed by Rizzi as [-anaphoric] because they do not need an antecedent and they are [+pronominal] because they can be referentially linked to another NP outside of their governing category, in this case to PRO_{arb}. The whole argument for GNO being a pronoun is thus based on examples like (5), where arb' can (but does not have to) be coreferential with arb".

(5) È difficile [PRO_{arb'} sperare [che il governo possa autorizzare__arb", a [PRO is difficult hope that the government can authorize to vivere così]]].

live like that
'It is difficult to hope that the government can authorize one to live like that.'

Two readings possible: arb' = arb"; arb' ≠ arb"

Rizzi 1986:(25-b)

2.2 Authier (1989, 1992a,b): GNO as A'-bound pro

Shortly after Rizzi, Jean-Marc Authier contributed to the debate about GNO by arguing that French has GNO of the same sorts as Italian, and that they should be semantically treated as variables which are subject to unselective binding by an overt or null adverb of quantification in the sense of Lewis (1975).

- (6) a. D'habitude_i/ $Null\ Adverb_i$ trop de choucroute rend [e]_i obèse. usually/___ much of sauerkraut makes obese.
 - b. For most x's, x a person, too much sauerkraut makes x obese.

Authier 1989:(42)

Authier (1989:47-54) provided several argument in support of the view of GNO as base-generated variables that get A'-bound. However, he didn't add much to the debate about GNO's syntactic composition, simply stating that they are null pronouns identified by an unselective operator, in the same way as empty categories identified by object clitics are understood to be pro (Jaeggli 1986). In contrast to Rizzi, he argues that A'-bound pro is Case-less so it is allowed only in languages which have optional accusative Case-assignment. According to Authier, the setting of this parameter follows from Pollock's 1989 strong vs. weak AGR-parameter.

2.3 Landau (2010): GNO as DPs or ϕ -sets

Idan Landau is the author of the most recent article which touches on the issue of GNO and their syntax. He distinguishes two types of null arguments:

- 1. Strong implicit arguments, such as PRO, Italian pro_{arb} (Rizzi 1986), or Chinese Topic-bound variables (Huang 1984). These arguments allow secondary predication and anaphoric binding and as such, they have to have a D-feature, i.e. they have to project the category of determiner. The reasoning behind this goes back to Longobardi (1994) who maintains that without a D-head, an NP argument cannot be mapped to a syntactic argument, and thus saturate a syntactic predicate.
- 2. Weak implicit arguments, such as agents of passives or implicit experiencers. These arguments cannot be secondarily predicated about and do not bind reflexives, but they can act as controllers and trigger Conditions B and C effects. Landau analyzes these null arguments as not having a D-feature but as consisting of a set of ϕ -features. A hypothetical example of a weak implicit argument is given below.

[3rd, sg, F] = a female x that is neither the speaker nor the addressee Landau 2010:383

Even though Landau adopts Rizzi's analysis of GNO in Italian as pronouns, and therefore DPs, which could be interpreted along the lines of Authier (1989), he admits that non-D implicit arguments can be interpreted as bound by a sentence-level generic operator as well. Therefore, in Landau's system, the generic semantics of an implicit argument does not give any clue as to what such argument's syntax should be.

In what follows, I show that Landau's typology is a rather arbitrarily posited system which is unable to capture the syntactic properties of generic implicit arguments. I come to the conclusion that GNO in Czech are not represented by "sets of ϕ features", let alone DPs, even though they can function as reflexive binders or subjects of argument small clauses.

3 Arguments for Syntactic Representation

3.1 GNO as Obligatory Controllers

On a par with Italian and French, Czech has generic null objects which can control subjects of infinitival clauses. In (8-a), GNO controls the subjects of the non-finite clause 'to come to classes on time'; in (8-b), GNO's overt counterpart *člověk* shows the same behavior. Another example of GNO as a controller is in (9).

- (8) a. Šikovný učitel přiměje___i [PRO_i chodit na hodinu včas]. skilled teacher makes go to class on time 'A skilled teacher makes one come to classes on time.'
 - b. Šikovný učitel přiměje člověka; [PRO_i chodit na hodinu včas]. skilled teacher makes human.ACC go to class on time 'A skilled teacher makes one come to classes on time.'
- (9) Ošemetný vnitřní hlas někdy navádí i [PRO_i nepřiznat se k vině a tricky inner voice sometimes incites not-admit.REFL to guilt and PRO tiše čekat, jak vše dopadne].

 quietly wait how everything falls
 'A tricky inner voice sometimes incites one not to admit one's guilt but to quietly wait how everything turns out.'

Using the participation in control as a support for the syntactic representation goes back to Bach's generalization (Bach 1979), the term due to Bresnan (1982:418): "where the object of a verb is an obligatory controller, intransitivization is impossible." It should capture the fact that the direct cannot be omitted in the case of object control, as in (10-b), but it can be omitted under subject control, as in (10-a).

- (10) a. Louise_i promised (Tom) [PRO_i to be on time].
 - b. Louise taught *(Tom_i) [PRO_i to smoke].

The contrast between English and other languages in (11) then lead Rizzi and Authier to take it as evidence for the existence of null generic arguments in Italian and French, but their

non-existence in English. Notice that Czech behaves like Italian and French in this respect.

- (11) a. English: *Ambition leads___ [PRO to make mistakes].
 - b. Italian: L'ambizione spinge a [PRO commettere errori].
 - c. French: L'ambition amène___ à [PRO commettre des erreurs].
 - d. Czech: Ambice nutí___ [PRO dělat chyby].

Nevertheless, it should be mentioned that the subsequent generative literature came up with arguments against using obligatory control as evidence for syntacticity, see especially Chierchia 1989 and Wurmbrand 2002 for analyzing obligatory control as a lexical/semantic relation; see Landau 2010 for arguing against such a view.

3.2 GNO as Binders for Condition A

Another syntacticity test used in the literature, probably more reliable than the one from obligatory control, is based on the null argument's ability to bind reflexives. Czech GNO can bind anaphoric elements both directly within the same clause, as in (12) and (13), or indirectly via controlled PRO, as in (14). In the following examples, the grammatical gender of the finite clause subject is purposedly different from the gender value of the reflexive sebou $sam\acute{y}m$, because it excludes the possibility of its subject orientation.

- (12) Ani ta nejlepší ochranka neochrání__ i před sebou_i samým. neither the best security.NOM.SG.F not-protects.PF before self alone.INST.SG.M 'Not even the best security guard protects one from oneself.'
- (13) Naše centrum nabízí speciální seance, které usmiřují our center offers special sessions.NOM.PL.F which.NOM.PL.F reconcile.IMPF se sebou; samým.
 with self alone.INST.SG.M
 'Our center offers special sessions which reconcile one with oneself.'
- (14) Nepříznivé okolnosti mohou někdy svádět__i [PRO_i nebrat ohled unfavorable circs.NOM.PL.F can sometimes tempt.IMPF not-take regard na ostatní a PRO_i starat se jenom o sebe_i (samého)]. for others and care.REFL only about self alone.ACC.SG.M 'Unfavorable circumstances sometimes tempt one not to consider others and care only about oneself.'

The need for a structural representation of a null antecedent follows from the ungrammaticality of a sentence which lacks such an antecedent, as in (43).

(15) *Ani ta nejlepší ochranka_j neochrání sebe_i samého. neither the best security.NOM.SG.F not-protects.PF self alone.ACC.SG.M 'Not even the best security protects himself.'

²Note that if GNO can control and PRO can bind, the argument for the syntactic representation of GNO based on examples like (14) reduces to the argument from control presented in the previous section.

3.3 GNO as Small Clause Subjects

Another strong argument for the syntactic presence of Czech GNO is that they can serve as subjects of secondary predication in argumental small clauses, as exemplified below.

3.3.1 Argument Small Clauses

- (16) Taková politická témata nemohou nechat ___ chladným. such political topics.NOM not-can let.PF cold.INST 'Such political issues cannot leave one cold.'
- (17) Pravidelné požívání marihuany dělá__ otupělým. regular consumption.NOM marijuana.GEN makes.IMPF dull.INST 'Regular consumption of marijuana makes one dull.'

3.3.2 Adjunct Small Clauses

On the other hand, Czech GNO cannot become subjects of adjoined secondary predicates, which is something Italian GNO can do, as was shown in (4-b). The reason is that the surface form of such modification is analyzed as a substantivized adjective in Czech, and not as a modified null noun. As can be seen in (18), the adjective doesn't express the property that the internal argument has while undergoing the event expressed by the main clause but the property that it has regardless of the event it is involved in.

(18) Ten doktor vyšetřuje lidi nahé. × Ten doktor vyšetřuje nahé. this doctor examines people naked.ACC.PL × this doctor examines naked.ACC.PL 'This doctor examines people naked, i.e. while they are naked.' × 'This doctor examines naked ones, i.e. people who are naked.'

Interestingly, GNO in French cannot function as subjects of adjunct small clauses either (Authier 1989:fn.1). In (19-a), nu can only modify the subject un docteur. The same is true for Czech, providing the adjective's case and ϕ -features agree with those of the subject.

- (19) a. Un docteur sérieux examine nu. 'A serious doctor examines nude.'
 - b. Správný doktor vyšetřuje nahý.
 right doctor.NOM.SG.M examines naked.NOM.SG.M
 'A right doctor examines naked, i.e. while being himself naked.'

Regardless of this single difference between Italian on one side, and French and Czech on the other, the data exemplified so far provide already enough support for acknowledging the syntactic status of Czech GNO. What exactly constitutes GNO as syntactic creatures will be the matter of Section 5.

4 Towards the Semantic Analysis of GNO

Before discussing the details of the internal structure of GNO, I make a short detour into their semantics, because it has some important consequences for their syntax as well.

4.1 GNO as Variables

It was mentioned already in 2.2 that for Authier, GNO are generated as free variables which get bound by an unselective operator. He provides several tests (on French data) to show that GNO really behave like operator-bound variables. Perhaps the strongest one is that in sentences with multiple quantifiers, one of which is a generic adverb quantifying a null object, we can get scope-ambiguity. For example, a Czech equative sentence in (20) has the interpretation that there is something that always pushes one to break the rules (which can be schematically captured as \exists scoping over \forall), but it has also the interpretation where the universal scopes over the existential: for one, there is always something that pushes him to break the rules. Since May (1977), such ambiguity is standardly treated as a result of Quantifier Raising at LF.

- (20) a. Na téhle základně (pořád) něco nutí porušovat pravidla, i at this base always something forces.IMPF break rules even když uvnitř chce být člověk spořádaný. if inside wants be human orderly 'At this base, something always pushes one to break the rules even if one wants to be orderly inside.'
 - b. $\exists x \text{ [thing(x)} \land \forall y \text{ [person(y)} \rightarrow x \text{ pushes y to break the rules even if y wants to be orderly]}$
 - c. $\forall y \text{ [person(y)} \rightarrow \exists x \text{ [thing(x)} \land x \text{ pushes } y \text{ to break the rules even if } y \text{ wants to be orderly]]}.$

Moreover, in the so-called equative sentences with two occurrences of GNO, the two objects have to have the same reference. So in (21), any given arbitrary person that is calmed by a therapy has to be the same arbitrary person who gets balanced by that therapy.

(21) Terapie, která uklidňuje___, je terapie, která dělá___ vyrovnaným. therapy which calms is therapy which makes balanced 'A therapy which calms one is a therapy which makes one balanced.'

This restriction on the interpretation of empty elements in equative structures was first noticed by Lebeaux (1984) for arbitrary PROs. Lebeaux analyzes such PROs as "linked" by being bound by a single null quantifier. Authier concludes the same has to be true for GNO.

- (22) Linked PRO reference
 - a. PRO to know him is PRO to love him.

Lebeaux 1984:(17-d)

b. $\forall x [[PRO_x \text{ to know him}] \text{ is } [PRO_x \text{ to love him}]]$

4.2 GNO as Variables Bound by GEN

Even though the main Authier's insight that GNO are variables bound by a sentence-level non-overt adverb-like operator holds, Krifka et al. (1995) concluded that the null generic operator cannot be really unselective, but it takes two formulas as arguments: a restrictive term and a nuclear scope (a.k.a. matrix). Stemming from the works of Kamp (1981) and Heim (1982), Krifka et al.'s original formula is as follows:

(23) $Q[x_1, ..., x_i; y_1, ..., y_i]$ (Restrictor $[x_1, ..., x_i]$; Matrix $[\{x_1\}, ..., \{x_i\}, y_1, ..., y_i]$) where Q is a quantifier, $x_1, ..., x_i$ are the variables to be bound by Q, and $y_1, ..., y_i$ are the variables to be bound existentially within the nuclear scope

One of the advantages of the dyadicity of the generic quantifier is that it allows one to capture the ambiguity of the famous hurricane-sentence from Carlson 1989:

(24) Hurricanes arise in this part of the Pacific.

```
Reading 1: GEN[x;y](x) are hurricanes; y is this part of the Pacific & x arise in y) Reading 2: GEN[x;y](x) is this part of the Pacific; y are hurricanes & y arise in x)
```

Another important aspect of GEN-operator is that it can quantify not only over individual variables, but also over situation variables (modeled after Kratzer's 1995 spatiotemporal location). This essentially corresponds to a sentence being habitual, cf. "habitual sentences express generalizations over situations that are specified by the corresponding episodic verbal predicate" (Krifka et al. 1995:32). For example, a sentence in (25-a) has GEN quantifying over a situation variable s as captured in (25-b).

- (25) a. Mary smokes when she comes home.
 - b. GEN[s,x;](x = Mary & x comes home in s; x smokes in s)

Krifka et al. 1995:(53)

In (25-a), the restricting situation is expressed by a *when*-clause, but very often, it is not specified overtly, as with the habitually interpreted verb smoke in (26-a):

- (26) a. Mary smokes.
 - b. GEN[s,x;](x = Mary & s is a normal situation wrt. smoking & s contains x; x smokes in s) Krifka et al. 1995:(54)

Krifka et al. (1995) do not explicitly discuss GNO, but if we applied their generic operator to capture the meaning of a sentence with GNO, we'd get something like (27-b), where GNO is interpreted as a variable y bound by GEN, and restricted by the predicate "person" (I am using a more contemporary notation than Krifka et al., taken from Dayal 2011:1091).

- (27) a. Mozartova hudba rozveseluje___.
 'Mozart's music cheers one up.'
 - b. GENx,y,s $[R(x, Mozart's music_s^k), person_s(y), y is listening to x in s] [x cheers up y in s] where s is the situation index, k is a kind, and R is the realization relation which relates kinds to their instances³$

This analysis has at least two benefits. By systematically accounting for the generic interpretation of null objects, it eliminates the need for the feature [+generic], somewhat arbitrarily posited by Rizzi (1986). Note that the existence of a silent GEN-operator would

³I follow the neo-Carlsonian approach (Carlson 1989, Chierchia 1998, Dayal 2004), in treating bare plurals and mass terms (such as *Mozart's music*) as kind-denoting. When they combine with object-level predicates as in (27-a), the predicates access their instantiation sets via R.

have to be posited anyways, regardless of the existence of GNO, in order to account for the interpretation of overt generically interpreted expressions. And by generically quantifying over the situation variable s, it also explains why the sentences with GNO always have generic time reference, i.e. why they are always interpreted habitually. This is clearly visible in Czech, where imperfective verbs are in principle ambiguous between an ongoing, progressive-like interpretation, and a habitual interpretation. So a sentence like *Karel čte noviny* 'Charles reads.IMPF newspaper' can mean either 'Charles is reading a newspaper' or 'Charles habitually reads newspapers'. But the sentences with an imperfective verb and a null generic argument allow only the latter, habitual interpretation:

___ / lidi před fyzickým i (28)Dobrý policajt chrání psychickým a. people from physical and psychical good policeman protects.IMPF terorem. terror 'A good policeman protects one/people from both physical and psychical terror.' (* ___) / lidi Právě teď tam jeden policajt chrání right now there one policeman protects people from group teroristů. terrorists 'There is a policeman protecting *one/some people from a group of terrorists right now.'

5 Syntactic Features of GNO

After establishing the syntactic reality of GNO in Section 3, and the general semantic representation of sentences involving GNO in Section 4, we can now delve into the intricacies of their syntactic composition. I do not intentionally say "syntactic structure" because we shall see there is not much structure to them after all. A Slavic language with rich inflection such as Czech is particularly convenient for undergoing such a research task in the area of non-overt constituents because in Czech, ϕ -features are overtly morphologically marked not only on nouns and pronouns themselves but also on adjectives and verbs that agree with them.

5.1 Gender

5.1.1 Data and Generalization

In sentences where GNO function as controllers or A-binders, we can see GNO's gender reflected on regular adjectives predicated of GNO via PRO, as in (29), and on reflexive adjectives $s\acute{a}m$, $sam\acute{y}$ bound by GNO within the same clause, as in (30), or outside of the embedded non-finite clause, as in (31).⁴

⁴Czech has a three-way gender system, with masculine, feminine and neuter gender values. I do not consider adjectives with neuter endings in the discussion to follow, but in a (highly uncommon) context where the generalization was meant to apply to a group of human-like entities whose names have neuter gender, typically some personified animal offsprings, neuter agreement would be allowed as well, next to the pragmatically unmarked masculine gender:

- (29) Taková zkušenost naučí___i [PRO_i zůstat klidn-ý/^{C#}klidn-á]. such experience teaches stay calm-NOM.SG.M/calm-NOM.SG.F 'Such experience will teach one to stay calm.'
- (30) Ani ti nejlepší bodyguardi neochrání i před sebou; sam-ým / neither the best bodyguards not-protect.PF from self alone-INST.SG.M / C#sebou; sam-ou. self alone-INST.SG.F 'Not even the best bodyguards protect one from oneself.'
- (31) Kázání toho mnicha přimějí [PRO_i uvidět sebe_i sam-a / preaching that monk urge see self alone-ACC.SG.M / C#sebe_i sam-u v pravém světle].

 self alone-ACC.SG.F in right light 'Preaching of that monk urges one to see oneself truthfully.'

The adjectives bound by or predicated of GNO can always have masculine gender, which is semantically and pragmatically neutral in the sense that it refers to both male and female entities. However, feminine gender is not completely ruled out either. In the contexts where the generalization is meant to apply exclusively to women, GNO can be marked feminine – while masculine is also still possible. I mark this by the superscripted "C#" in the examples. If we set up the context and the content of the sentence such that the generalization applies to female beings only, as for example in (32), the semantic markedness of feminine gender goes away.

(32) Náš nový lak na nehty učí___i [PRO_i vážit si sebe_i sam-ého / our new polish for nails teaches esteem self alone-GEN.SG.M / sebe_i sam-é].

self alone-GEN.SG.F

'Our new nail polish teaches one to respect oneself.'

GNO seem to exhibit what is usually called "natural gender", when the grammatical gender of an expression corresponds to the biological gender of its referent. We chsler and Zlatić (2000:803) describe natural gender as the situation when the gender features "correlate directly with referential anchoring conditions". For example, any time a noun boy is used referentially, it must not only be anchored to a young male human, but its index has to have the feature [Gender:Masc], which forces all other elements that share its index, such as bound pronouns, to have the masculine form as well, cf. The boy absented himself/*herself; see also Percus (2011). However, the term natural gender covers a rather broad range of phenomena. In the following section, I explore to what extent natural gender is grammaticalized in Czech.

⁽i) Já jsem malé prasátk-o a říkám vám, že taková zkušenost naučí__i [PRO_i zůstat za I am little piglet-NOM.SG.N and say you that such experience teaches stay in všech okolností klidn-ý / klidn-é]. all circumstances calm-NOM.SG.M / calm-NOM.SG.N 'I'm a little piglet and I'm telling you that such experience teaches one to stay calm under any circumstances.'

5.1.2 Gender Marking of Czech Overt Nouns

I assume that gender features are located on the categorizing head called "little n" (Ferrari 2005; Kihm 2005; Lowenstamm 2008; Kramer 2009, 2014; Hammerly this volume), which gives them an important role as markers of nominalization. This assumption stems from a highly influential view in morphosyntax that nouns start the derivation as category-neutral roots which combine with the nominal-category-assigning head n (and possibly some other categorizing heads before that), see esp. the works of Marantz (1997, 2001) and Arad (2003, 2005). Marantz (2001, 2007) contends that the first categorizing head that attaches to a root is a phase head and all phonological and semantic idiosyncrasies, previously deferred to the lexicon, are limited to this "first phase" of syntax. All other derivations above the first category-determining node should follow the regular principles of syntactic composition.

In order to understand how gender is valued in the case of Czech GNO, we need to make a quick detour into the typology of Czech nouns when it comes to their derivation. Typically, nouns consisting only of a root and an inflectional ending have idiosyncratic gender (I call such nouns "root nouns"). For example, a root noun with the inflectional ending -e can be either masculine or feminine or neuter, depending on the root itself.

```
(33) moř-e – růž-e – soudc-e sea-NOM.SG.N – rose-NOM.SG.F – judge-NOM.SG.M 'a sea' – 'a rose' – 'a judge'
```

I am not concerned here with the exact mechanism of gender valuation of root nouns, but see Embick 2000 and Embick and Noyer 2007, where it is postulated that roots can be equipped with selectional features/class diacritics that ensure their insertion in the appropriate syntactic environment; see Acquaviva 2009 for an opposing view. My hypothesis is that the Vocabulary Items for these roots span both the root and the n-head with a valued gender feature, so they are in a sense idiomatized.

On the other hand, if a noun has an overt nominalizing suffix attaching to a root (or to another derivational suffix), its grammatical gender is determined by that particular suffix. For example, nouns with the suffix -dlo are always neuter, nouns with the suffix -ost are always (grammatically) feminine.

Within the latter group, of overtly derived nominals, there are nouns denoting in the human domain only, typically names of professions or names of people with certain characteristic property. They are based on neutral roots that can be embedded within a verbal or an adjectival structure as well and are formed by suffixes such as -tel, $-a\check{r}$, $-\acute{a}k$, -ant, etc. They are grammatically masculine and can refer to both males and females. If the feminine suffix (esp. -k-a) is attached to them, they denote exclusively in the domain of female individuals.

```
(35) a. uči-tel-∅ — uči-tel-k-a
teach-er-NOM.SG.M — teach-er-K-NOM.SG.F
'a teacher' — 'a female teacher'
```

```
b. stav-ař-Ø – stav-ař-k-a
build-er-NOM.SG.M – build-er-K-NOM.SG.F
'a builder' – 'a female builder'
c. chytr-ák-Ø – chytr-ač-k-a
smart-AK-NOM.SG.M – smart-AK-K-NOM.SG.F
'a smart man/person' – 'a smart woman'
d. muzik-ant-Ø – muzik-ant-k-a
music-ian-NOM.SG.M – music-ian-K-NOM.SG.F
'a musician' – 'a female musician'
```

According to Alexiadou (2004), the distinction between nouns with inherently specified gender, which can denote both humans and non-humans, and nouns with gender reflecting the biological sex is present in every language. Alexiadou explicates it in more detail on the gender systems of Italian, Spanish, Greek and Hebrew; Wechsler and Zlatić (2003) draw attention to the parallel distinction in Serbo-Croatian where they describe it as the opposition of lexical (intrinsic) versus semantic (sex-based) gender.

My assumption is that the nominalizing suffixes of the nouns in (35) spell-out their n-node and that they bear an interpretable gender feature (iGender). If the value of this feature is specified as [Masc], the noun can refer to both masculine and feminine individuals; if it is specified as [Fem], the noun denotes feminine entities only (see Percus 2011:179 for suggesting a concrete syntactic and semantic mechanism in which the combination of the feminine suffix with the rest of the structure is achieved).

It is important to understand that the interpretable gender feature on the suffix, not the suffix itself, brings about the noun's denotation in the human domain. The suffixes above can be used to derive names of non-human entities as well. I assume that in those cases, they are associated with the uninterpretable version of gender (see Kramer 2009, 2014 for arguing that both types of gender features, interpretable and uninterpretable ones, can be present in a single language). As expected, such nouns do not allow the formation of a female-denoting counterpart, even if the femininizing suffix itself can be attached, as e.g. in (36-c):

```
a. ukaza-tel-∅ – *ukaza-tel-k-a show-TEL-NOM.SG.M – show-TEL-K-NOM.SG.F 'a sign'
b. podběr-ák-∅ – *podběr-ač-k-a gather-AK-NOM.SG.M – gather-AK-NOM.SG.F 'a landing net'
c. na-běr-ák-∅ – naběr-ač-k-a on-gather-AK-NOM.SG.M – on-gather-AK-NOM.SG.F 'a gathering tool' – 'a soup scoop'
```

5.1.3 Interpretability of Gender on GNO

The previous section revealed that GNO are not unique in their gender-related behavior and that there is in fact a group of overt nouns in Czech, namely nouns derived from category-neutral roots by nominalizing suffixes with an interpretable gender feature, which have exactly the same behavior: their unmarked form is masculine and it can refer to humanlike entities of both sexes, but they can be also marked as feminine, in which case they refer to women only. The only difference between these overt nouns and GNO is that GNO's n-head or "nominalizing suffix" is not overt, presumably because there is no (overt) root that it would attach to.

There are two formal ways to capture the interpretable gender feature on n. If we analyzed it as a binary feature, the semantically unmarked, masculine form would be [iGender:–Fem] and the marked form would be [iGender:+Fem]. In the hierarchical feature geometry system (Harley and Ritter 2002, a.o.), [iGender:Masc] could be viewed as the unmarked node with no dependent, receiving the default interpretation and morphologically expressed as masculine; [iGender:Fem] would be treated as its dependent, daughter node, as captured in (37).⁵

The semantics of an n-node bearing one of the interpretable gender features but no other lexical semantics could be formalized as in (38). Note that this denotation fits into the generally accepted view of bare nPs as property-denoting. For simplicity, I label the interpretable gender values as [iMasc] and [iFem]. It allows me to remain neutral as to whether a binary or a privative feature system is theoretically superior. (In the privative system, [iMasc] would be restated as [iGender]; in the binary system, it would correspond to [iGender:-Fem].)

(38) a.
$$[[iMasc]] = \lambda x \lambda s[person(x,s)]$$

b. $[[iFem]] = \lambda x \lambda s[feminine(x,s)]$

5.1.4 "Human-ness" of GNO

The approach to the syntax and semantics of GNO sketched so far has one important theoretical advantage over Rizzi's proposal: the fact that GNO denote human beings does not have to be stipulated because it follows from the interpretation of their gender feature.⁶ In the semantic representation of a sentence with GNO, such as the one given in (27-b), the only semantic content contributed by the null object was the property "person", restricting the generically quantified object variable. This arbitrarily posited property can now be replaced with whatever is the meaning of an n-head with valued iGender. In (38), I suggested that, it is precisely the property of being "person" for [iGender:Masc], and the property of being "feminine" for [iGender:Fem].

That the interpretable gender feature on n reflects something else than the biological gender/sex is confirmed by the fact that names of animals are not productively derived by nominalizing gender-specific suffixes in Czech. Note that animals can be male or female, but they cannot be (masculine or feminine) personas. Names of animals in Czech are typically

⁵The semantic unmarkedness of masculine gender has to be distinguished from grammatical/morphological defaultness, cf. Sauerland (2008). Morphologically default gender in Czech is neuter, which arises if there is no gender specification at all, as e.g. in the case of impersonal passives or loanwords into Czech with uncommon endings which cannot fit into the Czech declension system.

⁶Both Authier (op.c.) and Landau (op.c.) gloss over GNO's humanness and simply take it as a fact so Rizzi (op.c.) is the only scholar having any proposal related to this issue in the literature on GNO.

root nominals whose grammatical gender is determined by their lexical properties. Even if there are sex-neutral animal names, denoting both male and female entities, they are attested with either a masculine or a feminine grammatical gender. This is quite different from the situation attested for GNO and for the nouns in (35), where only the masculine grammatical gender was associated with semantic neutrality.⁷

(39) lišk-a, opic-e vs. pes- \emptyset , kůň- \emptyset fox-NOM.SG.F, monkey-NOM.SG.F dog-NOM.SG.M, horse-NOM.SG.M 'a fox (M or F), a monkey (M or F)' vs. 'a dog (M or F), a horse (M or F)'

Another advantage of deriving the "lexical semantics" of GNO from their interpretable gender feature is that it allows us to include in their denotation personified entities and other human-like creatures, which we also perceive as "personas" (with masculine or feminine characteristics), but which we hesitate to label as members of the human kind, i.e. as [+human]. For example, in the hypothetical context where someone is asked to make a report on the effects of Mozart's music on various creatures on different planets, the sentence such as (40) is perfectly acceptable. Interestingly, the parallel observation was made by Safir (2000:10) for generic one in English and it was extended by Moltmann (2006:259) to arbitrary PRO – even though both of these are traditionally associated with [+human] feature as well.

(40) Zjistili jsme, že Mozartova hudba dokáže rozveselit__ i na planetách, kam found out that Mozart's music can cheer up.PF even on planets where lidé dosud nevkročili a které obývají pouze mimozemšťané. people so far not-entered and which inhabit only extraterrestrials 'We found out that Mozart's music can cheer one up also on the planets which people never entered and which are inhabited solely by extraterrestrials.'

The parallel sentence with no personifiable object in (41) is not felicitous, unless we add some extra assumptions about the context:

#Zjistili jsme, že Mozartova hudba dokáže rozveselit___ i na planetách, kam found out that Mozart's music can cheer up.PF even on planets where lidé dosud nevkročili a kde jsou pouze kameny.

people so far not-entered and where are only stones

'We found out that Mozart's music can cheer one up also on the planets which people never entered and where there are only stones.'

In the same fashion, it is completely acceptable for Pooh to tell Eeyore who is sad:

(42) Poslechni si Mozartovu hudbu, ta rozveseluje___.

Listen Mozart's music it cheers up.IMPF
'Listen to Mozart's music, it cheers one up.'

⁷By saying this, I do not want to imply that there aren't any regularities in the domain of grammatical gender of animal names whatsoever. For example, it is well known that all nouns denoting exclusively male animate individuals are grammatically masculine, while all nouns denoting exclusively female animate individuals are grammatically feminine; for a formal analysis of this fact in terms of presuppositional semantics for gender features see Percus 2011.

5.2 Number

5.2.1 Data and Generalization

The data on number specification of GNO as reflected on agreement markers are much more blurred than the data on gender discussed in the previous section. Adjectives predicated of GNO as well as reflexives bound by GNO have usually a singular ending. However, plural endings are allowed to a limited extent as well, with varying degree of acceptability for different speakers and in different contexts.⁸

- (43) Ani nejlepší ochrank-a neochrání__i před sebou_i samý-m / neither best security-NOM.SG.F not-protects before self alone-INST.SG.M / *??sebou_i samým-i. self alone-INST.PL 'Not even the best security guard protects one from oneself.'
- Tahle speciální meditac-e usmiřuje___i se sebou_i samý-m / this special meditation-NOM.SG.F reconciles with self alone-INST.SG.M / *??sebou_i samý-mi. self alone-INST.PL 'This special meditation reconciles one with oneself.'
- (45) Každá přežitá nehoda dělá ostražitější-m / ??ostražitější-mi. every survived accident makes more alert-INST.PL.M / more alert-INST.PL 'Each survived accident makes one more alert.'

The use of the singular versus plural form in the examples above is not associated with a major difference meaning, which is the case for overt generically quantified objects as well, as shown in (46).

(46) Současný systém student-a / student-y zotročuje. current system student-ACC.SG.M / student-ACC.PL.M enslaves. 'Students are/the student is enslaved by the current system.'

I assume that the plural noun in (46) is interpreted as a generically quantified kind-denoting bare plural; the shift from kinds to properties is enabled by accessing the kind's instantiation set (Chierchia 1998; Dayal 2004). On the other hand, the singular noun ranges over entities in the taxonomic domain, which are not transparent with respect to their instantiation sets (Dayal 2004).

What is not explained is why the plural form is degraded for GNO when it is equally acceptable for overt generic objects. All of the examples in (43), (44), and (45) could take an

Also note that the reflexive pronoun sebe 'self' is not itself overtly marked for number – its forms are homophonous in singular and plural for all morphological cases. However, since the adjective $sam\acute{y}$ 'alone' is in concord with this pronoun and it is overtly marked for number, I assume it gets its number value from the pronoun.

⁸Since plural adjectival forms are homophonous for masculine and feminine gender in all but nominative case in Czech, gender specification is omitted for plurals in the examples below because there is no way to determine it.

overt singular or an overt plural generic object with no difference in grammatical acceptability and with roughly the same meaning:

- (47) Ani nejlepší ochrank-a neochrání člověk-a_i před neither best security-NOM.SG.F not-protects human-ACC.SG before sebou_i samý-m / lid-i_i před sebou_i samým-i. self alone-INST.SG.M / people-ACC.PL before self alone-INST.PL 'Not even the best security guard protects one/people from oneself/themselves.'
- Tahle speciální meditac-e usmiřuje člověk-a_i se this special meditation-NOM.SG.F reconciles human-ACC.SG with sebou_i samý-m / lid-i_i se sebou_i samý-mi. self alone-INST.SG.M / people-ACC.PL with self alone-INST.PL 'This special meditation reconciles one/people with oneself/themselves.'
- (49) Každá přežitá nehoda dělá člověk-a ostražitější-m / every survived accident makes human-ACC.SG more alert-INST.PL.M / lid-i ostražitější-mi. people-ACC.PL more alert-INST.PL 'Each survived accident makes one/people more alert.'

If the semantics of a verbs and/or the presence of a reciprocal requires a plural object, as in (50), the structure with GNO is slightly degraded, but not ungrammatical.

(50) [?]Taková propaganda jenom znesvářuje___i mezi sebou_i navzájem. such propaganda just disunites between selves mutually 'Such propaganda just disunites people among themselves.'

Note that such structure would not be grammatical with an overt singular generic noun $\check{c}lov\check{e}k$ and it would require a noun in plural.

(51) Taková propaganda jenom znesvářuje *člověk-a_i / lid-i_i mezi such propaganda just disunites human-ACC.SG / people-ACC.PL between sebou_i navzájem.

selves mutually
'Such propaganda just disunites one/people among themselves.'

In general, verbs whose lexical semantics requires a plural or a collective theme can combine with GNO without problems.

(52) Společné nebezpečí dokáže spojit___ (dohromady).
collective danger can unite together
'A collective danger can unite people/population (together).'

Even though the data presented in this section are somewhat hard to grasp, they point towards the following conclusions: (1) GNO cannot be specified for singular and plural number values as overt nouns are. If they were, we would expect both number values to be equally acceptable in the contexts such as those in (43) through (45), where overt nouns can be either

singular or plural. (2) GNO cannot be assigned one number value as a default, as e.g. mass nouns in English, cf. Chierchia 2010:136 who assumes that mass nouns in English "receive a semantically void, 'default' singular morphological marking" since the semantic function associated with singular and plural number marking, checking the atomicity of a property denoted by nP, is not applicable to them. If GNO behaved like mass nouns in this respect, it would lead to the appearance of a default, presumably singular number on all elements agreeing with GNO, and to the ill-formedness of clauses which require grammatically plural objects, such as the one in (50). Moreover, we would expect plural endings on agreement markers to be completely ungrammatical in the contexts which allow direct objects in both singular or plural, which is not the case either.

For both of these reasons, I assume that GNO do not have the number category at all, i.e. they do not project NumP where number value is specified. (That number features are generated on a separate functional projections was proposed by many authors; see Ritter 1991, Carstens 1991, Panagiotidis 2000, Borer 2005.) This allows GNO to avoid the semantic distinction between singular and plural objects in generic statements, described in relation to (46), and to receive the generic interpretation from a direct GEN-quantification of a variable introduced by a property-denoting n, cf. (27-b). It also leads to ambivalence when it comes to number-marking on agreeing adjectives, since both values, singular as well as plural, are at play. While I do not have a principled account of how the number value is determined for the adjectives in the examples (43) through (45), I suppose that it is a result of some form of a partial pragmatic agreement, which can be employed for a feature even if grammatical (index-based) agreement cannot.

5.2.2 Missing NumP and GNO's Case-Assignment

Another, indirect support for the fact that GNO do not project the category of number is based on the examples with GNO as small clause subjects, cf. 3.3.1. In (53), there is a sharp contrast between GNO and its overt counterpart, a generically interpreted noun *člověk*, when it comes to case agreement. While GNO is compatible only with idiosyncratic instrumental case on the adjective that is predicated of it, the overt noun allows the predicate to agree with it in case.⁹

- (53) a. Na tyhle prášky pozor, dělají otupěl-ým / *otupěl-ého of these pills beware make dull-INST.SG.M/dull-ACC.SG.M 'Beware of these pills, they make one dull.'
 - b. Na tyhle prášky pozor, dělají člověk-a of these pills beware make human-ACC.SG.M otupěl-ým / %otupěl-ého dull-INST.SG.M/dull-ACC.SG.M 'Beware of these pills, they make one dull.'

It is often assumed that case is a property of DPs (Danon 2006). The morphological support for this claim comes from the observation that case inflection is primarily visible

⁹The accusative form is marked with '%' because there are some Czech speakers who find it unacceptable. Most speakers perceive it as an acceptable, though a bit less preferred alternative to the instrumental form.

on D-elements, such as articles, pronouns or clitics (Landau 2010:381). However, such assumption is problematic in article-less languages like Czech where the presence of a DP-layer in nominals was disputed on syntactic grounds (Bošković 2008; Despić 2009; Despić 2011; Bošković 2012), and where possessives and demonstratives can be analyzed as modifiers of a lower functional projection than the DP. Moreover, the semantic reason for the presence of a DP in nominal projections, which saw D as a precondition for their argumenthood (Longobardi 1994), disappeared in the light of the research on kind terms (Chierchia 1998) and definitely interpreted bare nouns in article-less languages like Hindi or Russian (Dayal 2004).

On the other hand, there are still reasons to analyze case features as features that are visible at the level of the maximal extended projection of the nominal (Preminger 2011:159) and that cannot be assigned to a bare nP. Under the assumption that case features are located in a separate functional projection KaseP (Bittner and Hale 1996) and that overt nominals have at least the categorial heads Num and n, KaseP has to be the topmost nominal functional category which – if no DP is present – merges (at least) with NumP. For the idea from pre-DP-hypothesis time that arguments have to be specified as NumPs, see Rizzi 1986:543. Also note that even for Chierchia (1998) and Dayal (2004), who argue that bare nouns can function as arguments, the number of such nominal phrases has to be specified because the type-shifting operations are sensitive to its [Sg/Pl] value. Even though Chierchia and Dayal speak about determinerless argument NPs, what they actually mean are determinerless argument NumPs, once we work with a more articulated nominal functional structure where number is given its own functional projection.

That case-marking is sensitive to number-specification as well as to gender-specification of nouns follows from the existence of the functional sequence [KP [NumP [nP]]], accompanied by the assumption that K agrees in ϕ -features with Num and n, and morphological case is then spelled-out on the K-head. This can be formally achieved in the feature valuation system based on downward probing Agree (Chomsky 2000; Pesetsky and Torrego 2007), where different ϕ -features can probe independently of each other. That valued number is a precondition for case-assignment is clearly visible in Slavic languages like Czech where each grammatical number has its own case declension paradigm; moreover, case is expressed by inflectional endings which synthetically express number and gender as well. Simply put, there is no way for a noun to get case without having a number feature. (I suppose that this is a language-specific parameter rather than a universal principle, given the existence of number neutral nouns in languages like Japanese or Malagasy.) Importantly, if KaseP always selects (at least) NumP in Czech and GNO do not project NumP, as suggested above, GNO's inability to be assigned case follows.

An alternative view of case assignment, which nevertheless corroborates the dependency of case on number, is presented in Embick and Noyer 2007. These authors analyze case features as purely morphological features, inserted at PF and not contained in syntax proper. They focus on the declension system in Latin, which has six different cases for each number, pretty much on a par with the declension system in Czech, which has seven cases for each number. Since in Latin (as well as in Czech), case and number are realized in the same position, Embick and Noyer (2007:308) propose that case features are inserted directly to the Num node which also contains the feature [±Plural]. When a vocabulary items for a particular case marker is inserted, it spells-out the case features and the number feature

altogether. If the number feature was not present in Num, the vocabulary item for case marker could not be inserted since it cannot have more features than the node it is inserted to. In other words, the dependence of case on number in languages like Latin follows from the non-existence of Num-spelling vocabulary items that are underspecified for number value.

While it is in theory possible that there are null nouns which are marked for case, the opposite case, overt nouns without morphological case, is inconceivable in Czech. For all overt nouns, having a morphological form is inseparable from belonging to a certain declension paradigm and expressing morphological case, cf. Franks and Pereltsvaig (2004). So null nouns are presumably the only ones that can "afford" not to have case in Czech.

5.3 Person

Person features are standardly located in the D-head, but there is a controversy in the literature as to which specific features constitute what is traditionally called the grammatical category of "person". Some scholars maintain that only first and second person features, i.e. just the features [Author] and [Participant] can be present in D, with third person pronouns being truly underspecified for person, thus giving rise to the morphological default (Harley and Ritter 2002, Panagiotidis 2002, Adger and Harbour 2007, to name a few). On the other hand, Nevins (2007) argues that the view of third person as non-person cannot be maintained if we want to account for the morphological effects of the Person-Case Constraint. He concludes that a binary system of person features has to be used, rather than a privative one:

```
(54) 1st person = [+Author, +Participant]
2nd person = [-Author, +Participant]
3rd person = [-Author, -Participant]
```

While this debate pertains mainly to pronouns, it is assumed that nouns, i.e. nPs do not have any person features themselves. But they can take them on, presumably when they merge with person-specified D, cf. *I linguist*, you linguists (Panagiotidis 2002).

The interpretation of GNO suggests that they involve all three persons semantically. Not only that they range over person-like beings, usually restricted by the context in some way, but the speaker and the addressee are always implied to be among those beings. That's why GNO are especially common in headlines and advertisements which aim to (1) give an impression of a statement verified by its author, and (2) to appeal (and apply) to the reader/listener. The same sort of involvement of the semantic speaker and addressee is attested for English generic one and arbitrary PRO; Moltmann (2006, 2010) analyzes the special relation of one and PRO_{arb} to the first person in the philosophical sense within the Simulation Theory as "generalizing detached self-reference", roughly corresponding to "putting oneself into the shoes of anyone meeting relevant conditions".

One way to show that the first and second person referents are in the denotation of GNO is through the exceptions to generic statements. It is known that generic quantification allows for exceptions. If the speaker and the addressee can constitute such exceptions, they have to be among the entities that the generalization applies to in the first place. The data from Czech confirm that they are.

- (55) Jógová cvičení sice uklidňují, ale já jsem výjimka, mě neuklidňují. yoga exercises indeed calm.IMPF but I am exception me not-calm 'Indeed, yoga exercises calm one, but I am an exception, they don't calm me.'
- (56) Jógová cvičení sice uklidní, ale ty jsi výjimka, tebe neuklidní. yoga exercises indeed calm.PF but you are exception you not-calm 'Indeed, yoga exercises make one calm, but you are an exception, they don't make you calm.'

Note that if we replace GNO with another generic noun that does not range over the speaker/addressee, the same exception is infelicitous. For example, if the speaker is a female in her thirties, the following generalization does not make sense.

(57) #Jógová cvičení sice staré lidi / starého člověka uklidňují___, ale já jsem yoga exercises indeed old people / old human calm.IMPF but I am výjimka, mě neuklidňují.

exception me not-calm

'Indeed, yoga exercises calm old people / the old man, but I am an exception, they don't calm me.'

However, if the speaker/addressee have the property that makes them qualify for the set of entities that the generic quantifier ranges over, they can represent an exception from the general rule once again. For example, it is ok for the author of this article to say:

(58) Debaty o pravopise generativního lingvistu / generativní lingvisty debates about orthography generative linguist / generative linguists nezajímají, ale já jsem výjimka, mě zajímají.
not-interest but I am exception me interest 'Debates about orthography do not interest the generative linguist / generative linguists, but I am an exception, they interest me.'

These examples confirm that GNO behave much like other generically interpreted nouns when it comes to the first and second person semantics. The main difference is that GNO always range over the speaker and the hearer, while all other nouns range over them only if the speaker and the hearer belong to the set of entities with the property P, where P is determined by the lexical semantics of the generically interpreted noun and restricts the range of GEN. This is because GNO are based on the conceptually broadest nPs, bearing only the "person semantics" of [iGender] discussed in 5.1.3, and the speaker/hearer are always personas, while they are not always P.

I suppose that the parallelism between GNO and other generically interpreted nouns reflects the fact that neither the former nor the latter are specified for either of the three grammatical person features in (54), which is what allows these nouns to denote all three persons semantically. It is worth mentioning that according to Nevins (2007), something similar is true for impersonals: they can refer to any person specification, even though pragmatics usually prefers one.

(59) Interpretive possibilities for impersonal pronouns (Nevins 2007:307)
$$[+P, +A] \cup [+P, -A] \cup [-P, -A]$$

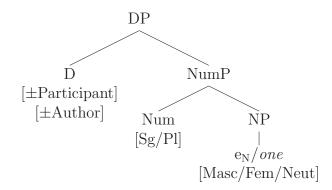
Although Nevins leaves the details of implementation of this insight for future research, he suggests that impersonals are truly underspecified for $[\pm Participant, \pm Author]$ person features since they are compatible with both [+] and [-] values for each of these features, i.e. they bear all feature specifications simultaneously. The same is true for GNO, modulo their interpretable gender, which forces them to denote in the human-like domain. We saw above that GNO can refer to any member from the union of the speaker, the addressee, and everyone else, i.e. none of the possible combinations of $[\pm Participant, \pm Author]$ is applicable to GNO in itself. This conclusion is independently supported by the missing evidence for the D-projection in GNO, where person features are assumed to be generated, cf. 5.2.2.

6 Conclusion: GNO as Pronominal Nominals

Examining one-by-one the syntactic features standardly associated with the extended nominal projection, I arrived at the following: GNO have an interpretable gender feature, on a par with human-denoting nouns productively derived by nominalizing suffixes, but there does not seem to be any evidence that GNO have number and person features and that they can get case. I explain this as a result of missing number and determiner projections in GNO's syntactic structure.

Getting back to the claim by Rizzi (1986) with which I started this paper, about GNO being syntactically pronouns, we can safely conclude that the only thing which GNO and regular pronouns have in common – and which regular nouns do not have – is their conceptual emptiness. Neither GNO, nor other pronouns have a concept-denoting, descriptive root.

(60) Structural template of pronouns (following Postal 1969)



In the linguistic tradition following Postal (1969), and contra intransitive determiners of Abney (1987), pronouns are assumed to contain an abstract, null or overt noun in their structure, in addition to the determiner and possibly other functional projections. It is marked as e/one in (60). This noun is empty in the sense that it does not denote any concept, and it bears only the categorial N feature and one of the gender features. It is precisely this non-descriptiveness or non-predicativeness what makes a pronoun truly pro-nominal, being able to stand for other nominals whose N is descriptive and does denote some property (Panagiotidis 2002).

In the line of the morphosyntactic research that I am pursuing here, see esp. 5.1.2, categorial and gender features are separated from a concept-denoting root. Consequently, there is no more need for a "conceptually empty noun in the lexicon", postulated by Panagiotidis, op.c., bearing only an N feature and a gender feature. The function of such a categorizer and

a gender-bearer is fulfilled by an n-node with a valued gender feature; see also Panagiotidis 2011.

I argued in 5.1 that such a node is present inside GNO, and since I also determined that no other functional category merges with it, it is the only node that constitutes GNO.

(61) Shortage of structure in GNO
(Note that in the theory of bare phrase structure, there is no difference between nP and n in the tree on the right and they correspond to a single node.)

nP

in

iGender:

If we translated Postal's pronominal template in (60) into the current morphosyntactic theory based on acategorial roots, regular pronouns would be made up of D, Num and n heads. GNO thus have the status of conceptually empty "pronominal nouns" or "pro-nPs" present inside every pronoun, rather than being full-fledged pronouns. This conclusion gets an independent support from several other research projects; see especially the work of Déchaine and Wiltschko (2002, 2003) who argue that pronouns can be DPs, ϕ Ps or NPs.

7 References

Abney, Steven P. 1987. The English noun phrase in its sentential aspect. Ph.D. thesis, MIT, Cambridge, MA.

Acquaviva, Paolo. 2009. Roots and lexicality in Distributed Morphology. In *York Papers in Linguistics, Series 2*, eds. Alexandra Galani, Daniel Redinger, and Norman Yeo. York: Department of Language and Linguistic Science, University of York, 1–21.

Adger, David and Harbour, Daniel. 2007. Syntax and syncretism of Person Case Constraint. $Syntax \ \mathbf{10}(1):2-37.$

Alexiadou, Artemis. 2004. Inflection class, gender and DP internal structure. In *Explorations in nominal inflection*, eds. Gereon Müller, Lutz Gunkel, and Gisela Zifonun. Berlin: De Gruyter, 21–49.

Arad, Maya. 2003. Locality constraints on the interpretations of roots: the case of Hebrew denominal verbs. *Natural Language and Linguistic Theory* **21**(4):737–778.

Arad, Maya. 2005. Roots and patterns: Hebrew morphosyntax. Springer: Dordrecht.

Authier, J.-Marc. 1989. Arbitrary null objects and unselective binding. In *The null subject parameter*, eds. Osvaldo Jaeggli and Ken Safir. Dordrecht: Kluwer, 45–67.

Authier, J.-Marc. 1992a. Arbitrary null object languages in a parametric theory of linguistic variation. In *ASJUren Gehigarriak 27. Syntactic theory and Basque syntax*, eds. Joseba Andoni Lakarra and Jon Ortiz de Urbina. 37–52.

Authier, J.-Marc. 1992b. A parametric account of V-governed arbitrary null arguments. Natural Language and Linguistic Theory 10(3):345–374.

- Bach, Emmon. 1979. Control in Montague grammar. Linguistic Inquiry 10(4):515–531.
- Bittner, Maria and Hale, Ken. 1996. The structural determination of Case and agreement. Linguistic Inquiry 27(1):1–68.
- Bošković, Željko. 2008. What will you have, DP or NP? In *Proceedings of NELS 37*, eds. Emily Elfner and Martin Walkow. Amherst, MA: GLSA, UMass, 101–114.
- Bošković, Željko. 2012. On NPs and clauses. In *Discourse and grammar: from sentence types to lexical categories*, eds. Günther Grewendorf and Thomas Ede Zimmermann. Dordrecht: De Gruyter, 179–246.
- Borer, Hagit. 2005. Structuring sense: an exo-skeletal trilogy. Volume 1: In name only. New York, NY: Oxford University Press.
- Bresnan, Joan. 1982. Control and complementation. Linguistic Inquiry 13(3):343–434.
- Carlson, Gregory N. 1989. On the semantic composition of English generic sentences. In *Properties, types and meaning. Volume II: Semantic issues*, eds. Gennaro Chierchia, Barbara Hall Partee, and Raymond Turner. Dordrecht: Kluwer, 167–192.
- Carstens, Vicki. 1991. The morphology and syntax of determiner phrases in Kiswahili. Ph.D. thesis, University of California, Los Angeles, CA.
- Chierchia, Gennaro. 1989. Structured meanings, thematic roles and control. In *Properties, types and meaning. Volume II: Semantic issues*, eds. Gennaro Chierchia, Barbara Hall Partee, and Raymond Turner. Dordrecht: Kluwer, 131–166.
- Chierchia, Gennaro. 1998. Reference to kinds across languages. *Natural Language Semantics* **6**(4):339–405.
- Chierchia, Gennaro. 2010. Mass nouns, vagueness and semantic variation. Synthese 174:99–149.
- Chomsky, Noam. 1981. Lectures on Government and Binding. Dordrecht: Foris.
- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The view from building* 20: essays in linguistics in honor of Sylvian Bromeberger, eds. Ken Hale and Samuel Jay Keyser. Cambridge, MA: MIT Press, 1–52.
- Chomsky, Noam. 1995. The minimalist program. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: the framework. In *Step by step: essays on minimlist syntax in honor of Howard Lasnik*, eds. John Martin, David Michaels, and Jane Uriagereka. Cambridge, MA: MIT Press, 89–155.
- Danon, Gabi. 2006. Caseless nominals and the projection of DP. Natural Language and Linguistic Theory 24(4):977–1008.

- Dayal, Veneeta. 2004. Number marking and (in)definiteness in kind terms. *Linguistics and Philosophy* **27**(4):393–450.
- Dayal, Veneeta. 2011. Bare noun phrases. In Semantics. An international handbook of natural language meaning, eds. Klaus von Heusinger, Claudia Maienborn, and Paul Portner, vol. 2. Berlin, Boston: De Gruyter, 1088–1109.
- Déchaine, Rose-Marie and Wiltschko, Martina. 2002. Decomposing pronouns. *Linguistic Inquiry* **33**(3):409–442.
- Déchaine, Rose-Marie and Wiltschko, Martina. 2003. On pro-nouns and other "pronouns". In From NP to DP. Volume 1: The syntax and semantics of noun phrases, eds. Martine Coene and Yves D'hulst. Philadelphia, PA: John Benjamins, 71–89.
- Despić, Miloje. 2009. On the structure of Serbo-Croatian NP: evidence from binding. In Formal Approaches to Slavic Linguistics 17. The Yale Meeting 2008. Ann Arbor, MI: Michigan Slavic Publications, 17–32.
- Despić, Miloje. 2011. Syntax in the absence of Determiner phrase. Ph.D. thesis, UConn, Storrs, CT.
- Embick, David. 2000. Features, syntax and categories in the Latin perfect. *Linguistic Inquiry* **31**(2):185–230.
- Embick, David and Noyer, Rolf. 2007. Distributed morphology and the syntax/morphology interface. In *The Oxford handbook of linguistic interfaces*, eds. Gillian Ramchand and Charles Reiss. New York, NY: Oxford University Press.
- Ferrari, Franca. 2005. A syntactic analysis of the nominal systems of Italian and Luganda: how nouns can be formed in the Syntax. Ph.D. thesis, New York University, New York, NY.
- Franks, Steven and Pereltsvaig, Asya. 2004. Functional categories in the nominal domain. In Formal Approaches to Slavic Linguistics 12. The Ottawa Meeting 2003, eds. Olga Arnaudowa, Wayles Browne, Maria Luisa Rivero, and Danijela Stojanovic. Ann Arbor, MI: Michigan Slavic Publications, 109–128.
- Harley, Heidi and Ritter, Elizabeth. 2002. Person and number in pronouns: a feature-geometric analysis. *Language* **78**(3):482–526.
- Heim, Irene. 1982. The semantics of definite and indefinite noun phrases. Ph.D. thesis, UMass, Amherst, MA. 2011 Edition.
- Huang, James C.-T. 1984. On the distribution and reference of empty pronouns. *Linguistic Inquiry* **15**(4):531–574.
- Jaeggli, Osvaldo. 1986. Three issues in the theory of clitics: Case, doubled NPs and extraction. In *Syntax and semantics 19. The syntax of pronominal clitics*, ed. Hagit Borer. New York, NY: Academic Press, 15–42.

- Kamp, Hans. 1981. A theory of truth and semantic representation. In *Formal methods in the study of language*. Part 1, eds. Jeroen Groenendijk, Theo Janssen, and Martin Stokhof. Amsterdam: Stichting Mathematisch Centrum, 277–322.
- Kihm, Alain. 2005. Noun class, gender, and the lexicon-syntax-morphology interfaces: a comparative study of Niger-Congo and Romance languages. In *Oxford handbook of comparative syntax.*, eds. Guglielmo Cinque and Richard S. Kayne. New York, NY: Oxford University Press, 459–512.
- Kramer, Ruth. 2009. Definite markers, phi-features, and agreement: a morphosyntactic investigation of the Amharic DP. Ph.D. thesis, UC Santa Cruz, Santa Cruz, CA.
- Kramer, Ruth. 2014. Gender in Amharic: a morphosyntactic approach to natural and grammatical gender. *Language Sciences* **43**:102–115.
- Kratzer, Angelika. 1995. Stage-level and individual-level predicates. In *The generic book*, eds. Gregory N. Carlson and Francis Jeffry Pelletier. Chicago: University of Chicago Press, 125–175.
- Krifka, Manfred, Pelletier, Francis Jeffry, Carlson, Gregory N., ter Meulen, Alice, Link, Godehard, and Chierchia, Gennaro. 1995. Genericity: an introduction. In *The generic book*, eds. Gregory N. Carlson and Francis Jeffry Pelletier. Chicago: University of Chicago Press, 1–124.
- Landau, Idan. 2010. The explicit syntax of implicit arguments. *Linguistic Inquiry* **41**(3):357–388.
- Lebeaux, David. 1984. Anaphoric binding and the definition of PRO. In *Proceedings of NELS 14*. Amherst, MA: GLSA, UMass.
- Lewis, David. 1975. Adverbs of quantification. In *Formal Semantics of Natural Language*, ed. Edward Keenan. Cambridge: Cambridge University Press, 3–15.
- Longobardi, Giuseppe. 1994. Reference and proper names. Linguistic Inquiry 25(4):609–665.
- Lowenstamm, Jean. 2008. On little n, $\sqrt{\ }$, and types of nouns. In *Sounds of silence: empty elements in syntax and phonology*, eds. Jutta Hartmann, Veronika Hegedüs, and Henk van Rimesdijk. Amsterdam: Elsevier, 105–144.
- Marantz, Alec. 1997. No escape from syntax: don't try morphological analysis in the privacy of your own lexicon. In *U. Penn Working Papers in Linguistics. Proceedings of the 21st Annual Penn Linguistic Colloquium*, ed. Alexis Dimitriadis, 4.2. Philadelphia, PA: PLC, 201–225.
- Marantz, Alec. 2001. Words. WCCFL 20 handout, USC.
- Marantz, Alec. 2007. Phases and words. In *Phases in the theory of grammar*, ed. Sook-Hee Choe. Seoul: Dong In, 196–222.

- May, Robert Carlen. 1977. The grammar of quantification. Ph.D. thesis, MIT, Cambridge, MA.
- Moltmann, Friederike. 2006. Generic *one*, arbitrary pro, and the first person. *Mind* \mathcal{E} Language 14:257–281.
- Moltmann, Friederike. 2010. Generalizing detached self-reference and the semantics of generic one. Mind & Language 25(4):440–473.
- Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* **25**(2):273–313.
- Panagiotidis, Phoevos. 2000. Demonstrative determiners and operators: the case of Greek. *Lingua* **110**:717–742.
- Panagiotidis, Phoevos. 2002. Pronouns, clitics and empty nouns: pronominality and licensing in syntax. Philadelphia: John Benjamins.
- Panagiotidis, Phoevos. 2011. Categorial features and categorizers. *The Linguistic Review* **28**(3):365–386.
- Percus, Orin. 2011. Gender features and interpretation: a case study. *Morphology* **21**:167–196.
- Pesetsky, David and Torrego, Esther. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture: syntax of derivation adn interpretation*, eds. Vida Samiian Simin Karimi and Wend K. Wilkins. Amsterdam/Philadelphia: John Benjamins, 262–294.
- Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* **20**(3):365–424.
- Postal, Paul. 1969. On so-called 'pronouns' in English. In *Modern studies in English: readings in Transformational Grammar*, eds. David A. Reibel and Sanford A. Schane. Englewood Cliffs, NJ: Prentice-Hall, Inc., 201–224.
- Preminger, Omer. 2011. Agreement as a fallible operation. Ph.D. thesis, MIT, Cambridge, MA.
- Ritter, Elizabeth. 1991. Two functional categories in noun phrases: evidence from Modern Hebrew. In *Syntax and semantics 25. Perspectives on phrase structure: heads and licensing*, ed. Susan Rothstein. San Diego, CA: Academic Press, 39–62.
- Rizzi, Luigi. 1986. Null objects in Italian and the theory of pro. *Linguistic Inquiry* **17**(3):501–557.
- Safir, Ken. 2000. Keeping one's reference constant. Ms., Rutgers University.

- Sauerland, Uli. 2008. On the semantic markedness of phi-features. In *Phi-theory: phi-features across modules and interfaces*, eds. Daniel Harbour, David Adger, and Susana Béjar. New York, NY: Oxford University Press, 57–82.
- Wechsler, Stephen and Zlatić, Larisa. 2000. A theory of agreement and its application to Serbo-Croatian. *Language* **76**(4):799–832.
- Wechsler, Stephen and Zlatić, Larisa. 2003. The many faces of agreement. Stanford, CA: CSLI Publications.
- Wurmbrand, Susanne. 2002. Semantic vs. syntactic control. In *Studies in comparative Germanic syntax*. Proceedings from the 15th Workshop on Comparative Germanic Syntax, eds. C. Jan-Wouter Zwart and Werner Abraham. Amsterdam: John Benjamins, 93–127.