About pronouns[*]

Halldór Ármann Sigurðsson

Lund University

Abstract

This essay claims that pronouns are constructed as syntactic relations rather than as discrete feature bundles or items. The discussion is set within minimalist Context-linked Grammar, where phases contain silent but active edge features, edge linkers, including speaker and hearer features. An NP is phi-computed in relation to these linkers, the so established relation being input to context scanning (yielding reference). Essentially, syntax must see to it that event participant roles link to speech act roles, by context linking. Edge linkers are syntactic features–not operators–and can be shifted, as in indexical shift and other Kaplanian monster phenomena, commonly under control. The essay also develops a new analysis of inclusiveness and of the different status of different phi-features in grammar. The approach pursued differs from Distributed Morphology in drawing a sharp line between (internal) syntax and (PF) externalization, syntax constructing relations–the externalization process building and expressing items.

1   Introduction

Indexical or deictic items include personal pronouns (*I*, *you*, *she*, etc.), demonstrative pronouns (*this*, *that*, etc.), and certain local and temporal adverbials and adjectives (*here*, *now*, *presently*, etc.). In the influential Kaplanian approach (Kaplan 1989), indexicals are assumed to have a fixed

---

reference in a fixed context of a specific speech act or speech event. Schlenker (2003:29) refers to this leading idea as the *fixity thesis*, stating it as follows:

> *Fixity Thesis* (a corollary of Direct Reference): The semantic value of an indexical is fixed solely by the context of the actual speech act, and cannot be affected by any logical operators.

Operators that would shift the value of an indexical within a specific speech act have come to be known as *Kaplanian monsters*. According to Israel and Perry (1996), they are logically coherent, but Kaplan nevertheless claimed that they are nonexistent in natural languages. This claim is sometimes referred to as the *prohibition against monsters* (see Schlenker 2012). As we will see, it has been proven mistaken in recent years. That is, certain natural language contexts do allow "monstrous" shifts.[1] For the moment, however, I put this aside, focusing instead on the regular types of contexts where the fixity thesis seems to make correct predictions. Two such contexts are given in (1).

(1)   a.   [Mary:] **I** bought a book.
       b.   [John:] Yes, and **I** bought a pen.

In the context of Mary's speech act in (1a), the pronoun *I* has a fixed value and in the distinct context of John's response in (1b) it also has a fixed value, but that value is distinct from its value in the first context. Each context assigns a unique value to "one and the same" word, namely the value "the speaker of this clause." Accordingly, the variable or shifting reference of a pronoun like *I*, in regular contexts such as the ones in (1), is standardly assumed to be unproblematic in the semantic literature (Perry 1997, Schlenker 2003, inter alia). The consensus is roughly: Fix the context and then everything is fixed.

However, from a formal syntactic point of view, this is a major problem, commonly swept under the carpet or not noticed at all. Consider this in the context of Chomsky's approach to the syntactic derivation (see, e.g., Chomsky 2001:11ff), where each derivation starts out as an array of lexical items, to be merged and computed in relation to each other as the derivation proceeds. Nothing in the putative lexical array of e.g. (1a), *{ … I, buy, book, …}*, gives any clue or instructions that the item *I* is going to refer to the speaker of the clause,

---

[1] However, as we will see, these shifts involve syntactic features and not semantic operators. In a sense, thus, Kaplan was right.

rather than to some other actor (nor does anything in the subsequent derivation, on standard assumptions).

The Fixity Thesis addresses the "speech act part" of this problem, but it does not address the syntactic or structural part of it. That is, it ignores the fact that the pronoun *I* does not only refer to the speaker of a clause; it also refers to an event participant (or, if one likes, a θ-role). That is, *I* in e.g. (1a) denotes a BUYER in a buying event as well as the person who happens to be telling the hearer about this event. Somehow, grammar must be able to link the BUYER to the speaker. Call this *participant linking*. As stated in (2), participant linking is a property of indexical pronouns.

(2) Participant linking: Indexical pronouns link and conflate event participants and speech act participants

In other and more traditional terms: an indexical pronoun has not only clause-external *reference*; it also carries or fulfills a clause-internal *role*–and linking reference and role is obviously the job of grammar. As we will see, participant linking is an instantiation of *context linking*, an omnipresent property of natural language.

Not taking participant linking into account results in much the same incomplete understanding of pronouns as under the performative hypothesis (Ross 1970).[2] It basically leaves the speech act and the propositional content of the clause unlinked. That is, it analyzes (1a–b) as if these clauses had roughly the reading 'Hereby, I (the speaker) tell you (my hearer) that I existed/acted in some situation or state.' An additional "loop," granting that this *I* is necessarily the same actor as *x*, *x* a BUYER participant in a buying event, is lacking under both the fixity thesis and the performative hypothesis, and that applies to mainstream syntactic approaches as well (where the problem has not been generally discussed).[3] While semantics traditionally focuses on the speech act side of the coin, syntax has focused on the argument structure side. Both sides must instead be considered simultaneously. This is the challenge. Analyzing

---

[2] Even though the performative hypothesis did not resolve participant linking, it was partly on the right track, and it was a great loss to linguistics that John Ross did not further pursue his pioneering ideas. As has been widely discussed, the performative hypothesis also created an infinite regress problem by postulating a silent performative verb. Delfitto and Fiorin (2011:204, fn. 6) maintain that this problem is shared by the approaches in Sigurðsson 2004 and Bianchi 2006, but that is incorrect.

[3] This holds, regardless of how NPs are introduced into syntax (cf. Lohndal 2012, Wood 2012).

syntax without taking speech acts into account is not worthless nor is analyzing speech acts without considering syntactic structures. However, our goal, the real challenge, is to develop a unified analysis of syntactic structures and speech acts–and not to develop analyses that account separately for the two sides, regardless of how sophisticated such analyses may be in other respects.

Pronominal reference–the clause-external side of participant linking–is syntactically unbounded and insensitive to regular island constraints and intervention phenomena, as easily seen, for instance, in examples like (3).

(3)　[Mary:] John said that the person **I** spoke to when **I** was on my way was …

The syntactic freedom of indexical pronouns might seem to suggest that participant linking is an extra-syntactic phenomenon. However, a non-syntactic view of indexicality is off the track. As the first person pronoun is not a regular lexical item but a variable, there must be something in the underlying representation of (3) that blocks it from being just a general open variable, free to be interpreted as x ('anybody', 'somebody', 'people in general', etc.).[4]

Pronominal reference or indexicality is a *strictly linguistic* phenomenon (i.e., linguistic in the broad sense, cf. Hauser et al. 2002). That is, setting event participant roles apart, a first or a second person singular indexical pronoun exclusively refers to a speech act role: that of a (conceived) speaker or a (conceived) hearer in a particular speech act. Obviously, in the canonical case, there will be some person, say Noam Chomsky, who carries the role in question and may thus be addressed as *you* or talk of himself as *I*, but *you* and *I* cannot be used to refer to Chomsky, only to the roles he may happen to carry in some particular speech act or speech event.

This may seem trivially obvious, but it is not. It means, contrary to common assumptions, that pronouns like *I* and *you* are not indexical in relation to individuals in the external "real" world but only in relation to language contained speech act roles. In other words, the "speaker" and the "hearer" are arguably *syntactic features*.[5] Importantly, they are *not* logical or semantic operators in the sense of Kaplan (and his critics); that is, they do not operate on

---

[4] Such readings are actually prominent in bound variable contexts, discussed in section 4. Such contexts illustrate that it is slightly misleading to talk about pronouns as variables. Instead, they are expressions of syntactic relations that can be variably set (and the principles governing this variable setting preclude an open variable reading in (3)).
[5] As the speaker and hearer features feed PF insertion of spelled-out pronouns, they cannot be "semantic" in an extra-syntactic sense (given the minimalist single cycle approach, see e.g. Chomsky 2008).

predications or scope over contexts or open sets, instead targeting individual syntactic elements, like ordinary syntactic probes. I will return to this issue in section 2.

The evidence in favor of the syntactic approach to pronouns pursued here comes, above all, from the following phenomena:

- Person computation
- Computational parallelisms between Person and Tense
- Indexical shift
- Bound variable readings
- Inclusiveness

I will discuss these phenomena in the following sections: Person computation and participant linking in section 2, indexical shift and Person/Tense parallels in section 3, bound variable readings in section 4, Number and inclusiveness in section 5, turning to pronominal gender in section 6 (arguing that it is added by PF agreement in the post-syntactic derivation). The discussion is set within the framework of a minimalist *Context-linked Grammar* (CLG), so I will start out, in section 2, by briefly introducing the basic assumptions and components of this approach (that is, those assumptions and components that are not shared with mainstream minimalism as developed by Noam Chomsky in the 21st century). However, before I embark on this journey, let me restate what I just said–it is important that we try to understand this: Pronouns are exclusively and strictly linguistic (in the broad sense). That is, they do not refer directly to entities outside of language, even not when "deictically used." They commonly do refer to (or "imply") language-external entities, but they do so *indirectly*, by means of intra-clausal computation (syntax) + context scanning (pragmatics).[6] As we will see, variation in the context scanning part of this equation yields indexical shift and bound variable effects.

Context linking of an argument, thus, is the result of two distinct but cooperating systems: Syntax, computing the syntactic values of an argument (most centrally its person value), and pragmatics, deciding the reference of the so computed values under context-scanning. The output of the syntactic computation is (naturally) input to context scanning (and to the interfaces).

---

[6] Reference in general (e.g. of the "Morning Star" and the "Evening Star") is only ever linguistic, made possible and mediated by the computational machinery of grammar (cf. the initial remarks in Sigurðsson 2011b). In other words, there is no such thing as "direct reference." However, this is a big issue that I must set aside here.

Context-linked Grammar highlights a number of recalcitrant issues. Some of these issues will only be addressed in passing here, without a full treatment, and some of them will not be discussed at all. This does not worry me too much, though. The issues in question are not approach specific but general and true issues. Context-linked Grammar identifies these issues and puts them in the spotlight, but it does not create them–they must be acknowledged and addressed in any theory of language. The most fundamental of these issues, participant linking, is like gravity before the scientific revolution: It is generally just taken for granted and therefore not subject to serious study, the basic why- and how-questions of scientific inquiry. Understanding participant linking, and context linking in general, is a prerequisite for an advanced understanding of language, so I will discuss these phenomena in some detail.

2   Person computation and participant linking

Mainstream formal approaches to syntax (Chomsky 1995 and related work) distinguish sharply between clausal computation and the relationship between clauses and their context, presupposing that clauses can be meaningfully analyzed in isolation. There is indeed no question that many properties of clauses are context-independent. However, indexical items, including pronouns, prove that grammar is not only about clause-bounded computation but also about clause-context relations. I will here briefly sketch an approach–minimalist Context-linked Grammar–that accommodates this "bipolar" view of language. As we will see, it naturally accommodates participant linking.

The fundamental claim of CLG is that the left periphery of every phase, the phase edge, contains a bundle of silent but syntactically active linking features, *edge linkers*. For expository ease, I will here focus on subject NPs and the richest phase edge, the C-edge, briefly turning to lower phases and non-subject NPs at the end of this section. The C-edge minimally contains the C-edge linkers listed in (4).[7]

(4) a.   Speaker and hearer categories; that is, the logophoric agent and the logophoric patient features, Λ_A and Λ_P.[8]

---

[7] See previous work, including Sigurðsson 2004a, 2004b, 2011a, Sigurðsson and Maling 2012.

[8] "Speaker" and "hearer" are traditional notions. As will be discussed in section 5, they are misleading, but, for expository ease, I will be using them here along with the more pertinent "logophoric agent/patient."

      b.   Fin(iteness) categories; that is, Speech Tense and Speech Location, T_S and L_S.[9]

      c.   Top(ic) categories, most centrally the Aboutness-Shift Topic (A-Topic) feature in Frascarelli 2007 and related work.

The T- and v-domains also split into atomic elements, so this view presupposes a richly split clausal structure; call it the *Richly Split Approach* to clausal structure, RSA.[10] However, if we allow ourselves the abstraction of lumping the C-edge linkers in (4) together as *CLn*, and, in the same fashion, to lump grammatical features such as Tense and Person as *GR*, and propositional content features as *CONT*(ent), the canonical clausal structure can be simply sketched as in (5), where the dots stand for potential lexical items; the curly brackets (here) indicate that a category is silent but syntactically active.

(5)   [$_{CP}$ … {CLn} … [$_{TP}$ GR .... [$_{vP}$ CONT …]]]

Grammatical clause-internal computation values clause-internal elements (GR and CONT elements) in relation to the C-edge linkers, *CLn*. This is referred to as C/edge linking in Sigurðsson 2011a, but I will here opt for the term *C-edge computation*. Together, C-edge computation and *context scanning* yield *C-context linking*, as explicitly stated in (6).

(6)   C-context linking = C-edge computation + context scanning

The propositional content of a clause canonically relates to some coordinates of actual time, location, and speaker/hearer (Bühler 1934), and these phenomena as such are obviously extra-linguistic or pragmatic, subject to context scanning. However, C-context linking is made possible by C-edge computation, where

---

[9] Cf. Rizzi and Shlonsky 2006:349: "[I]t appears that Fin can be either nominal or verbal."

[10] RSA, in turn, presupposes Head Unification. That is, unless separately active in the derivation, adjacent silent heads bundle up, thereby functioning as a single head (Sigurðsson 2010:165). Thus, as will be discussed in sections 4 and 5, EGO (or "self") features usually bundle up with the speaker/hearer features or, in certain less central cases, with Speech Tense, T_S. Needless to say, the present approach owes much to Rizzi (1997), Cinque (1999), Bianchi (2006), Frascarelli (2007) and other proponents of the cartography school (and also to the basically non-cartographic approach in Platzack 2001).

     Many, perhaps most or even all abstract clausal head features are plausibly universal, even if their content is provided by the (universal) 3rd factor and incorporated into Narrow Syntax (I-syntax), rather than being stored in Universal Grammar as such (Sigurðsson 2011b, 2011c, 2012b). Externalization of syntactic head relations (overt Tense markings, etc.) is subject to variation, not discussed here.

clause-internal elements (GR and CONT elements) are computed and valued in relation to the C-edge linkers (the outcome of this computation subsequently interfacing with pragmatics by context scanning).[11] This is sketched in (7) (where Agree (or Match) is denoted by ↔ and where the slash simply denotes 'a relation').

(7) C-edge computation = CLn ↔ GR/CONT
     (& GR/CONT = GR ↔ CONT)

For instance, as will be explicated shortly, a vP-internally generated subject NP (a CONT element), matches a grammatical Person feature (a GR element), the so established relation entering into an additional higher matching relation with CLn categories. In minimalist approaches, clausal computation is driven by Agree (in addition to Merge), a matching relation between a probe and a goal. Importantly, Agree (or Match) is not an identity relation but a valuing relation (pace Chomsky 2001:5). Successful clause-external context scanning, in contrast, yields an identity relation in a similar (although not identical) fashion as syntactic control.[12] I will thus refer to it as *contextual control*. I highlight this stance here:

- Agree is a *valuing relation*; that is, X is valued in relation to Y under Agree.
- Control (full or partial) is an *identity relation* (regardless of whether it is derived by movement). Syntactic control is more heavily constrained than contextual control, but both are referential identity relations.

For the C-edge, then, the general relation between clause-internal computation and contextual control can be sketched as in (8).[13]
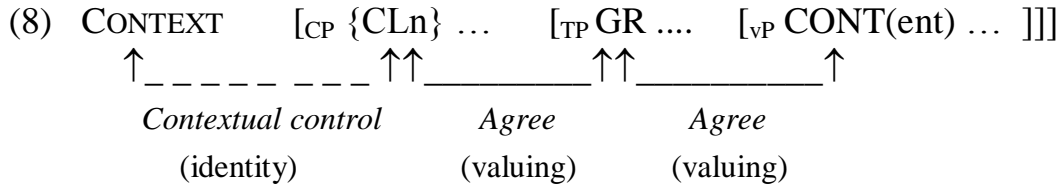
---

[11] A detailed study of the pragmatic clause-external part of this is beyond the scope of this essay (there can be many potential "yous", "shes", etc., in a given context). Presumably, humans share (at least some non-linguistic) parts of pragmatic context scanning with other species, while the clause-internal grammatical computation is species-specific. These aspects of language are often confused and mixed, with bewildering consequences.
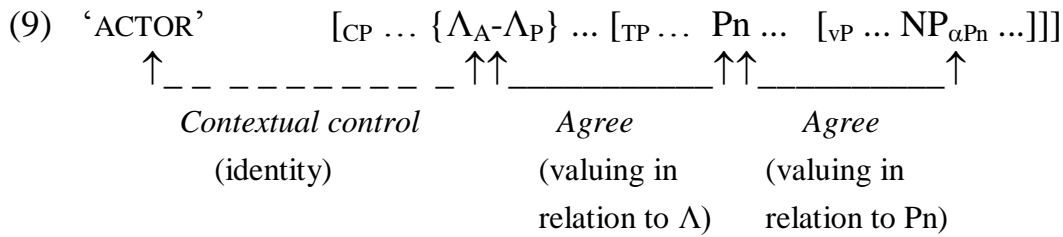
[12] See e.g. Holmberg 2005, Holmberg, Naydu, and Sheehan 2009 on clause-external control of pro in partial null subject languages.

[13] For technical reasons, the picture in (8) is slightly misleading. That is, what is valued in relation to CLn is not GR as such but the relation GR/CONT (that is, the outcome of the GR ↔ CONT Agree, cf. (7)). A parallel remark applies to the picture in (9).

(8) CONTEXT $\quad$ [$_{CP}$ {CLn} … $\quad$ [$_{TP}$ GR …. $\quad$ [$_{vP}$ CONT(ent) …]]]

$\qquad$↑$\_\_\_\_\_$ $\_\_\_$ ↑↑$_____$↑↑$_____$↑

$\qquad\qquad$ *Contextual control* $\qquad$ *Agree* $\qquad$ *Agree*

$\qquad\qquad\quad$ (identity) $\qquad\qquad$ (valuing) $\qquad$ (valuing)

Context-linked Grammar, as sketched in (8), enables a coherent analysis of the participant linking problem addressed in section 1. The crucial factor involved in participant linking is Person (Pn) computation, as illustrated in (9) (Λ_A-Λ_P are among the CLn features, as stated above, Pn is a GR element, and NP$_{\alpha Pn}$ is a CONT(ent) element).

(9) 'ACTOR' $\qquad$ [$_{CP}$ … {Λ_A-Λ_P} … [$_{TP}$ … Pn … [$_{vP}$ … NP$_{\alpha Pn}$ …]]]

$\qquad$↑$\_\_$ $_____$ $\_$ ↑↑$_____$↑↑$_____$↑

$\qquad\qquad$ *Contextual control* $\qquad$ *Agree* $\qquad\qquad$ *Agree*

$\qquad\qquad\quad$ (identity) $\qquad\qquad$ (valuing in $\qquad$ (valuing in

$\qquad\qquad\qquad\qquad\qquad\qquad$ relation to Λ) $\qquad$ relation to Pn)

As indicated in (9), an NP enters syntax as a variable (see Kratzer 1998 on pronouns), and this variable is valued in relation to Person; the outcome of this Pn/NP$_{\alpha Pn}$ valuing relation, in turn, is valued in relation to the Λ-features at the phase edge (here the C-edge). This is sketched in (10) and (11) (where the arrow reads 'gets valued as').

(10) NP$_{\alpha Pn}$ $\qquad\to\quad$ NP$_{+Pn}$ or NP$_{-Pn}$

(11) a1. $\quad$ +Pn $\quad\to\quad$ +Λ_A, −Λ_P $\quad=\quad$ 1st person by computation

$\qquad$ a2. $\quad$ +Pn $\quad\to\quad$ −Λ_A, +Λ_P $\quad=\quad$ 2nd person by computation

$\qquad$ a3. $\quad$ +Pn $\quad\to\quad$ −Λ_A, −Λ_P $\quad=\quad$ 3rd person by computation

$\qquad$ b. $\quad$ −Pn: $\qquad\qquad\qquad\qquad$ = $\quad$ 3rd person by default $\qquad$ ("no person")

NPs are first interpreted as being either 'personal' or 'non-personal' (NP$_{+Pn}$ or NP$_{-Pn}$), 'personal' NPs in turn being assigned grammatical person under positive or negative matching of the edge linkers, Λ_A and Λ_P. Nonhuman and indefinite NPs are canonically –Pn and hence 3rd person by default ("no person"). Definite 3rd person arguments, in contrast, are canonically valued as +Pn, thus 3rd person by computation ("true person").[14]

---

[14] There seems to be a close correlation between definiteness/specificity and +Pn valuation. See Sigurðsson 2010 for a more general discussion of this rather opaque issue.

This yields much the same results as Distributed Morphology analyses of pronominal systems in terms of features like [±author], [±hearer], [±participant] (Noyer 1992 and much related work).[15] Importantly, however, edge linkers, including the logophoric features, are not lexical features; that is, they are not inherent parts of some particular items (overt or abstract). Pronouns are PF interpretations of a double matching *relation*: A low matching relation between a vP-internal NP variable and ϕ plus a higher secondary relation between the outcome of this low matching relation and the relevant edge linkers.[16] This general scheme was sketched in (7) and (8) above for subject NPs. On this approach, thus, an "argument" is a *set of relations* rather than a bundle of inherent features, the relations applying between $NP_{\alpha Phi}$ and ϕ, and between the outcome of this $\phi/NP_{\alpha Phi}$ valuing relation and the relevant edge linkers.[17]

(12) Argument = {edge linkers ↔ $\phi/NP_{\alpha Phi}$}
    (& $\phi/NP_{\alpha Phi}$ = ϕ ↔ $NP_{\alpha Phi}$)

Importantly, edge linkers are syntactic features (probes) and *not* logical or semantic operators in the sense of Kaplan (and his critics). While linguistic operators operate on predications or scope over open sets, edge linkers are like other syntactic probes in that they target individual elements. However, it is the probe that values the NP goal, and not the other way around. Pronouns are "born" without ϕ-specifications ("ϕ-naked"), thus not having any ϕ-values which they could transmit or assign to their probes. Even so, it is not clear that it makes sense to assume some kind of primacy of probes over their goals.[18] A probe and a goal build a relation, and it is the relation and not its individual subparts that

---

[15] As argued by Bobaljik (2008a), pronominal Person systems can be successfully analyzed in terms of only two binary speaker and hearer features (here $\pm\Lambda_A$ and $\pm\Lambda_P$). However, additional Top(ic) features (cf. (4)) are required if we also want to account for the context linking of 3rd person pronouns (as in Sigurðsson 2011a).

[16] On Number and inclusiveness, see section 5. For our purposes, "ϕ" may be taken to denote syntactic Person and Number and sometimes also gender. On the latter, see section 6.

[17] Notice that the present approach is rather different from Distributed Morphology (see Embick and Noyer 2007) in that internal syntax does not operate on morphemes or items, instead building relations that get expressed as discrete items in the externalization component (Sigurðsson 2004b, 2011b, 2011c). Morphology interprets syntax but it is not equivalent with syntax – the derivation is definitely not "syntax all the way down".

[18] Even though any approach to clausal structure has to assume a look ahead or given engineering in the sense that clausal categories, including edge linkers, Voice, v, p, T, etc., are ordered in relation to each other in a "predestined" and a very restrictive way.

gets interpreted at the interfaces. Without such relation building, the derivation would yield uninterpretable debris.[19]

Being an identity relation, control does not reduce to Agree (pace Landau 2004, 2008). However, as we will see in section 3, control and Agree typically form chains or paths together. It may be technically possible to analyze exhaustive and obligatory syntactic control as derived by movement (Hornstein 1999 and related work), but contextual control or context scanning cannot be so analyzed. Edge linkers (or computed edge linker relations) in independent matrix clauses scan information under contextual control or context scanning, and it is unclear why this "information scanning capacity" should not be available under syntactic control as well. I assume that it is, and that we need to distinguish between control and movement, much as we must distinguish between control and Agree. A bottom to top derivational approach correctly forces us to assume context scanning (unless we are willing to assume that all anaphoric relations, temporal as well as nominal, contextual as well as intra-clausal, are derived by movement–yielding absurd results, it would seem).

Another central issue, alluded to above, regards ϕ-computation of more than one NP per clause. I adopt the general licensing approach in Kratzer 1996, Pylkkänen 2008 and much related work, where arguments are introduced and event licensed by specialized heads: agentive or active subjects by Voice/$_{AG}$, indirect objects by Appl, direct objects by v (or v-V), and prepositional objects by p (or p-P).[20] Plausibly, these licensers incorporate into phase heads, each phase having its own grammatical ϕ-categories (commonly PF silent) and its own edge linkers (yielding the relation in (12)). Thus, each NP is context linked under phase-internal computation (ϕ-computation) plus phase-external context scanning. In addition, co-clausal phase edges are head-head connected, by selection (or Agree, in the spirit of Landau 2004, 2008), suggesting (as in Chomsky 2001) that a phase cannot be transferred to the interfaces until at least the elements of the next phase up have been merged and matched by elements and relations of the lower phase.

Context linking, including participant linking, is a central property of language, missed by both Kaplan and his critics (and ignored in mainstream

---

[19] Recursion boils down to this: Elements merge in a relation that is input to (and "packed into") another relation with a higher element, which in turn is input to yet another higher relation, ad infinitum (pragmatic considerations apart).

[20] Event licensing is distinct from ϕ-licensing ("Abstract Case"), the latter driving regular A-movement. While agentive subject NPs are introduced and event licensed by Voice/$_{AG}$, definite subject NPs (nonagentive as well as agentive) are ϕ-licensed under C-edge computation. See Sigurðsson 2012a.

formal approaches to grammar). As we will see, the present understanding of context linking also offers solutions to a number of other much discussed issues, including indexical shift and bound variable readings.

3   Indexical shift

In the unmarked case, Λ_A and Λ_P are coreferential with the actual speaker and hearer of the utterance, respectively, as in (13):

(13) a. Mary said to John that she would help him.
=   b. $[_{CP} \dots \{\Lambda_A\}_i \dots \{\Lambda_P\}_j \dots [_{TP} \dots \text{Marie}_k \dots \text{John}_l \dots [_{CP} \dots \{\Lambda_A\}_i \dots \{\Lambda_P\}_j \dots$
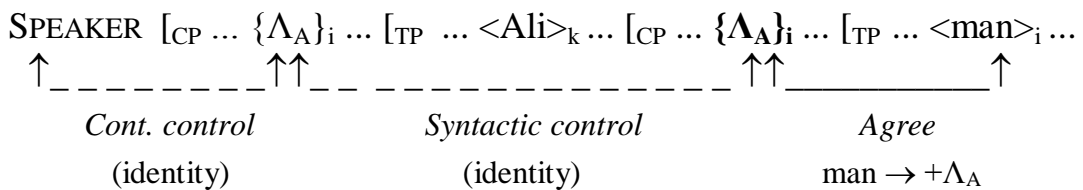 $[_{TP} \dots \text{she}_k \dots \text{him}_l \dots$

In both the main and the subordinate clause in (13), Λ_A and Λ_P refer or link to the actual speaker and hearer of the discourse, and the arguments are negatively valued in relation to these features, $-\Lambda_A$, $-\Lambda_P$ (hence the 3 person, *she* and *him*).

In Person shift contexts, however, the subordinate Λ_A and Λ_P are shifted. Consider this for the ambiguous Persian clause in (14).[21]

(14) Ali be Sara goft [ke **man tora** doost daram].   *Persian*
     Ali to Sara said that I   you friend have.1SG
     a.   'Ali told Sara that I like you.'   Unshifted = (15)
     b.   'Ali told Sara that **he** likes **her**.'   Shifted = (16)

The regular unshifted reading in (14a) can be analyzed as in (15); for simplicity, I only show the computation of the speaker feature; another simplification is that I do not show the Person valuing relation between the T- and the v-domains (shown in (9)–(11) above). The notation *man* $\rightarrow +\Lambda_A$ means that the first person pronoun *man* gets valued as $+\Lambda_A$ (which in turn is identified with the actual speaker under syntactic + contextual control). On both readings i ≠ k.

(15) Unshifted reading:
     SPEAKER $[_{CP} \dots \{\Lambda_A\}_i \dots [_{TP} \dots <\text{Ali}>_k \dots [_{CP} \dots \{\mathbf{\Lambda_A}\}_\mathbf{i} \dots [_{TP} \dots <\text{man}>_i \dots$
     ↑_____↑↑__ _____↑↑_____↑
         Cont. control   *Syntactic control*   *Agree*
           (identity)   (identity)   man $\rightarrow +\Lambda_A$

The more interesting shifted reading in (14b) is analyzed in (16).

(16) Shifted reading:

SPEAKER $[_{CP}$ ... $\{\Lambda_A\}_i$ ... $[_{TP}$ ... <Ali>$_k$ ... $[_{CP}$ ... $\{\mathbf{\Lambda_A}\}_k$ ... $[_{TP}$ ... <man>$_k$ ...

$\uparrow$_ _ _ _ _ _ _$\uparrow$ $\uparrow$_ _ _ _ _ _ _ $\uparrow\uparrow$_____$\uparrow$

     Cont. control   *Synt. control*   *Agree*

      (identity) $\{\Lambda_A\}_k$ = Ali   man → $+\Lambda_A$
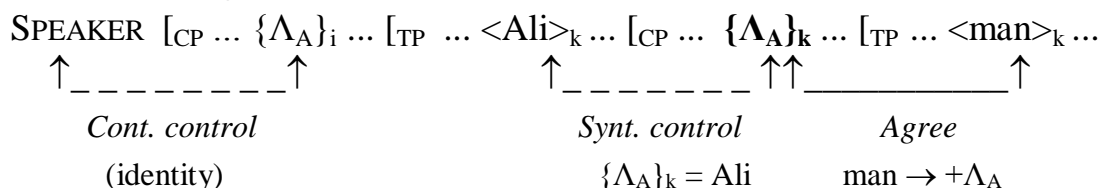
What is shifted, then, is not the first person pronoun *man* (as usually assumed), but the value of its local speaker feature, Λ_A, one of the C-edge linkers (set in boldface). The local computation of the pronoun itself yields an invariable value: $+\Lambda_A$ (and $-\Lambda_P$, not shown).

Indexical shift, as in (14b), has been documented for, e.g., Amharic, Donno Sɔ, Kannada, Kurdish, Matses, Navajo, Nez Perce, Persian, Punjabi, Slave, Tamil, Uyghur, and Zazaki (Speas 2000, Schlenker 2003, Sigurðsson 2004b, Anand and Nevins 2004, Anand 2006, Deal 2008, Ludwig et al. 2009, Shklovsky and Sudo 2009). The Kaplanian prohibition against monsters is thus evidently misguided, but it is still commonly assumed that the "monster phenomenon" is limited in scope. Thus, while Schlenker (2003) strongly argues that Kaplanian monsters do exist, he assumes that they are limited to attitude predicates, arguing that such predicates are "*quantifiers over contexts of thought or of speech*" (2003:32; Schlenker's emphasis), suggesting that "the problem can be treated … with a semantic stipulation" (2003:99). Similarly, Anand (2006:11), following Anand and Nevins (2004), argues that "indexical shift arises not via binding in the syntax but by overwriting of the semantic evaluation sequence … [that is] the *context* parameter (Kaplan 1989), which serves as the locus for indexical items."

However, the problem is by no means limited to "exotic" languages or to special predicate types, instead being general and pervasive, seen for instance in regular direct speech (*Mary said to John: "I will help you"*) and also in more colloquial constructions, like the ones in (17)–(19).

(17) … and he's simply "I don't care."
http://forum.purseblog.com/louis-vuitton/dilemma-my-bf-is-evil-53783.html (2012-06-17)

(18) Han räknade du är skyldig mig 53 dollar.   *Swedish*
he counted you are owing me 53 dollars

'He counted: "You owe me 53 dollars."'

(19) Då   utbrast   Britt att   den filmen vill   jag se.   *Swedish*
     then   burst-out Britt that that move want I   see   [SAG 4:866]
     'Then Britt burst out that "that move I want to see."'

Some languages have even developed special shift-markers, such as English *like* and Swedish *ba[ra]* (see Singler 2001, Svensson 2009).[22]

The generality of the indexical shift phenomenon is expected under the present approach, where the "monstrous" logophoric categories Λ_A and Λ_P are inherent features of the C-system (and other phase edges). The option of shifting their reference is constrained by a number of factors (as discussed by Schlenker 2003, Anand 2006 and others), but that is a distinct albeit an interesting issue. Even when not shifted, Λ_A and Λ_P are, by necessity, present and syntactically active, as shown in (15).
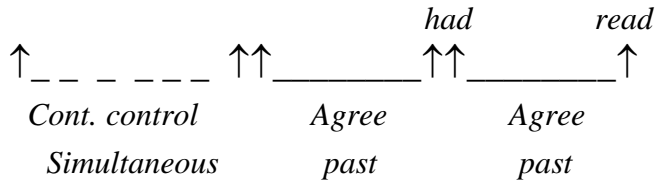
The present analysis is further supported by the fact that Person computation is paralleled by Tense computation. Tense is basically a double relation, like arguments (see (12)). That is: Event Tense in the v-domain, T_E, matches (is valued in relation to) Reference Tense, T_R or simply T in the T-domain, the so-established T_R/T_E relation in turn matching Speech Tense, T_S, in the C-domain (yielding a secondary relation, here denoted by a double slash, $T_S//T_R/T_E$).[23] The PAST-IN-THE-PAST reading of the regular past perfect in (20) can thus be analyzed as sketched in (21); for expository ease, T_S is the only C-edge linker shown.

(20) [Einstein says or thinks:] Reichenbach had read the book (at 9 o'clock).

---

[22] Direct speech and direct speech like examples such as the ones in (17)–(19) have certain properties that are not necessarily shared by subordinate indexical shift examples in languages like Amharic, Navajo, Persian, etc. One of these peculiarities is that direct "speech" can be plain sound or gesture imitation, without any grammatical content. However, inasmuch as these types contain indexical elements, they crucially share the shifted reference property. Moreover, parallel problems arise with respect to other grammatical categories, most clearly Tense (see shortly).

[23] Alternatively, one could use double edge arrows (denoting Agree/Match) and brackets: $T_S \leftrightarrow (T_R \leftrightarrow T_E)$.

(21) NOW   [$_{CP}$ … T$_S$ … [$_{TP}$ … T$_R$ … [$_{vP}$ … T$_E$ …]]]
                                 had   *read*
↑_ _ _ _ _ _ ↑↑_____↑↑_____↑

    Cont. control   *Agree*   *Agree*
    Simultaneous   *past*   *past*

That is, T$_E$ (the reading time) is valued as PAST in relation to T$_R$ (expressed by *had*), the so established T$_R$/T$_E$ relation in addition being valued as PAST in relation to T$_S$ (yielding T$_S$//T$_R$/T$_E$), which in turn is set as identical (simultaneous) with the actual utterance NOW under contextual control. Thus, Tense computation parallels Person computation.[24]

    Much as the speaker/hearer features, T$_S$ may be shifted under syntactic control. This is what happens in the widely discussed sequence of tenses (SOT) contexts, as in the Icelandic subjunctive clause in (22).

(22) María sagði   [að hún **væri**   veik (*í gær)].
    Mary said.PST.IND that she were.PST.SBJ sick (*in yesterday).
    'Mary said that she **was** sick (*yesterday).'

As indicated by the ungrammaticality of (narrow scope) "yesterday," the past tense subjunctive *væri* 'were, was' does not mean that the sickness eventuality lies in the past, but that the subordinate T$_S$ (the perspective time in Kiparsky 2002) has been shifted, as illustrated in (23) (for simplicity, I don't show T$_R$, as it so happens that T$_R$ = T$_E$ in both the matrix and the subordinate clause).

(23) NOW   [$_{CP}$ … T$_{S1}$ … … say-T$_{E1}$ …   [$_{CP}$ … T$_{S2}$ … sick-T$_{E2}$ …
  ↑_ _ _ _ _ _ _ _ ↑↑_____↑↑_ _ _ _ _ _ _ _ _ ↑↑_____↑

    Cont. control   *Agree*   *Syntactic control*   *Agree*
    simultaneous   *past*   *simultaneous*   *non-past ("present")*

That is, the subordinate T$_S$, T$_{S2}$, is shifted backwards in time under control, such that it becomes simultaneous with the past event of saying in the matrix clause, while the sickness eventuality in the subordinate clause is valued under Agree as being non-past in relation to T$_{S2}$ (non-past being basically the same tense

---

[24] This Person/Tense parallelism has been widely noticed by semanticists (Partee 1973, Kratzer 1998, Schlenker 2003, inter alia), but it has been neglected in mainstream syntactic approaches.

relation as in the simple present in matrix clauses).[25] Strikingly, the relation between T_{E1} and T_{S2} in (23) parallels the relation between the matrix subject *Ali* and the subordinate Λ_A feature in (16). In both cases, the value of an abstract element in a subordinate clause is set or fixed under syntactic control by an element in the matrix clause.

There is no co-shifting of the subordinate T_{S2} and the logophoric edge linkers, Λ_A and Λ_P, as seen by the fact that *María* in (22) is referred to by the 3rd person pronoun *hún* 'she' (and not by the 1st person *ég* 'I'). In other words, the pronoun *hún* is speaker anchored, whereas the subjunctive *væri* is anchored with the matrix clause subject *María*. This kind of "schizophrenia" is a widespread but a poorly understood property of language (for some observations, see Banfield 1982, Sigurðsson 1990).[26] The logophoric edge linkers are commonly "better behaved," showing a strong tendency to co-shift (Anand and Nevins 2004). However, as expected under a syntactic approach to edge linkers, there are exceptions (see on self talk in section 5 and e.g. Svenonius 2012), suggesting that each edge linker may be independently active (and even that v-edge linkers may be shifted without their locally c-commanding C-edge linkers being shifted too).[27]

4   Bound variable readings

Indexical shift phenomena show that personal pronouns have no lexical content. That is, analyzing for example the 1st person singular pronoun as a regular lexical item, simply marked or valued as +SPEAKER, with the meaning 'the speaker of this particular utterance,' is off the track. Instead, every phase is equipped with silent but syntactically active edge linkers, pronouns acquiring their ϕ-values in relation to a subset of these linkers, by edge computation.[28]

---

[25] For further details of Tense computation, see previous work (including Sigurðsson 2004b, 2011b, Sigurðsson and Maling 2012). Languages that do not have tense agreement in SOT contexts commonly apply the simple present tense in such contexts.

[26] For example, as discussed in these works (and as also seen in (22)), adverbial temporal indexicals (*yesterday*, etc.) do not co-shift with Tense, and represented speech and thought shows different shifts than indirect speech. I must set these intriguing issues aside here.

[27] Imposters (in the sense of Collins and Postal 2012) would seem to suggest a disparate multiple edge linker activity too (see Wood and E. Sigurðsson 2011 on Icelandic), but I have not developed a detailed analysis of the relevant intriguing data. The Tamil facts discussed in Sundaresan 2011 are also an interesting challenge.

[28] Pronouns are thus syntactically "zero" in the sense of Kratzer 1998 (rather than "minimal", as in Kratzer 2009). However, pronominal relations are transformed into or interpreted as overt ϕ-bundles in the externalization process, that is, they are (obviously) not "PF zero." See section 6 on gender.

This Context-linked Grammar approach is further supported by bound variable readings of pronouns. The conversation between Mary and John in (24) illustrates the difference between the bound variable reading and a regular referential reading (deictic or anaphoric, here anaphoric).

(24) a. [Mary]: Peter is a professor and **he** believes that **he** is very smart.
  b. [John]: Yes, every male professor believes that **he** is smart.

The natural reading of the pronouns in Mary's speech act in (24a) is referential, referring back to *Peter*. This reading is also available in (24b), that is, the clause can mean that every male professor believes that *Peter* is smart.[29] However, (24b) also has a (more plausible) bound variable reading, where it holds true of all male professors that each of them believes himself to be smart. These two readings are quasi-formally sketched in (25):

(25) a. For every x, x = a male professor, it holds
      that x believes that **Peter** is smart
  b. For every x, x = a male professor, it holds
      that x believes that $\boldsymbol{x}$ is smart

Bound variable readings of 3rd person pronouns have been widely discussed, whereas it is a relatively recent discovery that 1st and 2nd person pronouns can also have such readings (see Kratzer 1998, Rullmann 2004). Since Kratzer 2009, 1st and 2nd person pronouns with bound variable readings have become known as *fake indexicals*.

The example in (26) has a 1st person fake indexical (Kratzer 1998 attributes this example to Irene Heim).

(26) Only I got a question that I understood.

---

[29] Any bound pronoun is potentially ambiguous between a referential and a bound variable reading, the latter being contingent on the properties of the antecedent. If the antecedent can be interpreted as referring to a subset of a defined or conceivable set, the pronoun can have a bound variable reading. Such a reading is usually farfetched in the absence of a quantifier, but it becomes less marked when the antecedent is focalized, as in (ib).

(i) a. Who_i believes $himself_i$ to be rich?
  b. Well, $JOHN_j$ believes he_j is rich (even though no others believe they are).

On the fake indexical reading there is only one "questioned" who understood the question he or she got (no others understood their questions) and this person happens to be the speaker of the clause.[30] This reading is sketched in (27).

(27) There is only one x such that x got a question that x understood
  & x = the speaker

Two distinct chains are involved, connected only by coincidental coreference. The underlying syntax is shown in (28).

(28) SPEAKER_i [$_{CP}$ .. $\{\Lambda_A\}_i$ .. [$_{TP}$ .. I_i / I_k .. [$_{CP}$ .. $\{\Lambda_A\}_k$ .. [$_{TP}$ .. I_k .. $i = k$

$\uparrow$_ _ _ _ _ _ _$\uparrow\uparrow$_ _ _ _ _ _ _ _$\uparrow$ Chain A

Cont. control   *Agree* $\uparrow$_ _ _ _ _ _ $\uparrow\uparrow$_ _ _ _ _ _ _ $\uparrow$ Chain B

Synt. control   *Agree*

Fake indexical readings involve shifting of a subordinate context linker (here $\{\Lambda_A\}_k$) under syntactic control, like the indexical shift examples discussed in the previous section.[31]

Both phenomena, indexical shift and fake indexicals, also involve a shift from the internal perspective of the actual speaker's EGO (the speaker of fake indexical examples thus not talking of himself or herself from his or her internal EGO perspective–but only as a "mindless variable"). In 3rd person bound variables this perspective shift is commonly not only away from the actual speaker EGO but toward a secondary 3rd person EGO; that is, inactive speaker perspective gets interpreted as activated perspective of some other prominent +Pn participant (cf. Sigurðsson 1990). This yields a *de se* reading; that is to say, a reading where the bound pronoun necessarily refers back to its antecedent as a self-reflecting EGO. Thus, when an author writes "Mary looked into the mirror

---

[30] As a matter of fact, contexts where the subordinate 1st person pronoun has a regular indexical reading (referring to the actual speaker of the clause) are not easy to find. The following seems to be at least marginally possible, though:
(i)   [I understand a number of questions and] only I got a question that I understood.
- where "a question that I understood" has the reading 'one of the specific questions that I understand.' – No one else got any of those specific questions.
[31] Sentences containing a clause bounded bound variable (*Only I do my duties here*, *Every boy loves his mother*, etc.) seemingly pose a problem to this analysis. They can commonly be paraphrased as biclausal (*It holds true of every boy that he loves his mother*, etc,), which might suggest an underlying biclausal structure. Alternatively, and perhaps more plausibly, sentences of this sort might be analyzed as involving shifted v-edge linkers but unshifted C-edge linkers.

and thought that she was good looking" the salient reading is the *de se* reading that Mary thought of herself "I am good looking." A possible, albeit a more far-fetched reading is the *de re* reading that Mary thought the person she saw in the mirror was good looking without realizing that the person in question was indeed herself (she might have been heavily drunk or hallucinating or just confused, thinking "she is good looking" rather than "I am good looking"). *De re* readings are excluded for controlled PRO (Chierchia 1989). That is, in "Mary tried everything to look good" there is no way of Mary by some accident having some stranger's looks in mind.

De se readings, thus, involve an ego/mind/self/consciousness/point-of-view/perspective feature of sorts (see Anand 2006 on the "P(erspectival)-Center"). As all these terms (used in the literature) would seem to suggest, it is not easy to pin down the exact nature of this feature, but it is clearly a feature of natural language. As in Sigurðsson 1990, I refer to it as EGO. *De se* readings arise by (secondary) EGO$_i$-EGO$_i$ binding, similar (but not tantamount or identical) to regular reflexive binding. In fact, long distance EGO$_i$-EGO$_i$ binding is lexicalized by reflexives or special pronouns in some languages.[32] EGO is thus an additional edge linker, with semantic effects in overtly unmarked *de se* contexts and with both semantic and PF effects in overtly marked *de se* contexts, e.g. Icelandic long distance reflexivization (LDR) constructions. The fact that it does have observable effects at both the interfaces suggest that it is a syntactic feature but its interpretation is furthermore subject to semantic and pragmatic plausibility, as has been repeatedly discussed in the literature (in e.g. Thráinsson 1976, Sigurðsson 1990, Reuland and Sigurjónsdóttir 1997, Anand 2006).

Speaker controlled $+\Lambda_A$ obligatorily bundles up with EGO, and indexical shifts, fake indexicals and *de se* readings are precluded in the local phase domain of a (pragmatic-syntactic) SPEAKER//$+\Lambda_A$/EGO relation.[33] In overtly unmarked *de se* examples, it might seem that the relevant EGO feature operates independently, mediating between the matrix argument and the subordinate bound variable (as in English "Mary looked into the mirror and thought that she was good looking"). However, corresponding examples in (the central variety

---

[32] Clements 1975, Thráinsson 1976, Reuland and Sigurjónsdóttir 1997, Y. Huang 2000, Delfitto and Fiorin 2011, inter alia; unfortunately, the special pronouns in question have misleadingly been referred to as "logophoric" pronouns. Secondary EGO or secondary perspective pronouns would have been more to the point.

[33] Recall, from fn. 10, that adjacent silent heads bundle up by Head Unification, thereby functioning as a single head, unless they are separately active in the derivation (Sigurðsson 2010:165). In addition, of course, even separately active heads commonly bundle up in PF, but that is irrelevant in the present context.

of) Icelandic are obligatorily in the subjunctive, and similar facts are found in other languages. Recall that sequences of tenses (SOT) readings are also confined to subjunctive clauses, and that such clauses have shifted Speech Tense, T_S (as illustrated in (23)). Thus, a secondary EGO (or perspective) feature may bundle up with shifted T_S. While this has no PF visible effects in English, it does in e.g. Icelandic.

5 Inclusiveness (and speaker/hearer asymmetries)

The interaction of Person and Number raises long standing and widely discussed problems. It has been commonly observed that *we* is not the plural of *I* in the sense that *we* does not mean "a plural speaker" or "many speakers" (see Boas 1911, Benveniste 1966, Lyons 1968, Bobaljik 2008a). As argued by Boas (1911:39), a "true first person plural is impossible, because there can never be more than one self." In other words, a plural 1st person is universally excluded because the 1st person category does not refer to the speaker as an object, instead relating to an EGO (or self/center of consciousness, etc). The pronoun *we* in "chorus usage" or "mass speaking" (in the sense discussed in Mühlhäusler and Harré 1990:201ff, Cysouw 2003:73–74) involves multiple EGOs or selves using the pronoun in the usual sense of 'some group of people including (or at least relating to) me.' Thus, when Neil, Jon and Erik visited their mother on her 80th birthday and chanted together "We love you mom!" they were saying three different things, as shown in (29).

(29) a.   [Neil:]   We (= Jon, Erik and I) love you mom!
     b.   [Jon:]   We (= Neil, Erik and I) love you mom!
     c.   [Erik:]   We (= Neil, Jon and I) love you mom!

That is, "We love you mom!" is not a single sentence here but three sentences, with three different sets of actors being referred to by the pronoun *we*. – Even if Mars, Jupiter and Saturn might align so closely that they look like a single star in the sky they do not thereby become a single star.

The functionalist discussion of "chorus we" and of the speaker as an object in the "real world" is remarkably beside the point. The term "speaker" is a misnomer, used only in lack of an indisputably better term. "Logophoric agent" is more to the point (although not perfect). Crucially, the relevant notion is not about a person or an individual (a "thing in the world," as it were) but about two distinct roles (usually held by persons): That of a *perceiver/thinker* and that of a *sender*, and it

is the perceiver/thinker role (center of consciousness/EGO) that is primary in relation to the sender role, not vice versa. Thus, as discussed at the end of section 4, indexical shifts and *de se* readings are precluded in the local phase domain of a speaker bound $+\Lambda_A$/EGO relation.[34]

The received understanding is that the pronoun *we* has the meaning 'speaker + X' (see e.g. Cysouw 2003, Siewierska 2004). This yields a number of possibilities, including both an inclusive *we*, referring to both the speaker and the hearer, and an exclusive *we*, referring to the speaker and somebody else but excluding the hearer. So, when I say to somebody "We should go to the movies," I am using *we* inclusively, including my hearer(s) (and potentially someone else too) in the set of people referred to by *we*, but, when I say "We have decided to help you," I am using *we* exclusively, excluding my hearer(s) from its reference set. Many languages make overt distinctions between inclusive and exclusive readings of the first person plural pronoun (Cysouw 2003, inter alia).

However, regardless of inclusivity and exclusivity, the speaker does not seem to be the reference core of *we*, as suggested by the sentences in (30).

(30) a. We have lived in Europe for at least 40000 years.
     b. We finally defeated Napoleon at Waterloo.

These sentences are not about the speaker but about abstract sets of humans (perceivers/thinkers or EGOs) with whom the speaker identifies himself or herself.[35] Even ordinary usage of *we*, as in "We [my family and I] sold the house," is not primarily about the speaker but about a set of event participants including or somehow relating to the speaker, at least according to the speaker's own assessment. Crucially, the clause "We sold the house" has no "plural person," instead having only the plural meaning that there were two or more SELLERS. This is a regular event participant plural, the same one as in "The owners sold the house." While Person is a high speech act related category, Number is a relatively low event participant category.[36]

---

[34] It might seem possible to reduce the speaker and hearer notions to just SENDER and RECEIVER with EGO coming for free, but that is not so. "Mindless" receivers and senders are entirely possible in many natural language contexts (self talk, to be discussed shortly, is only one such context), and both 3rd person *de se* readings and indexical shift phenomena illustrate that EGO features have a "life" of their own.

[35] It is not even clear that there ever has been any conceivable "natural set" that would meet the "real world truth conditions" of sentences of this sort. In addition, the reference set of an NP may of course be entirely fictional or imaginary. I set these aspects aside here.

[36] For intricate and detailed evidence that Person and Number are indeed distinct probes, and that Person is the higher one, see Sigurðsson and Holmberg 2008.

However, by *participant augmentation*, the event participant set {P} may be speaker augmented, hearer augmented, or both speaker and hearer augmented, as sketched in (31).

(31) a. Speaker augmentation of the participant set: $\{\{P\}, \Lambda_A\}$
      b. Hearer augmentation of the participant set: $\{\{P\}, \Lambda_P\}$
      c. Speaker and Hearer augmentation of the participant set: $\{\{P\}, \Lambda_A, \Lambda_P\}$
      d. No augmentation of the participant set: $\{P\}$

This exhausts the possibilities. The set {P} is open to any non-inclusive interpretation ('John and Mary', 'China, EU and USA', etc.), including the empty set interpretation. In case {P} is an empty set, (31a) yields the simple 1st person singular pronoun, (31b) yields singular *you*, (31c) the strictly inclusive reading of *we*, and (31d) the empty set interpretations in impersonal constructions. In case {P} is not an empty set, (31a) yields hearer exclusive *we*, (31b) yields regular plural *you*, (31c) general inclusive *we*, and (31d) a 3rd person reading.

Crucially, the speaker/hearer categories can only be augmentations (the opposite of the traditional 'speaker+' and 'hearer+' understanding); that is, they are not available in the set {P}of vP-internal NPs, 1st and 2nd person pronouns not being merged as vP-internal items, instead being interpretations of computational edge relations (plus a vP internal participant role). It follows that the fully computed argument set cannot be {speaker, speaker}; that is, a "chorus *we*" is excluded, as claimed by Boas (1911), a prediction that is typologically borne out (see the valuable overview and discussion in Bobaljik 2008a). Given (31) the {hearer, hearer} set should be excluded by the same logic, and also that is borne out. No language is known to indisputably have a plural pronoun that specifically refers to hearers only, excluding everybody else (Simon 2005, Bobaljik 2008a).[37]

The nonexistence of a specific {hearer, hearer} pronoun might seem surprising and has been repeatedly disputed (see Bobaljik 2008a). There are many situations where such a pronoun might seem to come handy, as apparently suggested by examples such as the one in (32).

(32) You, my hearers, are the only ones I care about.

---

[37] It follows that there is no *we* with the reading {{hearer, hearer}, speaker} either.

However, sentences of this sort do not involve a "mass *you*," instead being "mass addresses."[38] Much as the speaker has two distinct roles, that of a perceiver/thinker (EGO) and that of a sender, the hearer has the role of a perceiver/thinker (EGO) and the role of a receiver. The receiver role can conceivably be quantified over and "spread" across a set of potential receivers. However, the relevant fact here is that the perceiver/thinker role cannot be pluralized, there thus being a unique perceiver-perceiver (EGO$_i$-EGO$_k$) relation between the speaker and every single one of his or her hearers. That is, the 2nd person pronoun in (32) has a non-pluralized bound variable reading, roughly: 'For every *x*, *x* hearing me, it holds that I only care about *x*.'

The set in (31c) is spelled out as *we*, and not as plural *you*, suggesting that the hearer category is secondary and dependent in relation to the speaker category. The hearer is not just anybody who happens to hear something, but a specific role holder the speaker has in mind. Notice also that Speech Location is speaker bound but not hearer bound (i.e., speech locational *here* it is a "speaker *here*," not necessarily (although possibly) shared by the hearer). In contrast, Speech Time is both speaker and hearer bound. That is, a Speech Time *now* is necessarily the *now* of both the speaker and the hearer (regardless of whether it actually refers to the same moment).[39] The perceiver-perceiver relation (EGO$_i$-EGO$_k$) is necessarily a momentary relation, anchored only in minds at the moment of perception or thought, whereas the sender-receiver relation can be "dispersed" across space and time.

As discussed by Holmberg (2010), another interesting type of asymmetry between the speaker and hearer features is found in self talk. Thus, (33a) is felicitous as self talk, whereas (33b) is not (Holmberg's (9b) and (13b)).

(33) a.   I knew you could do it!
     b.   *You knew I could do it!

---

[38] This holds even in cases like "You should form a line" or "You should form a triangle", pointed out to me by Jim Wood. Sentences of this sort can involve arbitrarily many "yous", for instance just a single one, in which case these clauses are grammatical and interpretable, even though the result of the action might be different from what the speaker has in mind.

[39] Thus, a writer in, say, Stratford-upon-Avon in the year 1612 migh have written the sentence *You are reading this sentence **now*** (or *Thou art ...*) and his reader in, say, New York in the year 2012, might be nodding and mumbling "so true, so true." In contrast, the sentence *You are reading this sentence **here*** (where *here* is a speech locational *here*) would presumably evoke different reactions. However, this is a 3rd factor effect (in the sense of Chomsky 2005), hence a linguistic fact in only the broad sense rather than in the narrow sense of Hauser et al. 2002 (as expected under the approach developed in Sigurðsson 2011b, 2012b).

As Holmberg (2010:188) points out there is a crucial distinction to be drawn between the thinking self or EGO and the mindless self. While the speaker presupposes that the hearer, expressed by dialogue *you*, has a mind different from his or her own, self talk *you* does not have a mind, as suggested by the fact that it never answers back. "Apparently, *you* can't refer to the self as holder of thoughts or beliefs, in self talk", and *you* in self talk, "can't refer to the self as an experiencer of feelings or holder of intentions or plans, either" (Holmberg 2010:187).[40] In other words, the actual speaker, being linked to $\Lambda_{A/}+EGO_i$ by necessity, cannot refer to himself or herself as $\Lambda_{P/}+EGO_i$ as well (phase internally). Another important issue, highlighted by Holmberg's observations, is that self talk provides a context where indexical shift is not preconditioned by control (an exceptional but clearly a possible context type). In addition, self talk as in e.g. "I hate you!" provides clear evidence that indexical shift is not brought about by operators scoping over predications or contexts.

The sets in (31) do not necessarily involve the addition operator + or the conjunction &. Thus, sentence (30b), "We finally beat Napoleon at Waterloo," does not mean 'A bunch of politicians, soldiers, and I finally beat Napoleon at Waterloo.' Rather, the speaker augmented sets in (31) have roughly the general reading 'a set of participants [in the event or state specified by the predicate] with whom I identify myself.' The addition (+) and conjunction (&) relations are compatible with this general "identifying relation" but not forced by it.

6   A note on gender

Typological studies suggest that not having any noun gender is a common "gender system," 145 of 257 languages in Corbett 2011 having no gender (50 having two genders, 26 three genders, etc.). As Corbett has shown in many studies, those languages that do have noun gender vary as to whether and to what degree they have semantically related gender assignment, phonologically based gender assignment or arbitrary assignment. In previous work (e.g. Sigurðsson 2006a, 2009) I have argued that grammatical or formal gender is nonexistent in syntax, independent formal gender being assigned to nouns in (abstract) PF, and dependent formal gender (in pronouns, adjectives, etc.), in turn, being copied

---

[40] A related issue, brought to my attention by Jim Wood involves contrasts of the following sort:
(i)   I would watch yourself if I were you.
(ii)   *You would watch myself if you were me.
(iii) *I would watch himself if I were him.

under PF agreement with gendered (clause-internal or clause-external) antecedents.[41] Here I will focus on only pronominal gender.

Gender is a prominent category in many pronominal systems, common in 3rd person pronouns, but rarer as an overt category in 1st and 2nd person pronouns (see Corbett 1991:128–132, Siewierska 2004:103–107). However, pronominal gender is not a property of individual items (other than in shallow PF). This is clearly seen in gender systems of the classical three gender Indo-European type (as in Sanskrit, Latin, Greek, Albanian, Slavic languages, Icelandic, German, etc.). Thus, the Icelandic nouns meaning 'ship, yacht, boat' are neuter *skip*, feminine *skúta*, masculine *bátur*, respectively, pronominalized in discourse as *hún*, *hann*, *það* ('she, he, it'). Consider the sentence in (34).

(34) Hann   sökkti henni.
     he/it   sank   her/it
     'He/It sank her/it.'

Depending on the context, this sentence may mean that some male being sank some female being, or, for example, that some boat sank some yacht. As the words for 'earthquake' and 'island' are masuline vs. feminine (*jarðskjálfti* and *eyja*), it could also mean that some earthquake sank some island, for instance. In contrast, it could not possibly mean that some yacht (*skúta*) sank some boat (*bátur*), etc., even not in some imaginary world or game.

The gender of the pronouns in (34)–and of pronouns in general–is clearly just a shallow PF property, not stemming from any underlying syntax or semantics of vP-internal event participants. This can actually also be illustrated for English, as exemplified in the discourse in (35), *Avery* being a unisex name.

(35) [My friend Avery married a person called Avery too.] She has loved him
     ever since.

The underlying syntax of pronominal clauses of this sort is simply [*x* sank *y*], [*x* has loved *y*], etc., where *x* and *y* copy both their reference and their gender features under contextual control or scanning. Accordingly, the gender features are invisible to the semantic interface, whereas they enter the externalization PF process, yielding *hann* and *henni* in (34) and *she* and *him* in (35). Gender

---

[41] Arguably, natural gender nouns do have a semantic gender feature, HE, SHE, etc. However, as discussed in some detail in Sigurðsson 2009, there is commonly no relation or only a very weak indirect relation between semantic gender features of this sort and formal gender features like masculine and feminine.

agreement–as overt agreement in general–is a PF process (see Sigurðsson 2006a, 2009, Bobaljik 2008b).[42]

Semantic or natural gender reading is obviously available in examples like (34) and (35). However, it is not provided by syntax but by pragmatics. Inferring from the context that the referent of *hann* 'he,' etc., is a sex-differentiated human or animal, both the speaker and the hearer will understand it as carrying natural gender, otherwise not. Nothing in the syntactic, clause-internal computation carries or yields this information. This is further illustrated by the well-known fact that pronouns that do not show any gender distinctions, such as 1st and 2nd person pronouns in many Indo-European languages, trigger PF gender agreement. This is shown for the Icelandic 2nd person singular pronoun in (36).

(36) a.   Þú   ert   gáf**að**ur.   Addressing a male
        you.SG are intelligent.NOM.MASC.SG
        'You are intelligent.'

     b.   Þú   ert   gáf**uð**.   Addressing a female
        you.SG are intelligent.NOM.FEM.SG
        'You are intelligent.'

As indicated by the English translation, these sentences have identical underlying syntax/semantics. By context scanning, however, both the speaker and the hearer know that only one of them is felicitous in a given context. The derivation of (36a) is syntactically perfect, even when it is addressed to a female, and so is the derivation of (36b) when addressed to a male, mistakenly or on purpose.

Regardless of pragmatic gender processing, gender features are PF active (and PF obligatory) in gender languages of the Icelandic sort. That is, gender-marked pronouns are not only built in syntax; their construction proceeds by feature copying (agreement) in PF.[43]

---

[42] Notice, however, that it is possible to analyze gender as PF interpretation of a syntactic identity or coreference relation of sorts; that is, one can argue that syntax has "abstract Gender," not as a feature but as a relation (that has basically nothing to do with natural gender, though).

[43] Notice that this analysis is only available in a derivation by phase approach. That is, being copied from outside the phase, agreement gender cannot be spelled out until the next phase up has been merged (with the highest C-phase as an exception − for which the context provides the external "phase" domain, cf. Chomsky 2004:125, n. 17). Moreover, it follows that vP spell out must be procrastinated until C-context scanning has been completed, the C-phase thus having a larger span, in a sense, than assumed in Chomsky 2001 (as suggested by many more

It follows from the present analysis that the φ-categories have a different status in pronominal systems. As we have seen, Person is syntactically computed as a high speech act related category. Number is a lower event participant category, also syntactic/semantic in the unmarked case. Pronominal gender, in turn, is a PF agreement category, good for pragmatic processing but with no syntactic import, much as honorific markers and other instances of social deixis.[44] In addition, both Person and Number may trigger shallow and cross-linguistically varying PF agreement, yielding the misleading but commonly adopted idea that all φ-categories have similar status in grammar. That is, however, not the case.

7 Brief concluding remarks

Kaplan (1989) was right in that natural language does not have any monstrous shifty operators. In contrast, it has shifty *features*, silent but active in every phase edge, thus omnipresent in language.

Pronouns are "creatures" of syntax and partly of PF, spelling out syntactic edge-NP relations plus PF agreement relations (and not items in a pre-PF sense). An NP is born or merged as an event participant ("θ-role") without any φ-specifications, getting φ-valued and participant linked under edge computation and context scanning, plus cross-linguistically varying gender (and sometimes number) specification in PF.[45] Thus, pronouns illustrate that "lexical items" are not input to the derivation but its output (see also Wood 2012 on "lexical semantics" as partly syntactically derived).

In addition, obviously, any external language has a vocabulary of conventionalized PF strings (acoustic, visual, tactile, or combinatory), commonly referred to as "words" or "signs." The question of exactly how such externalized strings interact or co-operate with internal language structures remains a largely unresolved puzzle, despite numerous honorable attempts to

---

long distance dependencies than just distant gender agreement, including long distance reflexivization and sequence of tenses).

[44] Thus, it is not surprising that gender and honorific markings can be altered under social and political pressure, cf. the development or introduction of gender-neutral pronouns such as "singular" they and the Swedish *hen*.

[45] Even pronominal number may sometimes be a semantically vacuous PF agreement feature, as discussed in Sigurðsson 2009 (inherently plural or pluralis tantum nouns, for instance, being referred to by plural pronouns without any concomitant plural semantics). For arguments that some pronouns are born or merged partly φ-specified, see Kratzer 2009 and the references cited there. However, the data discussed by Kratzer involve morphological agreement, suggesting that the relevant φ-specification arises in PF rather than in I-syntax.

resolve it. However, by showing that syntax and PF cooperate in building some PF items, we have come at least one small step closer to an understanding of this puzzle.[46] More centrally, though, pronouns provide evidence that the correlation between internal and external language is radically and fundamentally non-isomorphic. Internal language builds relations–external language expresses items.

References

Anand, Pranav. 2006. De de se. Doctoral dissertation, MIT.

Anand, Pranav, and Andrew Nevins. 2004. Shifty operators in changing contexts. In *Proceedings of the 14th Conference on Semantics and Linguistic Theory*, ed. by Kazuha Watanabe and Robert B. Young, 20–37. Ithaca, NY: CLC Publications.

Banfield, Ann. 1982. *Unspeakable sentences*. Boston: Routledge & Kegan Paul.

Benveniste, Émile. 1966. *Problèmes de linguistique générale,* Vol. 1. Paris: Gallimard [English translation by Mary E. Meek published 1971 as *Problems in general linguistics*. Cora Gables, FA: University of Miami Papers].

Bianchi, Valentina. 2006. On the syntax of personal arguments. *Lingua* 116:2023–2067.

Boas, Franz. 1911. Introduction. In *Handbook of American Indian languages*, ed. by Franz Boas, 1–83. Bureau of American Ethnology Bulletin, 40. http://hdl.handle.net/10088/15507.

Bobaljik, Jonathan. 2008a. Missing persons: A case study in morphological universals. *The Linguistic Review* 25:203–230.

Bobaljik, Jonathan. 2008b. Where's Phi? Agreement as a post-syntactic operation. In *Phi-Theory: Phi features across interfaces and modules*, ed. by Daniel Harbour, David Adger, and Susana Béjar, 295-328. Oxford: Oxford University Press.

Bowers, John. 2010. *Arguments as relations*. Cambridge, MA: MIT Press.

Bühler, Karl. 1934. *Sprachtheorie: Die Darstellungsfunktion der Sprache.* Jena: G. Fischer [English translation by Donald Goodwin published 1990 as *Theory of language: The representational function of language*. Amsterdam: John Benjamins].

---

[46] Notice again that this is distinct from Distributed Morphology approaches. Feature values, such as 1st person and past tense are not syntactic elements but PF interpretations of syntactic relations. Crucially, morphological PF operations can "see" (some of) syntax but not the other way around; that is, they are out of syntactic reach, hence invisible to the semantic interface.

Chierchia, Gennaro. 1989. Anaphora and attitudes *de se*. In *Semantics and contextual expressions*, ed. by Renate Bartsch, Johan van Benthem, and Peter van Emde Boas, 1–31. Dordrecht: Foris.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1–52. Cambridge, MA: The MIT Press.

Chomsky, Noam. 2004. Beyond explanatory adequacy. In *Structures and beyond: The cartography of syntactic structure*, Vol. 3, ed. by Adriana Belletti, 104–131. Oxford: Oxford University Press.

Chomsky, Noam. 2005. Three factors in language design. *Linguistic Inquiry* 36:1–22.

Chomsky, Noam. 2008. On Phases. In *Foundational issues in linguistic theory. Essays in honor of Jean-Roger Vergnaud*. Ed. by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press.

Clements, George N. 1975. The logophoric pronoun in Ewe: Its role in discourse. *Journal of West African Languages* 10:141–177.

Collins, Chris, and Paul Postal. 2012. *Imposters: A study of pronominal agreement*. Cambridge, MA: MIT Press.

Corbett, Greville. 1991. *Gender*. Cambridge: Cambridge University Press.

Corbett, Greville. 2011. Number of genders. In *World atlas of language structures onlin*e, ed. by Matthew S. Dryer and Martin Haspelmath. http://wals.info/chapter/30 (2012-08-11).

Cysouw, Michael. 2003. *The paradigmatic structure of person marking*. Oxford: Oxford University Press.

Deal, Amy Rose. 2008. Events in space. In *Proceedings of SALT 18*, ed. By Tova Friedman and Satoshi Ito, 230–247. Cornell: CLC Publications.

Delfitto, Denis, and Gaetano Fiorin. 2011. *Linguistic Inquiry*, 42:193–224.

Embick, David, and Rolf Noyer. 2007. Distributed Morphology and the syntax–morphology interface. In *The Oxford Handbook of Linguistic Interfaces*, ed. by Gillian Ramchand and Charles Reiss, 289–324. Oxford: Oxford University Press.

Frascarelli, Mara. 2007. Subjects, topics and the interpretation of referential pro. An interface approach to the linking of (null) pronouns. *Natural Language and Linguistic Theory* 25:691–734.

Hauser, Marc D., Noam Chomsky, and W. Tecumseh Fitch. 2002. The faculty of language: what is it, who has it, and how did it evolve? *Science* 298:1569–1579.

Holmberg, Anders. 2005. Is there a little pro? Evidence from Finnish. *Linguistic Inquiry* 36:533–564.

Holmberg, Anders. 2010. Referring to yourself in self talk. In *Structure preserved: Studies in syntax for Jan Koster*, ed. by Jan-Wouter Zwart and Mark de Vries, 185–192. Amsterdam: John Benjamins.

Holmberg, Anders, Aarti Naydu, and Michelle Sheehan. 2009. Three partial null-subject languages: A comparison of Brazilian Portuguese, Finnish and Marathi. *Studia Linguistica* 63:59–97.

Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30:69–96.

Huang, Yan. 2000. *Anaphora: A cross-linguistic study*. Oxford: Oxford University Press.

Israel, David & John Perry. 1996. Where monsters dwell. In *Logic, Language and Computation Vol. 1*, 303–316, ed. by Jerry Seligman and Dag Westerståhl. Stanford, CA: CSLI.

Kaplan, David. 1989. Demonstratives. In *Themes from Kaplan*, ed. by Joseph Almog, John Perry, and Howard Wettstein, 481–564. Oxford: Oxford University Press.

Kiparsky, Paul. 2002. Event structure and the perfect. In *The construction of meaning*, ed. by David I. Beaver, Luis D. Casillas Martínez, Brady Z. Clark, and Stefan Kaufmann, 113-136. Stanford, CA: CSLI.

Kratzer, Angelika. 1996. Severing the external argument from the verb. In *Phrase structure and the lexicon*, ed. by Johann Rooryck and Laurie Zaring, 109–137. Dordrecht: Kluwer.

Kratzer, Angelika. 1998. More structural analogies between pronouns and tenses. In *Proceedings of semantics and linguistic theory (SALT) VIII*, ed. by Devon Strolovitch and Aaron Lawson, 92–109. Ithaca, NY: Cornell University, CLC Publications.

Kratzer, Angelika. 2009. Making a pronoun: fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40:187–237.

Landau, Idan. 2004. The scale of finiteness and the calculus of control. *Natural Language & Linguistic Theory* 22:811– 877.

Landau, Idan. 2008. Two routes of control: Evidence from case transmission in Russian. *Natural Language & Linguistic Theory* 26:877–924.

Lohndal, Terje. 2012. Without specifiers: Phrase structure and events. Doctoral dissertation, University of Maryland.

Ludwig, Rainer, Robert Munro, David W. Fleck, and Uli Saulerland. 2009. Reported speech in Matses: Obligatory perspective shift with syntactic transparency. In *Proceedings of SULA 5*.

Lyons, John. 1968. *Introduction to theoretical linguistics*. Cambridge: Cambridge University Press.

Mühlhäusler, Peter, and Rom Harré. 1990. *Pronouns and people: The linguistic constructions of social and personal identity*. Oxford: Blackwell.

Noyer, Rolf. 1992. Features, positions and affixes in autonomous morphological structure. Doctoral dissertation, MIT.

Partee, Barbara. 1973. Some structural analogies between tenses and pronouns. *Journal of Philosophy* 70:601–609.

Perry, John. 1997. Indexicals and demonstratives. In *A companion to philosophy of language*, ed. by Bob Hale and Crispin Wright, 586–612. Oxford: Blackwell.

Platzack, Christer. 2001. The computational system as a minimal feature driven device and the tripartite TP/VP-hypothesis of the universal clause. *GLOW Newsletter* 46:46–47.

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: The MIT Press.

Reuland, Eric, and Sigríður Sigurjónsdóttir. 1997. Long distance "binding" in Icelandic: Syntax or discourse? In *Atomism in binding*, ed. by Hans Bennis, Pierre Pica, and Johan Rooryck, 323–340. Dordrecht: Foris.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook in generative syntax*, ed. by Liliane Haegeman, 281–337. Dordrecht: Kluwer.

Rizzi, Luigi, and Ur Shlonsky. 2006. Satisfying the Subject Criterion by a non subject: English Locative Inversion and Heavy NP Shift. In *Phases of interpretation*, ed. by Mara Frascarelli, 341–361. Berlin: Mouton de Gruyter.

Ross, John R. 1970. On declarative sentences. In *Readings in English transformational grammar*, ed. by Roderick Jacobs and Peter Rosenbaum, 222–277. Waltham, MA: Ginn & Co.

Rullmann, Hotze. 2004. First and second person pronouns as bound variables. *Linguistic Inquiry* 35:159–168.

SAG = *Svenska Akademiens grammatik* 1–4 ['The Swedish Academy Grammar 1–4']. Ulf Teleman, Staffan Hellberg, and Erik Andersson. Stockholm: Norstedts Ordbok. 1999.

Schlenker, Philippe. 2003. A plea for monsters. *Linguistics and Philosophy* 26:29–120.

Schlenker, Philippe. 2012. Indexicals. To appear in *The handbook of formal philosophy*, ed. by Sven Ove Hansson and Vincent F. Hendricks. Springer.

Shklovsky, Kirill, and Yasutada Sudo. 2009. Indexical shifting in Uyghur. Paper presented at NELS 40, MIT.

Siewierska, Anna. 2004. *Person*. Cambridge: Cambridge University Press.

Sigurðsson, Halldór Ármann. 1990. Long distance reflexives and moods in Icelandic. In *Modern Icelandic syntax*, ed. by Joan Maling and Annie Zaenen, 309–346. San Diego: Academic Press.

Sigurðsson, Halldór Ármann. 2004a. Meaningful silence, meaningless sounds. *Linguistic Variation Yearbook* 4:235–259.

Sigurðsson, Halldór Ármann. 2004b. The syntax of Person, Tense, and speech features. *Italian Journal of Linguistics* 16:219–251.

Sigurðsson, Halldór Ármann. 2006a. Agree in syntax, agreement in signs. In *Agreement systems*, ed. by Cedric Boeckx, 201–237. Amsterdam: John Benjamins.

Sigurðsson, Halldór Ármann. 2006b. The Nominative Puzzle and the Low Nominative Hypothesis. *Linguistic Inquiry* 37:289–308.

Sigurðsson, Halldór Ármann. 2009. Remarks on features. In *Explorations of Phase Theory: Features and arguments*, ed. by Kleanthes Grohman, 21–52. Berlin: Mouton de Gruyter.

Sigurðsson, Halldór Ármann. 2010. On EPP effects. *Studia Linguistica* 64:159–189.

Sigurðsson, Halldór Ármann. 2011a. Conditions on argument drop. *Linguistic Inquiry* 42:267–304.

Sigurðsson, Halldór Ármann. 2011b. On UG and materialization. *Linguistic Analysis* 37:367–388.

Sigurðsson, Halldór Ármann. 2011c. Uniformity and diversity: A minimalist perspective. *Linguistic Variation* 11:189–222.

Sigurðsson, Halldór Ármann. 2012a. Minimalist C/case. *Linguistic Inquiry* 43:191–227.

Sigurðsson, Halldór Ármann. 2012b. Thoughts on cartography and universality. In Luigi Rizzi's 60th Birthday Celebration. http://www.ciscl.unisi.it/gg60/

Sigurðsson, Halldór Ármann. 2014b. Context-linked Grammar. *Language Sciences* 43:175–188.

Sigurðsson, Halldór Ármann, and Anders Holmberg. 2008. Icelandic Dative Intervention. In *Agreement restrictions,* ed. by Roberta D'Alessandro,

Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 251–279. Berlin: Mouton de Gruyter.

Sigurðsson, Halldór Ármann, and Joan Maling. 2012. Silent heads. In *Functional Heads*, ed. by Laura Brugé, Anna Cardinaletti, Giuliana Giusti, Nicola Munaro, and Cecilia Poletto, 368–378. Oxford: Oxford University Press.

Simon, Horst J. 2005. Only you? Philological investigations into the alleged inclusive-exclusive distinction in the second person plural. In *Clusivity: Typology and case studies of the inclusive-exclusive distinction*, ed. by Elena Filimonova, 113–150. Amsterdam: John Benjamins.

Singler, John Victor. 2001. Why you can't do a VARBRUL study of quotatives and what such a study can show us. *Selected papers from NWAV 29. Penn Working Papers in Linguistics* 7/3:257–278.

Speas, Margaret. 2000. Person and point-of-view in Navajo. *Papers in honor of Ken Hale*, MIT Working Papers on endangered and less familiar languages #1, ed. by Andrew Carnie, Eloise Jelinek, and Mary Willie. Cambridge, MA: MIT.

Sundaresan, Sandhya. 2011. "Monstrous agreement," anaphora, and context: evidence from Tamil. To appear in Proceedings of NELS 41.

Svenonius, Peter. North Sami pronouns. Paper presented as a poster at GLOW 35 in Potsdam.

Svensson, Gudrun. 2009. Diskurspartiklar hos ungdomar i mångspråkliga miljöer i Malmö ['Discourse particles in youth talk in multilingual settings in Malmö']. Doctoral dissseratation, Lund University.

Thráinsson, Höskuldur. 1976. Reflexives and subjunctives in Icelandic. In *Papers from the Sixth Meeting of the North Eastern Linguistic Society*, ed. by Alan Ford, John Reighard, and Rajendra Singh, 225–239 [Montreal Working Papers in Linguistics 6].

Wood, Jim. 2012. Icelandic morphosyntax and argument structure. Doctoral dissertation, NYU.

Wood, Jim, and Einar Sigurðsson. 2011. Icelandic verbal agreement and pronoun-antecedent relations. *Working Papers in Scandinavian Syntax* 88:81–130.