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Morphology and syntax … and semantics … and pragmatics

Deconstructing "semantic agreement"

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Introduction

Agreement, as the variation of the morphological form of one word according to the properties of another word in a given syntactic context, involves the interaction of at least two domains of the grammar, morphology and syntax. In the following examples, the form of the TARGET (here, the verb) varies according to the formal properties of the noun *dog* (the CONTROLLER), not the noun *ball*.

(1) *The dog* ***has*** *a ball.*

(2) *The dogs* ***have*** *a ball.*

A number of agreement constructions also require reference to meaning-based properties of words. The examples below with the noun *band* (adapted from Corbett 2006, pp. 2, 155–6) represent two different patterns of agreement: example (3) does not necessarily require reference to the meaning, while (4), a common pattern found in varieties of British English, does.

(3) *The band* ***has*** *arrived.*

(4) *The band* ***have*** *arrived.*

The distinction between examples (3) and (4) is traditionally one of syntactic vs. semantic agreement, respectively. SYNTACTIC AGREEMENT is agreement according to the morphological form of the controller (p. 155). The term SEMANTIC AGREEMENT has been used to classify a number of constructions across languages, but minimally requires reference to some meaning-based property of the word (*ibid.*). We argue that the range of constructions that have been labeled "semantic agreement" actually involve different types of meaning, what might be labeled as "semantics proper" and "pragmatic meaning". As is well documented in the literature

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(cf. Bianchi 2004, Szabo 2005, *inter alia*), the distinction between semantics and pragmatics is not without controversy. Wierzbicka (2008, p. 197), for example, gives a simple description of the two domains ("Semantics is the study of meaning. Pragmatics is the study of language use"), but note the debate that arises as to what exactly counts as *meaning* and *language use*: "The way one views the relationship between the two fields depends on how one views meaning, and how one views language use. Both of these matters are highly controversial."

Our goal in this paper is not to make a theoretical claim about the distinction between semantics and pragmatics. Rather, our interest is in agreement as the flashpoint between morphology and the semantics/pragmatics complex. The term "semantic agreement" is problematic: it implies that only semantics proper is relevant, and it lumps together several constructions that involve the controller's meaning in different ways. We problematize previous descriptions of "semantic agreement" to show how meaning interacts with morphology and syntax. Such an exploration adds to the discussion of the semantics-pragmatics controversy, but an answer to this problem is outside the scope of this paper. However, a full analysis of semantic agreement must stake a claim about the border between these two domains, and between both these domains and morphosyntax. To this end, we point to some relevant accounts in the literature that parallel the analysis of syntactic versus pragmatic control that we champion here.

Section 1 gives an overview of phenomena labeled as semantic agreement in the literature. In Section 2, we identify the constructions requiring reference to context-dependent meaning and discuss the role of pragmatics in agreement. Section 3 offers a case study, Vedic Sanskrit elliptic duals, showing how context, meaning, and morphology interact in determining agreement with certain Sanskrit controllers. Finally, we conclude with a brief discussion of syntactic versus pragmatic control and how it relates to our overall understanding of the interface between morphology and syntax … and semantics … and pragmatics.

1. Variation in semantic agreement patterns

Broadly speaking, semantic agreement produces a target form with features consistent with the meaning of the controller. The distribution of semantic and syntactic agreement can depend on the type of target; e.g. attributive adjectives almost always show syntactic agreement, while personal pronouns more often show semantic agreement. This variation, defined in terms of the Agreement Hierarchy, is consistent across languages (Corbett 1979; 2006, pp. 206–37). Because of this consistency, we follow Corbett (pp. 227–8) and consider all possible target types (i.e. pronouns, adjectives, verbs, etc.) as conditioning agreement, although there

is significant debate as to whether pronominal agreement is part of a separate domain of anaphoric relations. Since agreement operates on pronouns as it does on adjectives and verbs (e.g. often realizing the same features or progressing, diachronically, in the same way), we do not draw a distinction between agreement and anaphor with respect to target type.

Furthermore, agreement can operate differently even for targets of the same syntactic category. In particular, attributive adjectives and predicative adjectives condition different rates of semantic vs. syntactic agreement, with attributive adjectives favoring syntactic agreement in almost all contexts. Corbett (pp. 228–30) has addressed the possibility that this is due to syntactic organization: attributive adjectives are noun phrase internal — yet he observes that relative pronouns, which show a higher rate of semantic agreement than attributive adjectives, are also noun phrase internal. Target type and position are important dimensions in understanding the distribution of agreement patterns, but our goal in this paper is to focus on the nature of the **controllers** in semantic agreement.

1.1 Agreement with collective nouns

Many controllers producing variation in agreement targets are collectives referring to a group of animate entities, where both the number and gender of the referent conflict with the formal properties of the noun. In example (4) above, *band* is a type of *committee* noun (cf. Corbett 2006, p. 158). The verb *have* reflects the plural (collective) meaning of the noun *band*, as an entity typically made up of more than one member. In examples (5–6), the targets are consistent with both the semantic gender (i.e. natural sex) and semantic number of the controllers (both are groups of male soldiers, hence masculine and plural targets in both examples).

(5) *pars* *certare* *parati*
part.F.SG to-contend ready.M.PL
'a part [of men] ready to contend' (Verg. Aen. 5.108)

(6) *τὸ στρατόπεδον ἐν αἰτίᾳ ἔχοντες* *τὸν Ἄγι* *ἀνεχώρουν*
the army.N.SG at fault holding.M.PL Agis.ACC returned.3.PL
'the army [of men] returned, holding Agis at fault' (Thuc. 5.60)

Analyses of semantic agreement data can be more complex than Latin or Greek. In the Hittite example in (7),[1] the grammatical gender of *antuḫšatar* is neuter, but the target *kuinna*, is common gender. Hittite has a two-way distinction between

1. For example (7), the following conventions are used for the Hittite data and glosses, in accordance with Hoffner & Melchert's (2008, pp. xvii–xx, 14): […(…)…] indicates material (in parentheses) restored from a duplicate text. The typeface indicates orthography of the source text:

common gender[2] and neuter gender, roughly corresponding to the semantic properties of animate and inanimate, respectively. In (7), *antuḫšatar* refers to a human populace, i.e. an entity composed of animate members, and thus the target is common gender. The target's number, however, is singular, in spite of the fact that a populace represents a plurality. It is possible to interpret the singular target as syntactic number agreement according to the morphological form. The controller, after all, is also singular.

(7) *a(ntuḫšatar)]* *kuinna* *apel ANA* URU=*ŠU* EGIR-pa *[(peḫutet)]*
populace.N.SG each.C.SG his DAT city=his back lead
'…he led back the population [being composed of animate beings], each one to his own city' (KUB 19.11 iv 14–5, from Hoffner & Melchert 2008, p. 239)

This raises the question of whether gender agreement can operate independently of number agreement. On the one hand, agreement rules do not depend on each other in their formulation (gender is not assigned differently according to number values), but the operation of agreement rules is linked, where they apply as a set or not at all (cf. Corbett 2006, p. 257 on gender and number resolution). The more likely explanation for the singular target is that the number of the target *kuinna* **is** semantic: the target adjective means 'each', which can have an individuating effect. Because the resulting target feature is ambiguous between the two agreement patterns, this cannot be taken as evidence for either explanation.

1.2 Pancake sentences: Semantic agreement in the opposite direction

Not all instances of semantic agreement involve a straightforward matching of morphosyntactic features values with semantic gender and number. Many of the phenomena characterized as "semantic agreement" actually involve semantics in indirect ways. Enger (2004, 2013), for example, classifies Scandinavian "pancake sentences" as a type of semantic agreement when the predicate is a subjective evaluation of the controller. The controller (in (8), plural *pannnekaker* 'pancakes'; in (9–10) the singular *vodka* 'vodka' and *grammatikk* 'grammar') is interpreted as a collective unit, but one that results in neuter singular agreement on the predicate adjectives. The semantic contribution of the controllers is similar to that of *committee* nouns like *band*, but in the opposite direction: a plural entity is conceptualized

syllabically written Hittite is in italics, Akkadograms in uppercase italics, and Sumerograms in uppercase.

2. In the gloss below, we use small capital C as an abbreviation for common gender; although Hoffner & Melchert (2008, p. xix) use COM, this stands for "comitative" under Leipzig glossing rules.

as a singular collective unit without individuation of members; or, with respect to gender agreement, a singular mass noun is considered to be nonaggregate, a semantic property that is connected with neuter gender.[3]

(8) *Pannekaker er godt/*gode*
pancakes.PL be good.N.SG/*PL
'Pancakes is good.'

(9) *Vodka er sunt/*sunn*
vodka.M.SG is/are healthy.N.SG/*M.SG
'Vodka is healthy.'

(10) *Grammatikk er morsomt/*morsom*
grammar.M.SG is/are fun.N.SG/*M.SG
'Grammar is fun.'

Thus the feature values depend on the **conceptualization** of the controller rather than the actual count of the controller's referent, unlike examples (5–6) above.

If a collective noun can also be conceptualized as singular, then it is possible that the singular "syntactic agreement" of (3) might actually involve meaning: *band* could just as easily be conceptualized as a collective entity lacking individuation like *pannekaker*, from which singular agreement arises. However, because the resulting syntactic agreement target and semantic agreement target would be indistinguishable, Corbett (2006, p. 157) argues this example cannot be considered one of semantic agreement (i.e. such a label is only appropriate when there is an identifiable "choice", even if meaning could be relevant). Still, the problem remains: even though semantics does not **need** to intervene in the agreement process, it still can — it is only that it is unidentifiable when the syntactic features and semantic features match.

1.3 Hybrid nouns

Another construction under the rubric of "semantic agreement" is agreement with "boat nouns": nouns that are lexically assigned a non-neuter gender by idiosyncratic rule, but are semantically inanimate objects. In English, these include boats

3. Corbett (2006, p. 150) similarly considers these pancake sentences as an example of semantic agreement, but he attributes the singular feature of the adjective to a conceptualization of the controller as an event ('eating pancakes') or an appeal to default agreement (p. 224). However, while (8–9) are easily conceptualized as events (with the implied verbs 'eating' and 'drinking', respectively), there is no obvious event verb that works for example (10). Furthermore, considering the agreement as default in nature ignores the connection between neuter gender and lack of individuation, a relationship that is found elsewhere in the language, according to Enger.

and other modes of conveyance. The following example is adapted from Corbett 1991 (pp. 180–1).

(11) *The Canberra, which/*who has just docked, is a fine ship. It/She sails again on Friday.*

In (11), gender agreement on personal pronouns can be syntactic (as *she*, according to the rule that states ships are assigned feminine gender) or semantic (as *it*, according to the semantic inanimacy of the boat). This kind of semantic agreement is notably different from the examples above from Latin and Ancient Greek: the exceptional agreement pattern is **syntactic**, since pronominal gender is usually assigned according to meaning in English. Importantly, the syntactic gender is a formal property of the noun; there is no accompanying animacy — hence the relative pronoun as *which*, not *who*.

Boat nouns and nouns like *band* are classified, within semantic agreement, as types of HYBRID NOUNS. Hybrid nouns are nouns that have a lexical feature that can be overridden by semantic information. As a more complicated example, Dahl (2000, p. 108) and Corbett (2006, p. 210) discuss terms for professions in Russian, e.g. *vrač* 'doctor'. When the discourse-relevant doctor is a woman, there are two agreement possibilities: masculine, according to the lexical gender, and feminine, according to the real-world properties of the referent.

(12) *molodoj/molodaja vrač prišel/prišla*
young.M.SG/F.SG doctor came.M.SG/F.SG
The young (female) doctor came.

There is an implicational relationship between the types of targets and the agreement features that surface: if the attributive adjective is feminine according to semantic agreement, the verb must also be feminine; but it is possible for the verb to be feminine and the attributive adjective to be masculine, as in the variation in (12) above (cf. Pesetsky 2013). The patterns of semantic and syntactic agreement operate according to the Agreement Hierarchy of Corbett 1979. While the particulars of the distribution of these two agreement patterns are interesting and deserving of investigation (indeed, already discussed by Corbett in several works, e.g. 1979, 1991, 2006), we focus on the meaning-based properties of the controllers that affect agreement outcomes, rather than those of the targets. For (12), what is of interest is the potential conflict between the formal features of *vrač* as a masculine noun (related in large part to its inflectional class) and the real-world gender of its referent.

Returning to the "straightforward" collective noun examples of Latin and Ancient Greek in (5–6), these constructions also require knowledge of the semantic properties of the referent in the discourse context. Thus, semantic agreement

for Latin *pars* 'part' is not necessarily masculine; rather, masculine gender is assigned if the referent is male; it could just as easily be assigned neuter gender via semantics if the referent were inanimate. Although semantic agreement with feminine referents is also possible, the resulting gender agreement is once again indistinguishable from syntactic agreement, cf. (13). However, if we assume that number and gender agreement must be operate in the same way for each target (as wholly semantic or wholly syntactic), then *raptae* is simply a result of agreement of all features according to the meaning of *pars*.

(13) *magna pars … raptae*
great.F.SG part.F.SG seized.F.PL
'a great part [of the maidens] were seized' (Liv. i. 9)

The attributive adjective *magna* is feminine singular, likely the result of syntactic agreement for gender and number. As noted above, different targets within the same sentence can show different agreement patterns, cf. Corbett's (1979) Agreement Hierarchy. While the distribution of agreement type according to target is interesting, we instead focus on the unambiguous semantic agreement of *raptae* and the (context-dependent) properties of *pars* that licenses this form.

2. Problematizing the role of meaning in semantic agreement

It is necessary at this juncture to distinguish between different types of meaning and thus two types of meaning-based agreement: semantic agreement, by virtue of the name itself, implies that the meaning-based properties by which agreeing forms surface originate in the domain of semantics. However, as we have seen with examples (5–6) and hybrid nouns like Russian *vrač*, pragmatic information often supplies the morphosyntactic feature values of the target. By pragmatic information, we mean information related to the specific referent that is relevant to the discourse context. That is, the gender and number properties of the referent of, e.g., Latin *pars* in the context surrounding example (5) are responsible for the masculine plural values on the target, not the general semantic properties of the noun *pars* (e.g. that it is one piece of a whole). This is in contrast to certain hybrid nouns, e.g. *committee* nouns, where it **is** the general semantic properties of the noun itself that supply the features for the target: in example (4), the target *have* follows from the general semantic property of plurality that bands possess.

This is not to say that contextual information is not available or not accessed. A better way to conceptualize the split is that the plurality of a band is **predictable** (requiring less contextual information), since nearly every discourse-relevant committee encountered by speakers is composed of multiple members. However,

when speakers of a British dialect that permits semantic agreement are told that the band in question consists of one member, they cannot say *the band are* (Peter Trudgill and Rory Turnbull, personal communication). This restriction suggests that agreement might be more sensitive to context than previously thought, and the split between "semantic agreement" and "pragmatic agreement" might not be real in practice. However, we continue to make this distinction as the information is still different in nature: bands are **overwhelmingly** plural entities, but "parts" of groups are **not overwhelmingly** one gender or the other.

Returning to example (11), boat nouns behave in the same way as *committee* nouns. Boats are universally inanimate, and thus whenever "semantic agreement" occurs, the speaker need only know the general properties of the noun. But boat nouns and Russian *vrač* are both classified as hybrid nouns, when in fact they look to different parts of the grammar (semantics proper and pragmatic context, respectively) for agreement information. We continue to classify boat nouns as semantic agreement, but we term examples like *pars* and *vrač* instances of PRAGMATIC AGREEMENT.

Yet "pragmatic agreement" is not a monolithic concept itself. Even within pragmatic agreement, information can come from different kinds of contexts. We stated earlier that "pragmatic agreement" looks to the real-world features of a referent in the discourse context, i.e. as information from the **local** context. However, pragmatic information can come in the form of the broader **socio-cultural** context, which requires knowledge of larger social and cultural conventions. Yet the patterns produced by socio-cultural context, especially in the case study of Sanskrit elliptic duals in Section 3, do not necessarily result in target forms that are expected on the basis of the meaning of the controller.

2.1 Meaning in the local context

As discussed above, reference to the local context can be required with hybrid nouns (e.g. *vrač*). This is typical for cases of semantic gender agreement, since gender is both a lexical property of nouns and a real-world property of people.

However, as we have shown, local context is not necessary for understanding agreement patterns with boat nouns, where the lexical gender is idiosyncratic but the semantic (neuter) gender reflects the general property of inanimacy shared by all boats; this is also the case with *committee* nouns, where the plural property is a general pattern of these collective nouns. A similar example is German *Mädchen* 'girl', which is lexically neuter (a result of the diminutive ending *-chen*) but semantically feminine. Corbett (1991, p. 228) gives the following data:

(14) *Schau dir dieses Mädchen an wie gut sie/es Tennis spielt.*
look you this.N.SG girl at how well she.F.SG/N.SG tennis plays
'Do look at this girl, see how well she plays tennis.'

Here, pronominal agreement can be feminine according to the meaning of *Mädchen*. Unlike gender agreement for certain profession terms in Russian, pragmatics need not mediate the feature selection here: a girl is always feminine. However, while reference to the conversational context in agreement with boat nouns and German *Mädchen* is not required, the contextual information is still available.[4] Thus, for these types of hybrid nouns, semantic agreement and pragmatic agreement are actually indistinguishable (just as semantic agreement and syntactic agreement are indistinguishable in examples like *Mary has arrived*, where the verb's number is consistent with the morphological and semantic number of *Mary*). But context is **necessary** for pragmatic agreement, e.g. the assignment of gender for targets like *vrač*.

2.2 Meaning and socio-cultural convention

The larger socio-cultural conventions of the language, which are also part of the context but deal with information outside of the real-world properties of the discourse-relevant controllers, can also affect agreement patterns. For example, understanding agreement patterns with polite plurals requires knowledge of politeness conventions in the language. Comrie (1975, p. 408) gives the following example from Russian, where the discourse referent is a single individual:

(15) *Vy videli*
you.PL see.PL
You [sg] saw.

Plurality in the example above is not chosen according to the real-world properties of the individual (as an individual is always referentially singular), but rather plural is chosen according to a convention of politeness whereby persons of distinction are addressed with plural number. Essentially, the rule for plural agreement can be considered syntactic (a stipulated rule in the grammar), but the conventions that produce such a rule are according to the social and cultural context of the language in question, as not all languages require or even allow pluralization in this context.

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4. And in fact, local context agreement is visible in exceptional cases where the referent of *Mädchen* is male; e.g. in a situation where a male tennis player performs a weak serve and the ball hits the net, a spectator might comment pejoratively: "That **girl** (*Mädchen*) can't hit anything. **He** (*Er*) is terrible." (Judgments elicited from a native German speaker, via Alexander Buchner, personal communication)

A similar phenomenon occurs in English for the "nursely 'we'" construction discussed by Joseph (1979, pp. 520–1).

(16) *We seem a bit displeased with ourself/ourselves/*yourself, don't we?*

In this example, the pronoun refers only to the addressee; however, the form is not the expected second person singular *you* but the first person plural *we*. Person and number agreement are a product of the social context, with *we* used for reasons of empathy. The reflexive agreement as singular or plural represents a secondary pragmatic vs. syntactic agreement split: the person feature of the reflexive must agree with the pronominal subject, but the *-self* component can agree according to the (singular) number of the individual in the discourse context or the formal (plural) number of *we*.

In both of the examples above, interactional conventions (as part of socio-cultural context) determine the agreement rule. In the case study described in Section 3 below, religious context is necessary for understanding the reference and agreement patterns of so-called elliptic duals in Vedic Sanskrit.

3. Sanskrit elliptic duals

3.1 Reference

Vedic Sanskrit has a grammatical dual number, usually signifying two of a noun.

(17) *aśvā(u)*
horse.M.DU
'two horses'

There are a small number (roughly 20) of dual forms that are not translated as 'two Ns' but rather as standing in for a conventional pair in the language (data from Oliphant 1912, Kiparsky 2010).[5]

(18) *Mitrā*
Mitra.M.DU
'Mitra and Varuṇa'

In (18), a numerical reading is infelicitous. Mitra is a god in the Vedic pantheon. It is pragmatically inappropriate to refer to two of him. The meaning instead is Mitra and the individual with whom he is commonly associated, the god Varuṇa. The same is true of *dyāvā*, a masculine dual of the noun *div-* 'Heaven' that means 'Heaven and

5. The elliptic dual is primarily found in Vedic Sanskrit, but traces occur in other languages, e.g. Homeric Greek, where *Αἴαντε*, a dual form of Ajax, means 'Ajax and [his brother] Teucer'.

Earth' in this context, not the infelicitous 'the two Heavens'. These dual forms are called elliptic duals as though they stand in for forms with both members expressed. In fact, there exist Vedic compounds ("*dvandva* compounds") where both members **are** expressed, e.g. *Mitrāvaruṇā* and *dyāvāpṛthivī*, respectively; notably, the surface forms of each combining member in the compound are dual. The readings of elliptic duals are thus supported by religious context (knowing the pairings with religious significance) and *dvandva* compounds that exist elsewhere in the grammar.

There are two dual forms with both the numerical and the elliptic readings:

(19) *pitarā*
father.M.DU
'two fathers'/'parents'

(20) *mātarā*
mother.F.DU
'two mothers'/'parents'

Here, both readings are appropriate because the meaning 'two fathers/mothers' is not pragmatically inappropriate, although it is more common to use this form to refer to parents as a conventional pair. The elliptic dual forms also have corresponding dvandva compounds, *pitarāmātarā* and *mātarāpitarā*, respectively.

In all cases of elliptic duals, knowledge of socio-cultural conventions is required to understand the relationship between the referent and the realization of the dual form. This pragmatic information, at least in Vedic Sanskrit, is also key to understanding the agreement patterns with elliptic forms.

3.2 Agreement with elliptic duals

In (21–22), the genders of the target forms are unexpected, given the morphological forms of the controllers:

(21) *pūrvaje* *pitarā*
before-born.F.DU father.M.DU
'the parents born before us'

(22) *ubhe* *dyāvā*
both.F.DU Heaven.M.DU
'both Heaven and Earth'

Formally, *pitarā* and *dyāvā* are equivalent to the nominative masculine dual forms of the roots *pitṛ-* and *div-*, respectively. However, the target adjectives in both examples are unexpectedly **feminine** and dual. Kiparsky (2010, p. 322) describes this as if the targets are agreeing with the unexpressed members of the

pairs, *mātarā* and *pṛthivī*, which are both feminine and dual nouns. Furthermore, the elliptic dual *mātarā* 'parents' (formally feminine) requires a **masculine** dual target, as though agreeing with the second unexpressed masculine member *pitarā* (cf. Oliphant 1912). Kiparsky does not directly explain why these patterns occur. And unlike the other phenomena discussed above, this is not semantic agreement proper, which would produce a masculine dual target because the pair constitutes an animate group (cf. Hock's (2007) discussion of agreement with multiple controllers in Sanskrit; note that 'Heaven' and 'Earth' are personified in (22)).

In our view, meaning, and in particular, pragmatic socio-cultural meaning, is involved in the agreement outcome. We analyze these examples as requiring reference to the religious tradition. This information provides the link between the masculine dual-looking forms in (21–22) and morphological compounds that exist elsewhere in the grammar. As mentioned earlier, there exist in Vedic Sanskrit the full compounds *mātarāpitarā* 'parents' and *dyāvāpṛthivī* 'Heaven and Earth', where both members are expressed and which are feminine and dual (the gender and number of compounds is according to the features of the rightmost member).

There are various ways to describe the connection between elliptic duals and the full compounds, e.g. zero allomorphy (Johnson & Joseph 2014) or via a separate lexical entry for each elliptic form declining only in the dual and specified for the gender of the second member. In either case, reference must be made to the religious tradition surrounding these conventional pairs so as to explain the link between a form that produces an unexpected target outcome and the compound expressing the religious pair that leads to the agreement patterns.

This case study of Vedic Sanskrit shows how the larger pragmatic context can indirectly affect the surface forms of agreement targets. The unexpected gender of the targets in (21–22) cannot be predicted from the form of the controller, yet it is not semantic agreement proper. Rather, the cultural conventions and religious tradition surrounding the text provide the link between the elliptic form and the fuller compound on which the agreement is based.

4. Parallels to our syntactic versus Pragmatic Control

We are certainly not the first linguists to wrestle with distinctions between agreement that is pragmatically controlled and agreement that is syntactically controlled. More generally, the distinction between pure syntax as a controlling mechanism and the admittedly fuzzier notion of pragmatic context as a controller occurs in accounts of other linguistic phenomena as well. In order to contextualize our interest in this distinction, we offer brief discussions of two relevant previous accounts, one specifically on agreement and the other on anaphora.

Zwicky 1987, for instance, in dealing with what he calls "anaphor agreement" and "local agreement", recognizes the need for two types of reference. Kathol (1999: 232–3) offers a concise summary of Zwicky's findings in discussing the desirability of making a general statement about what features are available for what kinds of agreement relationships: "A similar point is made by Zwicky (1987: 8–9), who points out that one of the differences between … 'anaphor agreement' vs. 'local agreement' may be that the former can make reference to an essentially open-ended class of mostly semantically based properties, whereas the set of categories known to participate in local agreement is comparatively limited." Since local agreement typically involves matters of syntax (word order, governance relations, etc.), Zwicky in essence is referring to our distinction of syntactic versus pragmatic ("mostly semantically based") control of agreement.

Moving a bit farther afield, but still focusing on pragmatic versus syntactic control of linguistic phenomena, we note a parallel from the role of pragmatics in the licensing of certain anaphoric expressions. Hankamer & Sag 1976 (hereafter, HS) discuss anaphora that they characterize as "deep" versus "surface". Contrasting cases as in (23) with those in (24), they observe (p. 391) that "certain anaphoric expressions, though generally interpreted by reference to some linguistic antecedent, do not *require* such an antecedent, but can be controlled by some aspect of the nonlinguistic (we will say 'pragmatic') environment."

(23) My son's a doctor, and *he* says your hair'll fall out if you eat that.
Sue introduced me to *her* mother.
Anyone who eats that will lose *his* hair.
If the unicorn were real, *it* would certainly be an herbivore.

(24) *He*'s saying your hair will fall out.
Her hands are trembling.
I hope *it*'s an herbivore.

For HS, sentences such as (23) "illustrate syntactically controlled anaphora with definite pronouns" while sentences such as (24) "illustrate instances of … *pragmatically controlled* (or *deictic*) anaphora" (p. 391). Pragmatically controlled anaphora "is well-formed in a context which, without linguistic antecedent for the pronoun, nevertheless contains enough pragmatic information to allow (more or less) unambiguous determination of the intended referent." They document other cases of such a distinction, showing that there are "anaphoric processes that *must* be syntactically controlled" (p. 392), e.g. cases such as (25a), while others allow for pragmatic control, e.g. (25b); # indicates infelicity in the context — note that (25a) is fine with an overt linguistic antecedent, as shown by (26):

(25) [Hankamer attempts to stuff a 9-inch ball through a 6-inch hoop]
  a. Sag: #It's not clear that you'll be able to.
  b. Sag: √It's not clear that you'll be able to do it.

(26) Hankamer: I'm going to stuff this ball through this hoop.
  Sag: It's not clear that you'll be able to.

For HS, the distinction that these, and other anaphora processes, show could be modeled — bearing in mind that the paper was written nearly 40 years ago when different assumptions about syntactic theory were operative — as a distinction between "*deep anaphora*, in which the anaphor is not derived transformationally but is present in underlying representations; and *surface anaphora*, in which the anaphor is derived transformationally by deletion … [moreover] pragmatically controllable anaphors are just the deep anaphors" (p. 421). They further note that "all anaphoric processes accept syntactic control" (*ibid.*), as (28) suggests.

While the precise form of the modeling of this distinction would be very different today, we submit that the basic insight of HS is still valid — the facts they reported on have not changed, after all — and that it is relevant to the agreement issues we are discussing. It can be noted first of all that some of the anaphoric processes that HS were concerned with involve agreement; in particular the form a pronoun takes in a language like English is a matter of agreement, even if the establishment of an anaphoric relationship with an antecedent, a partly syntactic phenomenon, is part of what allows for the expression of agreement. Second, what we have been calling "syntactic agreement" would be those agreement processes that depend entirely on syntactic features of the antecedent, parallel to HS's surface anaphora. Third, HS's recognition that pragmatic factors can play a determining role in certain kinds of anaphora — their "deep anaphora" — is exactly parallel to our invocation of the larger pragmatic context needed to account for a fuller range of nonsyntactically determined agreement. Whatever formalization might be given in current terms to HS's pragmatically based anaphora could thus be extended to the cases of pragmatic agreement that we have identified here.

Conclusion

We have argued that phenomena characterized as "semantic agreement" actually make reference to different types of meaning in different ways. Thus, the notion of "semantic agreement" is problematic. First, the split between semantics proper and pragmatic meaning is important: we can distinguish between *committee* nouns and other hybrid nouns, for example, where information comes from two different sources (general semantic properties versus properties specific to the

discourse-relevant referent). Second, pragmatic meaning encompasses information from both the local context (e.g. real-world information of natural sex) and socio-cultural context (e.g. politeness conventions). These facts warrant a closer inspection of semantic agreement.

Because our goal is to merely problematize "semantic agreement," we only point to a possible solution for formalizing the split between reference to semantic information and contextual information via a discussion of syntactic versus pragmatic control. However, we believe that insights concerning this distinction provide an important parallel to the distinctions we have laid out in this paper in our deconstruction of semantic agreement with respect to the interaction of morphology, syntax, semantics, and pragmatics.

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Summary

Morphology and syntax … and semantics … and pragmatics: Deconstructing "semantic agreement"

Agreement minimally involves interaction between morphology and syntax, as a target's features vary according to the morphological form of a controller in a given syntactic context. However, semantics can also play a role, and the term "semantic agreement" has been used to describe various constructions where morphosyntactic feature values of the agreement target do not match the formal features of the controller, reflecting instead meaning-based properties of the noun. In this paper, we deconstruct instances of "semantic agreement," as there is good evidence to believe that more than just the semantics is involved in the agreement process. In some cases, e.g. Russian hybrid nouns like *vrač* 'doctor', the local context provides the agreement features, giving a type of "pragmatic agreement". In other cases, socio-cultural information plays a role, showing a broader type of pragmatic agreement. In light of these observations, we offer a deconstruction of semantic agreement phenomena in order to show the complex ways morphology interacts with syntax, semantics, and pragmatics. Finally, we argue that the distinction between syntactic, semantic, and pragmatic agreement is paralleled by (and benefits from) earlier discussions of syntactic versus pragmatic control.

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