DEFACING AGREEMENT

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Abstract

This paper contributes to the debate over the number of features needed in order to offer an adequate analysis of agreement. Traditional grammar and some recent proposals, notably by Alsina and Arsenijević (2012a, b, c), operate with two types – what is conventionally referred to as syntactic versus semantic agreement. Adopting Wechsler and Zlatić's (2000: 800, 2003, 2012) model, which envisages a division into three types of agreement (two syntactic ones, in addition to a separate, purely semantic feature), this paper argues that we need such a tripartition, because without it we cannot account for the facts in languages like Serbian/Croatian, English and Bulgarian.

1 Introduction[1]

Traditional grammar has for a long time distinguished between so called syntactic (formal or grammatical) agreement/concord, (1), and semantic (or notional) agreement/concord, (2).[2]

(1) Even stage-shy, anti-industry **Nirvana is** on board.   (COCA).
(2) **Nirvana are** believed to be working on cover versions of several seminal punk tracks.   (BNC)

      Some formal approaches, among them constraint-based ones, have called for at least three types of agreement (Wechsler and Zlatić 2000: 800, 2003, 2012), as have researches with a more typological background (Corbett 1983a: 81, 1986: 1015). Recently there has been renewed interest in agreement features in the setting of constraint-based theories like LFG and HPSG, with some doubts expressed as to how many sets of features are really needed to account for agreement phenomena. Alsina and Arsenijević (2012a,

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[2]Traditional sources often use the terms *concord* and *agreement* interchangeably. In this paper, following the established LFG and HPSG practice, *agreement* is used as a cover term, whereas *concord* is reserved to designate a type of agreement feature.

b, c), for instance, argue that it is extravagant to work with Wechsler and Zlatić's (2000, 2003, 2012) proposal involving three sets, namely concord, index and semantics. In Wechsler and Zlatić's model, concord and index both belong to syntax, the former more closely related to morphological declension and the latter more closely reflecting semantics, with semantic features forming a separate category. The motivation behind this apparent proliferation comes from Serbian/Croatian nouns like *deca* 'children' and *braća* 'brothers', which are said to agree with feminine singular attributive targets (concord agreement), neuter plural verbs and pronouns (index agreement) and, potentially, masculine plural pronouns (semantic/pragmatic agreement), as in example (3), where we illustrate concord agreement within the subject NP and index agreement in the predicate.

(3) Ta   dobr-a   deca   su   doš-l-a.
     that.F.SG   good-F.SG   children   AUX.3PL   come-PPRT-N.PL[3]
     'Those good children came.'   (SC; Wechsler and Zlatić 2003: 51)

Alsina and Arsenijević (2012a, b) believe that, rather than having three faces, agreement has only two – traditionally referred to as syntactic versus semantic agreement (or grammatical versus notional agreement/concord). The first accusation they level at Wechsler and Zlatić's trichotomy is that it gives rise to rampant redundancy and complexity, predicting that there would be numerous classes of nouns based on all the possible combinations of features, though in reality, only a handful of those classes have any members in them. In addition, it is deemed suspicious that most nouns, even in Serbian/Croatian, should have the same values for all their feature sets.

This paper aims to justify the need for at least three agreement feature sets. In the first place, redundancy is often misguided as criticism, especially in the light of agreement, which could be viewed as a superfluous linguistic luxury itself. Secondly, many of the putative classes involving nouns with no members in them can be independently ruled out by Corbett's (1983 and elsewhere) agreement hierarchies, which, roughly speaking, anticipate increasingly semantics-based agreement the further away from the controller the target is located. The system can be further streamlined by postulating default principles of feature inheritance. In addition, as Wechsler and Zlatić (2012: 384) point out, Alsina and Arsenijević's alternative proposal creates as much complexity as the original one which it is meant to replace.

Thirdly, this paper sets out to demonstrate that Alsina and Arsenijević's treatment rests on some rather problematic assumptions regarding the Serbian/Croatian data, which go against Corbett's (1983 and elsewhere) otherwise typologically and empirically sound generalisations of how agreement works. Therefore Alsina and Arsenijević do not provide a

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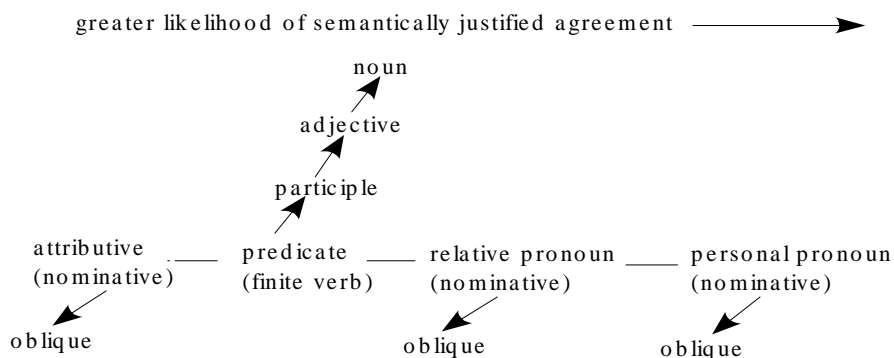[3]This analysis is not uncontroversial. It will be revisited below.

viable solution that can be squared with the evidence. The second half of the paper outlines attempts to demonstrate that the three sets of features are actually necessary even for morphologically and/or declensionally impoverished languages such as present-day English and Bulgarian.

2 Redundancy

According to Alsina and Arsenijević (2012a: 371), postulating three sets of features would lead to a wasteful proliferation of noun classes, most of them with no members at all. Given that a language such as Serbian/Croatian has two numbers (singular vs. plural) and three genders (masculine, feminine and neuter), leaving aside the category of case, a simple neuter singular noun would have to have neuter singular concord, neuter singular index and neuter (i.e. inanimate) singular semantics. Compared to saying that this is just a neuter singular noun, this three-tier description may look clumsy and excessive, but the apparent clumsiness is easily overcome with feature inheritance, envisaged by Wechsler and Zlatić (2000: 800, 2003: 49) themselves. In other words, the default scenario is that all the features of a noun are the same, with no mismatches. Such an intuitive idea makes light the possible burden on the memory of storing the information separately for each feature type and domain.

　　　Now, there could be mismatches, as we have seen above, which would have to put more of a strain on processing capacities, since different values are needed for the different feature types. There are declensionally neuter nouns which have masculine or feminine semantics, as they refer to human beings, e.g. German *Mädchen* and Bulgarian *момиче/momiče* 'girl', both grammatically neuter but with female referents. However, we would hardly expect to find a noun that refers to a man or a woman and possesses masculine or feminine concord and neuter index. This would be one of the empty categories Alsina and Arsenijević feel uneasy about. Since Wechsler and Zlatić's feature sets are to a large extent (not always, though) tied to agreement domains, it is obvious that semantic agreement will have the closest link to semantic justification, followed by index and then concord, for

(4) *Corbett's (1983: 88) Combined Target Hierarchies:*

greater likelihood of semantically justified agreement ⟶

noun
↑
adjective
↑
participle
↑
attributive _____ predicate _____ relative pronoun _____ personal pronoun
(nominative)　　(finite verb)　　(nominative)　　　　(nominative)
↓　　　　　　　　　　　　↓　　　　　　　　　　　　↓
oblique　　　　　　　　oblique　　　　　　　　oblique

which the link to meaning is loosest, as per their definition. This is also anticipated by Corbett's Combined Agreement Hierarchies, reproduced in (4), stating that the likelihood of semantic justification increases monotonically, without any corresponding decrease, the further to the right one moves.[4] A lot of potential empty classes are thereby ruled out. Concrete figures or statistics are hardly needed for anyone to be able to imagine how this would bring down the number of potential classes.

Even if this were not so, however, and all the redundancy and proliferation remained, neither would be a fair criticism. If anything, language is a system which fosters extreme redundancy, agreement being a case in point, as is the repetition of time information indicated with an adverb like *yesterday*, as well as via the tense of the verb for instance. Similarly, there are so many combinations of phonemes or morphemes in any given language which are allowed, but are simply not made use of. This rarely keeps linguists up at night.

3 The analysis of the Serbian/Croatian data

More troublesome are some of the assumptions on which the analysis of Alsina and Arsenijević (2012a, b) rests. Relevant Serbian/Croatian evidence is presented in (5) below. The central point to note about the marking in (5) is that in Serbian/Croatian, as in other Indo-European languages, the suffix *-a* is ambiguous between feminine singular and neuter plural.

(5) Sreo   sam   braću$_i$. On-a$_i$ su   došl-a.
    met.M.SG AUX.1SG brothers they-F.SG/N.PL AUX.3PL came-F.SG/N.PL
    'I met the brothers. They came.'

(SC; Alsina and Arsenijević 2012a: 371)

On the analysis involving only two agreement feature sets, *braća* is thought to be syntactically feminine singular and semantically masculine plural (Alsina and Arsenijević 2012a: 370, 373), so the morphologically ambiguous pronoun *ona* in (5), as well as the participle of the lexical verb, would have to be feminine singular, as opposed to neuter plural, the latter being Wechsler and Zlatić's (2003: 56ff.) and Corbett's (1983: 78ff.) interpretation. Crucially, the pronoun *ona* and the participle in (5) cannot be feminine singular in the environment of a plural finite verb, in line with Corbett's (1983: 88) robust Predicate Hierarchy in (4) above (see Wechsler and Zlatić 2012: 383). Following Corbett's empirically tested generalisations, both targets should be seen as neuter plural here, and nothing else, unless one wants to make the unjustified claim that Serbian/Croatian has pronouns and participles with mismatched F.SG and N.PL features, which would be nothing more than an *ad hoc* stipulation (see Alsina and Arsenijević 2012a:

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[4]Cf. Alsina and Arsenijević (2012c) for a discussion of their model in comparison with Corbett's predictions.

373, fn. 9, 375, fn. 14, who seem to be making this implicit assumption involving mismatched pronouns throughout their paper). Corbett's Predicate Hierarchy obtains for any given clause and predicts that you cannot start with more semantically justified agreement, i.e. the plural finite verb, and then switch to more grammatical agreement on the participle (cf. Dalrymple and Hristov 2010: 193-195, Hristov 2012: chap. 2).[5]

In effect, the only viable proposal which can be reconciled with the Serbian/Croatian data involves three agreement features for nouns like *deca* or *braća*:

- feminine singular concord, as suggested by unambiguously feminine singular targets in the attributive domain or in relative clauses – (6) (cf. Corbett 1983, Dalrymple and Hristov 2010, Hristov 2012: chap. 2, and the references cited there);
- neuter plural index, following the arguments adduced above;
- masculine plural semantics, as evidenced by the availability of unambiguously masculine plural anaphoric pronouns (see Wechsler and Zlatić 2003: 51).

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[5]The following example seems to contravene Corbett's principles, as it has an unambiguously plural finite verb and an unambiguously singular predicative adjective:
(i)   Pričamo   o   deci.
        talk.1PL   about   children

Ona   se   danas   smatraju   gladnom/*gladnim.
they.N.PL/F.SG   REFL   today   consider.PL   hungry.INST.F.SG/*INST.PL
'We're talking about children. They are considered hungry today.'
                                (SC; Alsina and Arsenijević 2012a: 375)
Wechsler and Zlatić (2012: 383) admit that they have no convincing solution, but Alsina and Arsenijević's theory does not fare much better, as the assumptions which they make in order to solve this particular problem unleash a host of other problems that run counter to the very foundations of Serbian/Croatian grammar, including the *ad hoc* postulation of mismatched pronouns (see Alsina and Arsenijević 2012a: 383, Wechsler and Zlatić 2012). This remains a puzzle.

The present author feels it must have to do with the fact that the sentence in (i) is a passive-reflexive structure related to an active of the type '[Someone] considers these children hungry [children]', where 'hungry' is in attributive position and is expected to agree in concord. There might be a trace of this state of affairs in the passive too, as 'children' is recoverable in 'They are considered hungry children today' – cf. '*They came/have come the children'.

As pointed out by an anonymous reviewer, Wechsler and Zlatić (2003) propose that secondary predicate adjectives resemble attributive adjectives in showing concord agreement, which may in turn be related to the typical (though not obligatory) adjacency between the noun and the adjective phrase, whether attributive or predicative. On the other hand, primary predicates resemble finite verbs and auxiliaries in showing index agreement, perhaps because they can be more distant from the agreement trigger.

(6)   deca   koj-u   vidite
       children   who(m)-ACC.F.SG   you.see
       'the children whom you can see'   (SC; Corbett 1983: 79)

With all its subtleties, the Serbian/Croatian material vindicates the tripartite division of agreement, but such a case can be made even on the basis of a language as morphologically impoverished and as 'unexotic' as English (see Hristov 2012: chap. 5), to which we turn in the next sections. Bulgarian, again much more declensionally modest than its western relative Serbian/Croatian, also seems to rely on three types of agreement.

4 Concord, index and semantic agreement in English

4.1 Agreement with collective nouns

The case for three types of agreement in English is built on three premises. Firstly, **NP-internal English targets** seem to exhibit concord (i.e. more morphologically sensitive) agreement (cf. Kim 2004), as in *this/*these family*. Putative counter-examples like *another few weeks/this 12 pounds*, etc. are only admitted in the presence of a word such as *few* or *twelve* which has no overt plural morphology. In *a little milk*, the indefinite article must surely combine with *little*, not with *milk*, which does not admit such determiners (cf. Quirk et al. 1985: 262-263).[6] Concord agreement in the NP-internal domain is also supported by coordination data: *this boy and girl* is well-formed, but **these boy and girl* is not because neither noun is morphologically plural (see King and Dalrymple 2004). In the context of coordination in English, concord is a distributive feature – the coordination itself has no concord of its own and a target such as *this* checks the concord of each individual member, which has to be singular in order to satisfy the requirements of the demonstrative pronoun (King and Dalrymple 2004).[7]

By contrast, index is said to be a resolving feature – the coordination itself projects an index which can be computed on the basis of the index features of each conjunct. **Subject-verb agreement** in English appeals to index (Wechsler and Zlatić 2003, King and Dalrymple 2004, Kim and Sells 2008: 112-117; cf. Pollard and Sag 1988: 245, 1994: 70ff.). Otherwise, it would be hard to explain why a singular verb is incompatible with a subject like *this boy and girl* (again, as per King and Dalrymple 2004). Potential counter-examples are due to a plausible singular interpretation, i.e. index:

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[6]For a discussion of phrases like *a pleasant three days in Philadelphia*, see Keenan (2013), who offers a summary of salient properties and a derivational account which appeals to underlying structure.

[7]Actually, only the conjunct closest to the demonstrative target might have to be singular, as suggested by G. Corbett (p.c.). In this case, concord would have to participate in closest-conjunct agreement (see Dalrymple and Hristov 2010).

none of them is/are, *my friend and colleague is/are*, *Eggs is my favourite breakfast*, *12 pounds is a lot to pay for that*, etc. (see Hristov 2012: chap. 5).

In view of these observations, **collective nouns** such as *government, family* or *committee* must have singular concord in both British English and North American English, since they only admit singular NP-internal dependents (**these government/family*). Subject-verb agreement suggests that British speakers are happy either with a singular or with a plural index, whereas Americans usually admit only singular verbs. It is well known that speakers of different varieties of English express different preferences about number agreement with collective nouns (cf. Johansson 1979: 203-205, Quirk et al. 1985: 316, 758-759, Bauer 1988, and Corbett 2000: 189 for discussion of various regional Englishes and/or empirical data).[8] On the other hand, both varieties readily accept singular, as well as plural, personal pronouns. The most economical account that takes into consideration the feature values in the different domains and varieties would have to assign the value combinations to at least three separate features, as summarised in the table below (see Hristov 2012: chap. 5).

Table 1: *Agreement with collective nouns in English*

	NP-internal agreement: CONCORD	Subject-verb agreement: INDEX	Pronominal agreement: SEMANTICS
BrE	**SG**	*SG/PL*	SG/PL
NAmE	**SG**	*SG*	SG/PL

The alternative proposal, whereby we recognise only two types of agreement – syntactic (SG) vs. semantic (PL), would leave it as a total mystery why no speakers seem to tolerate either syntactic (SG) or semantic (PL) verb agreement when the subject is a conjoined phrase of the type of *this boy and girl*. Likewise, grammatical agreement is exclusively obeyed in the environment of *more than*, in spite of potential conflicts with meaning (Quirk et al. 1985: 758).

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[8] It should be acknowledged that both singular and plural subject-verb agreement occur in both BrE and NAmE, so the distinction is one of frequency, as opposed to one of kind (see Quirk et al. 1985: 316; Huddleston and Pullum et al. 2002: 502). A search for the string *the committee have*, for instance, returns 10 relevant hits from the British National Corpus (100 million words), and only 1 relevant hit from the Corpus of Contemporary American English (450 million words). For *the committee are*, we get 6 hits in the BNC and 2 in COCA. For *his family are*, there are 12 hits in each. Another issue is whether it is advisable to abstract away from the grammar*s* of two *separate* varieties (Mitko Sabev, p.c.). Even if the present paper's idealisation is not upheld, and collective nouns only merit a split into two types of agreement, it will be demonstrated below that set-taking predicates such as *increase in numbers* require a distinct third type.

(7)   a. More than a thousand inhabitants have signed the petition.
       b. More than one member has protested against the proposal.
                                                        (Quirk et al. 1985: 758)

So it is preferable to assume that a collective noun must have mismatched index, as opposed to allowing index or concord agreement with the verb. In conclusion, both case studies so far appear to confirm the 'three-faced' nature of agreement. There are some more frills to the situation in English, which need to be addressed before further support is adduced from Bulgarian.

4.2 Some apparent problems

In spite of what was stated above, there might be evidence that index can exceptionally be active NP-internally, as in (8), (9) and (10) (Hristov 2012: chap. 5).

(8)   That/*those french fries is/*are getting impatient. (Eggert 2002: 216)
(9)   At Tsavo we filmed several rhino as they came down to the river.
                                                            (Allan 1986: 131)
(10)   These cucumber are doing well; it's a good year for them.
                                                            (Allan 1986: 132)

However, *french fries* in (8) is better treated as a zero-derived noun with singular concord and index. There exist other words where *-s* is not an exponent of the plural like *linguistic*s*, physic*s*, (*a*) mean*s* (of transport)*, *a* lazybone*s* etc. (cf. Molhova 1992: 20, 98-99); (9) and (10) can likewise be regarded as zero-inflected plurals, because such agreement is not allowed with any noun (see Allan 1986: 131ff.).[9]
    Another potential exception might be the (pre-)determiner *all*, which according to Pollard and Sag (1994: 83, 87-88) co-varies in index with the head noun, on the basis of the following judgements:

(11)   a. all men/all faculty/*all man
       b. Every faculty is/*are homogenous.
       c. Every faculty meets/*meet on a monthly basis.
       d. All faculty *meets/meet on a monthly basis.
                                                    (Pollard and Sag 1994: 83-84)

Controllers such as *staff, clergy, laity, peasantry, nobility, aristocracy* would pattern with *faculty* in (11) a. and d. above, but *government, committee* and *family* do not behave in the same way (Pollard and Sag 1994: 83; cf. Huddleston and Pullum et al. 2002: 375, Kim 2004: 1120). Very perceptively, Kim (2004: 1120) speculates that the items compatible with *all*

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[9]It should be noted that this use of *french fries* is more reminiscent of a hapax legomenon than of a properly lexicalised item (John Payne, p.c.).

might have acquired both singular and plural concord (= his AGR), but the plural concord has to be made unavailable for other targets: *Those faculty are…* (cf. Hristov 2012: chap. 5).

On closer inspection, it will likewise be established that both the singular concord of *twenty* and the plural concord of *pounds* are available for other attributive elements to agree with – cf. *this/these twenty pounds* (Hristov 2012: chap. 5). It remains for future research to probe how this interacts with animacy (cf. *those/*that twenty students*) and the nature of the target (cf. *another twenty students*). In the environment of inanimate controllers, both the contribution of the numeral and that of the head noun are visible to targets, whereas animate nouns like *students* probably suppress the values of the numeral, making their own concord and index the only features a target can gain access to. This, however, does not affect determiners like *another* (Hristov 2012: chap. 5).

This section has demonstrated that, despite some apparent exceptions, for which there are plausible alternative stories, English can safely be taken to operate with concord within the noun phrase.

4.3 Set-taking predicates

More support for our model comes from the well-formedness contrasts in (12) and (13) (Hristov 2012: chap. 5).

(12) The hedgehog is/*are increasing in numbers. (Perlmutter 1972: 245)
(13) *The hedgehog that I saw in the woods yesterday is increasing in
         numbers.   (Perlmutter 1972: 245)

The obvious solution that immediately springs to mind would be that *hedgehog* does not supply a plural index, so the plural verb is ruled out in (12). Nevertheless, as Perlmutter notes, predicates such as *increase in numbers* and *become extinct* take sets, not individuals, as illustrated in (13). The correct explanation therefore seems to be that what we observe in (12) is a mismatch between index and semantics (Hristov 2012: chap. 5). When *the hedgehog* is shorthand for the species, as in (12), it keeps its singular concord and index, although its semantics is now plural. As verbs in English operate with index, only a singular finite element will pass muster in (12). The meaning of the rest of the predicate, *increasing in numbers*, additionally forces a plural interpretation (but not index!) on the subject, which it indeed has in its species sense. Such a plural reading cannot be reconciled with the referent of (13), which is why this example crashes. It crashes for semantic and pragmatic reasons, though, and not because of any morpho-syntactic considerations. What is more, plurality alone does not suffice – the semantic restriction very precisely targets a species, since we cannot talk of a government or a family increasing in numbers. (#?*The government/family is increasing in numbers.*).

Even if we discarded the cross-dialectal considerations concerning collective nouns like *family* and we conceded that they only merited a two-way split into concord (NP-internal) and index (subject-verb *and* pronominal) agreement, 'species' nouns like *hedgehog* would still require a split of another kind – between index (subject-verb) and semantic (on the predicate as a whole) agreement.

4.4 Animacy effects[10]

As pointed out repeatedly in the preceding text, we keep encountering an interwoven mesh of morphology, syntax and semantics, where semantics is one of the components, but not the only one. It has been argued that animacy is a major factor favouring plural agreement with collective nouns (cf. Dahl and Fraurud 1996: 56 and the references cited there). Such influence is felt in examples like (14) below.

(14)   a. The Fleet is in harbour. (i.e. a number of ships)
         b. The fleet are in town. (i.e. a number of sailors) (Nixon 1972: 121)

However, those are not just clear-cut cases of picking up whatever the semantics of the controller is. Certainly, it is not merely a matter of semantic versus grammatical; instead, the empirical facts call for a model that relies on dedicated properties, like concord and index, which have to be attached to particular lexical items. In spite of being closer to meaning, index does not fully coincide with semantics because it ultimately belongs to syntax (cf. Nixon 1972). As Corbett (2000: 188) notes, 'if we adopted a notional definition, just requiring the (singular) noun to denote a collection of individuals, then nouns like *forest* or *wood* (group of trees) would be included. Here, however, there is no possibility of agreement options'. Sets of human beings (e.g. *committee*) can take plural agreement even when they lack the inflectional exponence, whereas plural "notional" agreement is disallowed with inanimates (**the forest are...*);[11] finally, the plural is permissible, though unusual in English, with non-human animates *(?the herd are restive)*. See Pollard and Sag 1994: 70-71 and Allan 1986: 124-136 for discussion of "corporate" nouns, as well as Juul 1975: 85-114 for more examples; Levin 2001: 11-14 reflects on the conceptualisation of human, animate and inanimate collectives; formal semantic approaches are presented

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[10]The rest of this section is based on Hristov (2012: chap. 5).
[11]It should be acknowledged that *forest* is not semantically plural for any agreement purposes, despite its reference:
(i) The forest caught fire. *They started burning. (Mary Dalrymple, p.c.)
There may also be exceptions to the animacy restrictions, as in (ii) (cf. Allan 1986: 127).
(ii) The snow-fed vegetation are subjected to the most intense heat of the summer.
(Hoeksema 1983: 73)

in Barker 1992 and the titles cited there.

4.5 Evidence from the behaviour of verbal predicates and relative pronouns

As suggested above, the singular and plural options on verbal targets that go together with collective nouns should not be perceived as grammatical and semantic agreement respectively; it seems preferable to treat both of them as semantically-driven grammaticalised agreement (i.e. index agreement), based on different interpretations of the noun (either as a unit or as a plurality of individuals) (cf. Levin 2001: 27-28). There are studies reporting that the singular is given almost exclusive priority with verbs like *consist of, contain,* or *be composed of*. If the relevant noun denotes a single organisation (e.g. *committee*), building (e.g. *university*) or another similar entity, i.e. if it has a singular index, which is the interpretation presupposed by such targets, then the singular form of the predicate takes over and the plural becomes unacceptable (Quirk et al. 1985: 758, Allan 1986: 127ff., Pollard and Sag 1994: 71, Levin 2001: 29, Huddleston and Pullum et al. 2002: 502). This is confirmed by the following material:

(15)   a. A commission of eminent people from other countries, such as Canada and Norway, is likely to be set up to oversee that process.
(Levin 2001: 96)
         b. *A new committee have been constituted.
(Pollard and Sag 1994: 71)

        Verbs like *set up* or *constitute* are only compatible with collectives that are viewed holistically and therefore a plural predicate would be inappropriate in this context, as in (15)b. In (16), the singular verb can only refer to the number of the people who make up the audience, while the plural verb can only hint at the size of the attendees themselves (Quirk et al. 1985: 758, Levin 2001: 149). In (17) and analogous cases, a singular verb is deemed unacceptable by some speakers for semantic reasons too (Levin 2001: 164, Allan 1986: 127ff.), although Google gives a lot of hits for the singular.

(16) The audience was/were enormous.   (Levin 2001: 149)
(17) The McKnight family were at each other's throats.   (Levin 2001: 164)
(18) The family has been notified but they haven't responded.
(Levin 2001: 33)

        Judging by examples like (18), which exhibit shifts in agreement, it might not be advisable to claim that the variation depends on different grammaticalised semantic conceptualisations (cf. Levin 2001: 33). And yet, this is not necessarily so, because one could first regard a group as a body or unit, and then as a multitude of various individuals, when one is better

acquainted with it.[12] Crucially, those are ordinary instances of switching the point of view (cf. Levin 2001: 33). In addition, the rival analysis, whereby these are not seen as shifts in semantic conceptualisation, but as alternations between grammatical and semantic agreement, does not fare any better in explaining the phenomena.

Another reason to advocate simultaneously coexisting singular and plural indices for nouns like *committee*, coupled with subject-verb agreement invariably with the index feature, is that '*which* is generally found where singular agreement would normally occur and *who* where plural agreement would be expected' (Levin 2001: 55; cf. Quirk and Greenbaum 1973: 379, Quirk et al. 1985: 759, Corbett 2000: 190, as well as Johansson 1979: 204-205 and Bauer 1988 for experimental evidence). The choice of relativiser parallels the way the antecedent is thought of – either as an entity/organisation (corresponding to *which*), or as a plurality of individuals (corresponding to *who*). This argument is substantiated with ample statistical evidence gleaned from corpora of British, American and Australian English (Levin 2001: 55-60). More support can be sought in the usage of personal pronouns.

Most importantly, this overview of English collectives and how they fit in the larger picture has furnished us with ample proof of the multi-faceted nature of English agreement, rudimentary though its inflectional inventory may be. Similar inferences emerge from investigating Bulgarian.

5 Concord, index and semantic agreement in Bulgarian[13]

One might ask if the concord-index distinction exists in Bulgarian at all, and if one cannot do without it. We believe that the fourfold elaboration into declension, concord, index and semantics from Wechsler and Zlatić's monograph needs to be upheld, so that we can account for cases like *момиче/momiče* 'girl', which is grammatically neuter but denotes females, just like German *Mädchen*. Hence, the clause-internal domain will normally be dominated by the neuter, but further away in the discourse a switch can be made to the feminine (e.g. on a pronoun in the next sentence). The split here is probably not between index and concord, however, but between index and

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[12]The author does not endorse the opinion that we should always get the singular first and then the plural (e.g. on different verbs), never the other way around (Hristov 2012: chap. 4, section 5), 'but one would not normally switch from a plural verb to a singular pronoun in close proximity' (Huddleston and Pullum et al. 2002: 495):
(i) *The committee_i haven't yet made up its_i mind.
                                        (Huddleston and Pullum et al. 2002: 495)
A mechanism of enforcing identity between the verb and the rest of the predicate might come in handy here, but not with *The committee hasn't yet made up their mind(s)*. This will naturally fall out from Corbett's Hierarchies if it is assumed that the plural target has greater semantic justification than the singular one, which is not far-fetched in view of the meaning of 'making up one's mind'.
[13]This section is based on Hristov (2012: chap. 3).

semantics. Attributive elements affiliated with 'girl', as well as relative pronouns and predicative participles, have to be neuter. Only a personal pronoun in a different clause is allowed to appeal to semantics and hence appear in the feminine.

By contrast, the misalignments in words like *баща/bašta* 'father' and *дядо/djado* 'grandfather' are either between morphology and concord, or alternatively, between concord and index, thereby lending support to the three-faced nature of agreement. Formally, *баща/bašta* 'father', *съдия/sădija* 'judge', and *слуга/sluga* 'servant', look like feminine nouns because they end in *–a*. They also take the feminine singular definite article *–ma/-ta*. Similarly, *дядо/djado* 'grandfather' and *чичо/čičo* 'uncle' have the morphological make-up of neuter nouns and consequently host the definite article typical of that gender. However, all attributive and predicative targets, as well as relative and personal pronouns that co-occur with such controllers have to be masculine.

(19) *The Bulgarian definite article:*

a) **MASCULINE**	b) **FEMININE**	c) **NEUTER**
-ът/-ăt (-ят/-jat), -a/-a (-я/-ja)	*-ma/-ta*	*-mo/-to*

The Bulgarian definite article behaves like an enclitic or phrasal affix which appears on the first nominal element of the NP (with which it forms a single word, as they "move" together and no other units may be inserted between them). If *баща/bašta* is the first or only nominal element, it will get the feminine definite article: *баща-ma/bašta-ta* 'father-the' (see (19) above). If there is a pre-posed adjective, the adjective will act as a landing site and the article will be masculine: *добри-ят баща/dobri-jat bašta* 'good-the father' (see (19)).[14]

Bulgarian can be demonstrated to admit index agreement NP-internally, since resolution is possible with conjoined controllers (see Hristov 2012: chap. 3):

(20)　　*тези*　　　*брат*　　　　*и*　　　*сестр-а*
　　　　 tezi　　　 brat　　　　　 i　　　 sestr-a
　　　　 this.PL　 brother(M)[SG]　and　 sister(F)-SG
　　　　 'this brother and sister' (lit. 'these brother and sister')
　　　　　　　　　　　　　　　　　　　　　　　　(Bulgarian; Hristov 2012: 107)

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[14]For more on the Bulgarian definite article, see Scatton (1993: 202), Bojadžiev, Kucarov and Penčev (1999: 469-474, 516), Tilkov et al. (1983: 36-37, 115ff., 167-170, 186, 195) and Pašov (1999). Consult Ortmann and Popescu (2000), who insist that the definite article in Romanian and Bulgarian is a suffix and come up with specifications within the domain of morphology which are in the spirit of our own.

If we preserve index agreement within the NP, nouns like those for 'father', 'judge' or 'uncle' can be said to manifest concord-index mismatches. The definite article will pick up the concord features of the head when it attaches directly to it, but will otherwise operate with index. This entails postulating concord agreement within the morphological/word boundaries of the head noun, but index agreement elsewhere within the noun phrase (as in (21) below).[15]

Some scholars might argue that the choice of article does not depend on grammatical gender, but on phonological shape. For example, if a noun ends in a consonant, it gets the *-ът(-ят)/-ăt(-jat)* allomorph; if it ends in /a/, it gets the *-ma/-ta* allomorph, and so on and so forth. It just so happens that the vast majority of nouns that end in /a/ are feminine, with only a handful of exceptions, like 'father', 'judge' and 'servant'. Such "exceptions" combine with *-ma/-ta*, not because they are morphologically feminine, but because of the word-final /a/ vowel. Although the adoption of phonological principles seems appealing and might successfully sum up the way articles work in the plural,[16] there is evidence against employing a sound-based mechanism, at least in the singular.

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[15]An anonymous reviewer suggests that it is possible to treat this type of mismatch as a mismatch between declension/morphology and concord, rather than concord-index, as argued in Wechsler and Zlatić (2003: 33) for similar nouns in Serbian/Croatian, like *sudija* 'judge' or *gazda* 'landlord'. The reason to go for concord and index here is the availability of resolved index agreement within the NP (see (20) above), but the main argument concerning the existence of at least three distinct agreement features remains unaltered irrespective of where the split is located.

[16]In the plural, selection is based on phonological generalisations. The allomorph is *-ma/-ta* if the plural noun ends in /a/, or *-me/-te* if the plural noun has a final /i/ or /e/ (see Tilkov et al. 1983: 123, Scatton 1993: 202). Neuter plural nouns usually end in /a/ and go with *-ma/-ta*, whereas non-neuter plural nouns often end in /i/ or /e/ and are consequently marked as definite with *-me/-te*, so the article can be argued to agree in gender (neuter vs. non-neuter) in the plural as well (cf. Tilkov et al. 1983: 103ff., esp. 105, and Scatton 1993: 199-203 on building plurals in Bulgarian). Exceptions like the neuter plural form *колене/kolene* 'knees', an old dual which has a word-final /e/ and takes *-me/-te*, or the masculine plural *пътища/pătišta* 'roads', which ends in /a/ and takes *-ma/-ta*, can be said to change their gender in the plural. However, this explanation might be too excessive and theory-driven.

This issue aside, plural adjectives, numerals and pronouns are consistently made definite with *-me/-te*, following the plural agreement marker *-u-/-i-*. *Много/mnogo* 'much/many' selects *-mo/-to*, but it ends in /o/, like a neuter singular noun or adjective, and is compatible with plural or singular mass nouns of any gender.

(i)   *много-то*   *студент-и*
       mnogo-to   student-i
       many-DEF.N.SG student(M)-PL
       'the many students'

In view of examples like (i), it is more accurate to state that the article agrees with its host, which, if adjectival, in turn agrees with the head noun.

While most masculine nouns do end in a consonant and are accordingly assigned the *-ът(-ят)/-ăt(-jat)* variant, as in *млекар-ят/mlekar-jat* 'milkman(M)-the', *прозорец-ът/prozorec-ăt* 'window(M)-the', there is a sizeable group of morpho-syntactically feminine nouns which also end in a consonant (instead of the usual feminine singular suffix *-a*). Such nouns, however, require the feminine *-ma/-ta* article, despite their final consonant, as in *доблест-ma/doblest-ta* 'valour(F)-the', *младост-ma/mladost-ta* 'youth(F)-the'. Lexemes with the same final phoneme can belong to different genders, and are thus compatible with different articles: *мирис-ът/miris-**ăt*** 'smell(M)-the' and *орис-ma/oris-**ta*** 'fate(F)-the'.[17] What is more, there are consonantal stems which vary in gender, e.g. *прах/prax* 'dust' (Burov et al. 1995: 569). They are sometimes treated as masculine and sometimes as feminine, receiving the appropriate definite affix in line with their grammatical gender, oblivious of the fact that the phonological shape of the stem remains constant. It is hardly surprising that the article should mirror the gender of the noun, since the former's paradigm is a grammaticalisation of an Old Bulgarian/Old Church Slavonic post-posed demonstrative pronoun (cf. the history of German and English; for the OB/OCS demonstrative, see Duridanov et al. 1991: 236-237, 554-555).

The most concise analysis therefore involves concord (or possibly morphological) agreement between the noun and the article attached to it,[18] in addition to index agreement for all other NP-internal targets.[19] In this way, articles will pick out concord when suffixed directly to the head noun, and index if they appear on another nominal element, as shown in (21). Straightforward examples for a masculine, feminine and neuter noun are given in (22). Mismatches are illustrated in (23).

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[17]The same idea extends to syncretic numerals like *първи/părvi* 'first'. In isolation, this form is ambiguous between masculine singular and all-gender plural. If it is masculine singular, it takes the masculine singular article *-я(m)/-ja(t)*. As expected, it takes the plural article *-me/-te* when plural.

[18]As opposed to appealing to a combination of gender and phonological make-up, which has been the traditional approach (see Bojadžiev, Kucarov and Penčev 1999: 469-474, 516).

[19]There is evidence to suggest that concord can exceptionally be available for agreement between an adjective and a noun, as in the following relatively archaic example. The word *vojvoda* 'chieftan' has the same feminine-like morphological make-up as *bašta* 'father' and now normally takes masculine adjectives. Fluctuation is observed in the likes of *пияница/pijanica* 'a drunk', which admits masculine or feminine adjectives even when it refers to a male.

(i)   *Страхил-е,*   *страшн-а*   *войвод-о...*
        Straxil-e   strašn-a   vojvod-o
        Strahil(M)-VOC.SG   fearsome-F.SG   chieftan(F/M)-VOC.SG
        'Oh, Strahil, you fearsome chieftain…'   (Mladenov 1979: 320)

(21) *Co-occurrence constraints on Bulgarian articles in the singular:*

a) **MASCULINE**	b) **FEMININE**	c) **NEUTER**
-ът/-ăt (-ям/-jat), -a/-a (-я/-ja)	*-ma/-ta*	*-mo/-to*
(↑CONCORD GEND)=M (↑CONCORD NUM)=SG *(within N)*	(↑CONCORD GEND)=F (↑CONCORD NUM)=SG *(within N)*	(↑CONCORD GEND)=N (↑CONCORD NUM)=SG *(within N)*
OR:	**OR:**	**OR:**
(↑INDEX GEND)=M (↑INDEX NUM)=SG *(within NP)*	(↑INDEX GEND)=F (↑INDEX NUM)=SG *(within NP)*	(↑INDEX GEND)=N (↑INDEX NUM)=SG *(within NP)*

(22)a *стол-ът*
stol-ăt
chair(M)[SG]-DEF.M.SG
'the chair'

дървени-ят
dărveni-jat
wooden[M.SG]-DEF.M.SG

'the wooden chair'

стол
stol
chair(M)[SG]

(22)b *мас-а-та*
mas-a-ta
table(F)-SG-DEF.F.SG
'the table'

дървен-а-та
dărven-a-ta
wooden-F.SG-DEF.F.SG

'the wooden table'

мас-а
mas-a
table(F)-SG

(22)c
. *дърв-о-то*
dărv-o-to
tree(N)-SG-DEF.N.SG
'the tree'

висок-о-то
visok-o-to
tall-N.SG-DEF.N.SG

'the tall tree'

дърв-о
dărv-o
tree(N)-SG

(23)a *бащ-а-та*
bašt-**a**-**ta**
father(F/M)-SG-DEF.F.SG
'the father'

добри-ят
dobri-jat
good[M.SG]-DEF.M.SG

'the good father'

бащ-а
bašt-a
father(F/M)-SG

(23)b	*дяд-о-то*	*добри-ят*	*дяд-о*
	djad-**o**-**to**	dobri-jat	djad-o
	grandad(N/M)-SG-DEF.N.SG	good[M.SG]-DEF.M.SG	grandad(N/M)-SG
	'the grandfather'	'the good grandfather'	

In conclusion, Bulgarian nouns like those for 'father', 'judge' and 'uncle' rely on concord within the boundaries of the head noun and on index elsewhere, including verbal and pronominal agreement. The words for 'boy' and 'girl', on the other hand, take neuter articles and adjectives, and agree with neuter predicates, only allowing feminine or masculine anaphors, which suggests a split between index and semantics. When plotted together, these two types of noun validate the existence of three types of agreement features in Bulgarian.

6 Conclusion

This paper set out to demonstrate the usefulness of operating with at least three types of agreement. It was shown that accusations of extravagance were unfounded, and at the same time a two-tier proposal could not provide an adequate description of the empirical facts in Serbian/Croatian, English and Bulgarian. It is worth reiterating that both English and Bulgarian are relatively morphologically and/or declensionally impoverished languages and yet require this type of agreement system.

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