Agreement morphology

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Abstract

Agreement is defined as the systematic co-variance of one element with another. The most uncontroversial agreement configuration is that between a controller - an element intrinsically specified for a value of an agreement feature - and the target

of agreement - the element reflecting a displaced feature value of the controller. The distribution of morphological agreement markers is however much wider than controller-target configurations: targets can express agreement values for features that are not visible on the controller and even show agreement morphology in the absence of a lexical controller. A second source of variation is due to the fact that in certain contexts there is a choice between syntactic agreement (with formal features of the controller) and semantic agreement (with semantic features of the referent of the controller). The choice between syntactic and semantic agreement is correlated in part with cross-linguistically observed regularities that have been formulated as the Agreement hierarchy and the Animacy hierarchy.

Agreement morphology harnesses the same morphological devices found with derivation and inflection. Like inflectional morphology more generally, agreement morphology is only present in a subset of the world's languages.

1 Defining agreement

Agreement is defined as the systematic co-variance of one element with another, as illustrated in (1) by gender and number agreement on the determiner and the adjective and in (2) by person-number agreement on the verb. [1]

(1) Modifier-head agreement[2]

a. el barco antigu-o
DET.**MSG** ship(M) old-**MSG**

b. la casa antigu-a (Spanish)
DET.**FSG** house(F) old-**FSG**

'the old ship / the old house'

(2) Subject-verb agreement

a. Ich gehe. / Du gehst. (German)
1SG.NOM walk.pres**1SG** / 2SG.NOM walk.pres**2SG**
I am walking. / You.sg are walking.

b. Die Frau geht. Die Frau-en gehen.
DET.**FSG** woman(F) walk.pres.**3SG** DET.**FPL** woman(F)-pl walk.pres**3PL**

[1] Note that the definition in terms of systematic co-variance does not distinguish between agreement in the noun phrase and with predicates on the one hand and government on the other hand. A verb governing a case on its argument is also a case of systematic co-variation of two elements. However, as discussed in Corbett (2006, 7-8) government is different from agreement in several respects. One important difference is the directionality of the co-variation: while in government the governor typically determines the case properties of a noun phrase, in typical agreement configurations the agreement reflects properties of a nominal controller.

[2] Abbreviations in the glosses: ABS = absolutive, ACC = accusative, CL# = noun class-marker of class #, CPRO = clitic verbal pronoun, DAT = dative, DET = determiner, DM = declarative marker, ESM = epistemic status marker, ERG = ergative, F = feminine, FV = final vowel, GEN = genitive, HAB = habitual, INANIM = inanimate, INESS = inessive, LOC = locative, M = masculine, N = neuter, OM = differential object marker (Modern Hebrew), PTCP = participle,PERFV = perfective, PL = plural, PRES = present, PRF = perfect, PRET = preterite, PST = past, SA = subject agreement, SG = singular

The woman is walking. / The women are walking.

Although this is not a logical consequence of the definition, agreement is usually conceived as an asymmetrical relationship between two elements designated by Corbett (2006, 4) as the CONTROLLER of agreement (which determines agreement) and the TARGET of agreement (which reflects displaced features of the controller).

In example (1) the lexically specified gender of the nouns, masculine for *barco* "ship" and feminine for *casa* "house", is the controller of gender agreement on two targets: the determiner and the adjective. Likewise, in example (2) the subjects are the controllers for person and number agreement, with the verbs as the targets.

1.1 Controllers and targets and the (a)symmetry of agreement

However, not all configurations in which there is co-variation between elements are as clearly asymmetrical as the examples (1)/(2). It is therefore a matter of analytical choice if agreement is taken to be a fundamentally asymmetric relationship or not.

A number of configuration are problematic for an intrinsically asymmetric view of agreement. Firstly, configurations in which identifying the controller is a matter of analysis, secondly, configurations in which there is no lexical controller, thirdly, configurations with overdifferentiated agreement in which the agreement on the target marks features that are not expressed on the controller and finally cases of grammaticalised agreement-mismatches (CONSTRUCTED NUMBER see Corbett 2000). This section examines each of these cases in turn.

Identifying a controller Consider the plural equivalent of example (1). In (3) all elements of the noun phrases are marked plural. While gender agreement in (3) is plausibly determined by the lexical gender of the noun,[3] it is not a trivial matter to establish which element is the controller for the instances of plural marking in the noun phrases in (3).

(3) Modifier-head agreement

a. los barco-s antigu-o-s
DET.MPL ship(m)-PL old-M-PL

b. las casa-s antigu-a-s (Sp)
DET.FPL house(f)-PL old-F-PL

'the old ships' / 'the old houses'

In semantic theories like Link (1983) and the large literature following him, plural is analysed as a property of the noun-denotation, favouring the conclusion that the plural head noun should be viewed as the controller of plural agreement in the DP. However, in syntactic terms, number is a property of the larger nominal constituent (DP, NumP or NP, depending on the phrase structure assumed), and not of the head noun.

[3] While modifiers have forms for varying person-gender-number combinations, nouns typically appear with a fixed gender.

Languages vary in whether the morphological expression of number is tied to the noun or to the determiner. In noun-class languages like the Bantu languages or Atlantic languages, number is fused with gender. In the Joola Banjal example (4) from Creissels (to appear), the singular form *fʊ-mangɔ* of the noun "mango" belongs to class F with the noun-class prefix *fʊ-* while the plural form *gʊ-mangɔ* "mangoes" belongs to class G with the noun-class prefix *gʊ-*. In contrast the noun for "cow" has the singular form *e-be* and plural form *si-be* of class E and S respectively. As shown in (4) the nouns control agreement forms associated with their noun-class, making number in Joola Banjal dependent on a lexical property of the head noun, similar to gender agreement in example (1). However, other languages do not have number marking on the nouns but mark number on determiners as exemplified here by Biak (Austronesian, South Halmahera-West New Guinea) in (5) (Dalrymple and Mofu, 2013). For these languages number on a noun phrase does not appear morphologically as a property of the head noun but of the determiner (see Bouchard (2002) for an analysis of nominal number in French as a property of the determiner).

(4) Noun-class in Joola Banjal (Atlantic)

a. fʊ-mangɔ f-ɐmɐk gʊ-mangɔ g-ɐmɐk (Joola Banjal)
CLf-mango CLf-big CLg-mango CLg-big
'big mango' 'big mangoes'

b. e-be y-ɐmɐk si-be s-ɐmɐk
CLe-cow CLe-big CLs-cow CLs-big
'big cow' 'big cows'
(exs 1a-d in Creissels to appear)

(5) Proximal demonstratives in Biak

a. Rum ine i-wawa. (Biak)
house DEM.**SG** **SG**-shake

b. Rum su-ine su-wawa
house DEM.**DUAL** **DUAL**-shake

c. Rum sko-ine sko-wawa
house DEM.**PAUCAL** **PAUCAL**-shake

d. Rum nane na-wawa
house DEM.**PL.INANIM** **PL.INANIM**-shake
'This house / these two houses / these (several) houses / these (many) houses are shaking.' (Dalrymple and Mofu, 2013, 45, ex. 9-12)

Under an analysis of number as a property of the DP constituent, either the determiner - as the head of the DP - can be analysed as the controller for plural agreement on adjective and noun, or all three plural markers on determiner, adjective and noun can be analysed as MULTIPLE EXPONENTS of an abstract feature [PLURAL] of the overall DP, under this view all the elements marking plural in the noun phrase

are targets with agreement controlled by the abstract plural feature (see section 1.4 for similar issues with case as an agreement feature).

In summary, it appears that while marking number of an argument on a verb is a clear case of asymmetric agreement, for number marking inside the noun phrase it is not immediately obvious which element should be identified as the controller.

Absence of a lexical controller Agreement configuration without overt controllers are commonly found in null argument languages that have argument agreement on the predicate. In (6), the Spanish equivalent of (2), there are no overt pronominal subjects while at the same time the verb is inflected for person and number of the subject.

(6) Subject-verb agreement

a. Estoy/ Estás caminando. (Spanish)
be.loc.PRES**1SG**/ be.LOC.PRES**2SG** walk.GER
'I am walking. / You.sg are walking. / S/He is walking.'

b. Está / Están caminando.
be.LOC.PRES**3SG** / be.lOC.PRES**3PL** walk.GER
'They are walking.'

To maintain an asymmetrical account of agreement in this type of example, two families of analyses have been propopsed. The first type of analysis postulates a paradigm of null controllers that carry the relevant feature specifications (Rizzi, 1986) while the second type of analysis analyses the agreement morphology itself as a pronominal, with the consequence that the marking on the verb is taken not to be agreement morphology at all (Jelinek, 1984).

Overdifferentiated agreement A second type of example that goes against an asymmetrical view of agreement is found with targets that mark features that are not expressed on the controller. In the French example (7) the adjective marks gender agreement in combination with a 2nd person pronoun and a copula, which are both unmarked for gender. This type of overdifferentiation of the modifier is very common with predicates that agree in gender and number but not in person, as e.g. the past in Russian (8).

(7) Tu es beau. / Tu es belle. (French)
2SG be.PRES.2SG beautiful.MSG. / 2SG be.PRES.2SG beautiful.FSG
'You(m) are beautiful. /You(f) are beautiful.'

(8) Ja sidel / sidel-a. (Russian)
1SG.NOM sat.M.SG / sat-F.SG
I was sitting (man/ woman talking). Corbett (2006, 115, ex 1)

In order to maintain an asymmetrical analysis of agreement in these examples, two homophonous pronouns differing in their gender feature have to be postulated

(Corbett, 2006, 115).

Grammaticalised agreement mismatches Examples where controller and target show a systematic mismatch in features that is nevertheless grammatical provide an argument that both feature sets contribute to the interpretation of the clause.[4] A famous example of a feature mismatch exploited to add an additional grammatical distinction is the Hopi (Uto-Aztec) CONSTRUCTED DUAL described by Hale (1997, 74), where combining a plural subject pronoun with singular subject agreement on a verb gives rise to a dual interpretation (9-c).

(9) a. Pam **wari** (Hopi)
that.**SG** run.PERFV.**SG**
He/she ran. (singular)

b. **Puma** yùutu
that.**PL** RUN.PERFV.**PL**
They (plural) ran. (plural)

c. Puma wari
that.**PL** RUN.PERFV.**SG**
They (two) ran. (dual)
(Hale 1997, 74, apud Corbett 2000)

As noted by Corbett (2000, 170), the possibility of having mismatching agreement in one configuration does not imply that other mismatches involving the same features are also permissible. In Zuni a plural 1st person pronoun with a singular verb gives rise to a 1st person dual (10-a); however, a featurally equivalent mismatch between a singular 1st person and a plural verb is ungrammatical (10-b) (see Harbour 2017 for a study of constructed duals cross-linguistically).

(10) a. hon ʔa:-kya (Zuni)
1pl.NOM go-PST
we (two) went

b. *hoʔ ʔ**a:w**-a:-kya
1sg.NOM **pl**-go-PST
(Corbett, 2000, 170, exs. 45/46)

As Corbett (2006, 5) stresses, the intuition that agreement expresses displaced features on a target does not imply that agreement has to be **modelled** as an asymmetrical relation. Corbett points out that agreement has been analysed in terms of symmetric feature unification (Pollard and Sag, 1994, 62-67) while essentially asymmetric feature checking on the target is implemented e.g. by the distinction between interpretable and uninterpretable features in the Minimalist program Chomsky (2000) (for discussion see Wechsler 2009; Ackema and Neeleman 2018).

[4] Note that such an analysis is dependent on the analysis of the feature values i.e. an analysis of pam puma as marking SG vs. PL (thank you to M. Baerman for pointing this out).

1.2 Targets of agreement

In example (1) the noun is the controller of gender and number agreement on two targets: the determiner and the adjective while in (2) the subject controls person and number agreement on the verb.

Examples (11) - (12) illustrate further argument-predicate agreement configurations. In (11) the subject controls noun-class agreement on the verb. In (12) the subject controls number and gender agreement on a predicative adjective.

(11) a. **ki**-kapu **ki**-moja **ki**-lianguka (Swahili)
SG-basket(7/8) 7-one 7-fell
One basket fell (adapted from (Corbett, 2006, 15, ex 28))

b. **m**-tu **m**-moja **a**-likuja
SG-person(1/2) 1-one 1-came
One person came (Corbett, 2006, 16, ex 30)

(12) a. La niña es **alt-a**. (Spanish)
DET.F girl(F) COP.PRES.3SG tall.**FSG**
The girl is tall.

b. Los niño-s son **alt-o-s**.
DET.ML child(M)-PL COP.3PL tall.**MPL**
The children are tall.

In the examples (2) - (12) agreement is between an argument and a verbal or an adjectival predicate. Cross-linguistically much rarer are cases of agreement between an argument and a manner-wh (13), an argument and an adverb (14), between an argument and another argument like the dative in (14) and between a postposition and an argument (15).

(13) a. W-a-ul-ile o-rie(na) [oli ba-ba-ana b-oola]? (Lubukusu)
2SG.SA-PST-hear-PST 2SG-how that 2-2-children 2SA-arrived
How did you hear that the children arrived?
(Carstens and Diercks, 2013, 183, ex 4a)

b. A-li-le e-nyama a-riena?
3SG.SA-eat-PST 9-meat 3SG-how
How did he eat the meat? (Carstens and Diercks, 2013, 191, ex 22a)

c. Ki-mi-saala ki-a-kw-ile ki-rie(na)?
4-4-tree 4SA-PST-fall-PST 4-how
How did the tree fall

d. Si-tanda si-funikhe si-rie(na)?
7-bed 7SA-broke 7-how
how did the bed break (Carstens and Diercks, 2013, 180, ex 1e-f)

(14) a. buwa-mu **b-ez** **dīta<b>u** $\bar{\chi}^{w}$alli a<b>u (Archi)
mother(II)-ERG **III**-1SG.DAT early<**III**> **bread**(**III**)[ABS] made<**III**>
Mother made bread for me early. (Corbett, 2006, 44, ex 36, from Kibrik

1994:349)

b. dija-mu **ez** **dīta<t'>u** nokł' a< >w
father(I)-ERG [**IV**]-1SG.DAT early<**IV**> **house**(**IV**)[ABS] made<**IV**>
Father made a house for me early. (Corbett, 2006, 44, ex 37)

(15) **ši** wo-b-nī centr-ē a-**b** (Tsakhur)
1PL be-I/II.PL-ESM centre(IV)-INESS in-(I/II)
'We were in the centre.' (Corbett, 2006, 46, ex 42a from Kibrik 1999:125)

In the examples (13) from Lubukusu (Bantu) the wh-word *how* agrees with the subject in person, number and noun-class (see Carstens and Diercks 2013 for detailed discussion).

In the examples in (14) from Archi (Nagh-Daghestanian), the absolutive argument agrees in gender with the adverb *dīta*< >*u* "early" and the 1sg dative < >-*ez* (where < > marks the gender agreement slot) (for discussion of the complexities of Archi agreement from different theoretical perspectives see Bond et al. 2016).

1.3 The domain of agreement

In the examples considered so far, agreement is syntactically local: it is internal to a single clause or to the noun phrase.

Non-local agreement-relations between an argument and a predicate are also found. Polinsky and Potsdam (2001) discuss examples of long-distance agreement across a clause boundary. In the Tsez example (16) the matrix verb may agree either with the complement clause (in gender IV (16)-a)) or with the absolutive argument inside the complement clause (16)-b).

(16) a. enir [užā magalu bāc'ruł] **r**-iyxo (Tsez)
mother [boy bread.IIIABS ate].**IV** **IV**-know
The mother knows the boy ate the bread. (Polinsky and Potsdam, 2001, 584, ex 1a)

b. enir [užā **magalu** bāc'ruł] **b**-iyxo
mother [boy **bread.IIIABS** ate].IV **III**-know
The mother knows the boy ate the bread.
(Polinsky and Potsdam, 2001, 584, ex 1a)

Note that while in (16)-b the agreement relation is across a clause-boundary, it is still between a noun-phrase and a predicate (unlike the examples in (13)/(14)/**??**).

Systematic co-variation in features is also observed in another type of non-local configuration, namely between an antecedent and a pronominal anaphor as in (17).

(17) **Mary** is singing because **she** is happy.

Accounts of agreement differ in whether the systematic co-variation of features on anaphoric pronouns as in (17) is considered an instance of agreement. As pointed

out by Corbett (2006, 21), morphological accounts of agreement tend to include pronouns while syntactic accounts of agreement tend to exclude them.

There is a clear difference between the two types of configuration: Antecedent-anaphor relations typically involve a co-indexation relation between two arguments, unlike noun phrase-internal and argument-predicate agreement.

However, in an example like (18), the identity of the referents is grammatically expressed by sharing the gender and number properties of the full noun phrase antecedent, not some intrinsic properties of the referent of the noun phrase. (See section 3 for a discussion of cases where the semantic properties of the referent influence the form of the agreement.)

(18) a. **Le** **bâtiment** s'est effondré. **Il** était en mauvais état.
DET.MSG building(M) REFL-is collapsed. 3**MSG** was in bad state
(French)

The building collapsed. It was in a bad state.

b. **La** **maison** s'est effondrée. **Elle** était en mauvais état.
DET.FSG house(F) REFL-is collapsed. 3**FSG** was in bad state
The house collapsed. It was in a bad state.

Drawing a principled line between agreement features on pronouns and other types of agreement is difficult for at least three reasons.

Firstly, in many languages, anaphoric pronouns use the same features found with noun phrase internal and predicate-argument agreement (Corbett, 2006, 22).

Secondly, pronouns are a common source of agreement markers diachronically (Givón 1976, Corbett 1995, Roberts and Roussou 2003, 186-193, Siewierska 2004, 263-268, Fuß 2005, 129-155), suggesting that given certain syntactic conditions, agreement features of pronouns can be reinterpreted as agreement markers.

Finally, pronouns appear in contexts in which their person number features are arguably treated as agreement as in the reading in (19)-b (Partee, 1989). In (19)-b the alternatives considered are interpreted as reflexive, i.e. correspond to *x admits that x is wrong*, suggesting that the presence of 1SG *I* in the embedded clause is interpreted as agreement with the subject of the matrix clause indicating a binding relation, not as a referential expression referring to the speaker of the utterance (see Kratzer 2009 for discussion).

(19) **I** am the only one around here who will admit that **I** could be wrong. (Partee 1989, fn. 3)

a. No one else will admit that **I** am wrong.
b. No one else will admit that **they** are wrong. (bound variable reading of the embedded subject)

Agreement morphology - at least in controller-target configurations - belongs to contextual inflection in the sense of Booij (1995), as the agreement on the target re-

flects the featural properties of a controller in the syntactic context (see entry *Inflectional morphology*), and, like inflectional morphology more generally, agreement morphology is only found in a subset of languages.

1.4 The features of agreement

Cross-linguistically, PERSON, NUMBER, and GENDER (also called ϕ-features) are the most common agreement features. Person, number and gender are reflected in predicate agreement in the Modern Standard Arabic example (20), see also the Swahili ex (11)), and number and gender are reflected in noun phrase internal agreement (1) (but see caveat on multiple exponents of number in noun-phrases in section 1.2).

(20) Past of *kataba* "write" (Modern Standard Arabic)

1SG	katab-tu			1PL	katab-nā
2MSG	katab-ta	2DUAL	katab-tumā	2MPL	katab-tum
2FSG	katab-ti			2FPL	katab-tunna
3MSG	katab-a	3M.DUAL	katab-ā	3PL	katab-ū
3FSG	katab-at	3F.DUAL	katab-atā	3FPL	katab-na

(20) shows that Modern Standard Arabic has distinctive forms for gender agreement in the 2sg/pl and 3sg/dual/pl (for gender marking verbal agreement in other Semitic languages see Gragg and Hoberman 2012, 176, Table 4:14).

Elements of a noun phrase can also show multiple exponents marking CASE as in ex (21). However, whether the variation in case internal to a noun phrase should be considered agreement depends on the analysis of case assumed (compare the discussion of number in the noun phrase). If case is a property of the entire noun phrase then the examples below qualify as multiple exponence of case in the noun phrase but not as agreement between a controller element and its targets. If case is taken to be assigned to the noun, then the exponents marking case on the adjective and the determiner exemplify case-agreement with the noun (see Corbett 2006, 133-135 for discussion).

(21) Multiple case-marking in the noun phrase (Modern Greek)

a. o kalós ánthropos
DET.NOM.MSG good.NOM.MSG man.M.NOM.SG

b. ton kaló ánthropo
DET.ACC.MSG good.ACC.MSG man.M.NOM.SG
'the good man'

Clearer examples for case agreement are found with argument-predicate agreement with secondary predicates (22)-a) and in exceptional case-marking environments (22)-b: in both examples the predicates **gáfaða** "intelligent ACC.MPL" and **fáklæd-**

dum "scantily cladDAT.PL" appear in the same case as the noun phrase they modify.

(22) a. Ég taldi **strakana** (vera) **gáfaða**. (Icelandic)
I believed the.boys(ACC) be intelligent(ACC.MPL)
'I believed the boys to be intelligent.' (Sigurðsson, 1996, ex. 28)

b. **Strákunum** verður kalt svona
the.boys(DAT) will-be cold(default) so
fáklæddum/***fáklætt**.
few-clothed(DAT.PL/*default)
'The boys will freeze, so scantily dressed.' (Sigurðsson, 1996, ex. 26)

In addition to the features PERSON, NUMBER, GENDER and CASE, other types of agreement features have been described for certain languages, such as agreement for DEFINITENESS, RESPECT/ POLITENESS and wh-agreement (see section 6.1 and Corbett 2006, 135-138, Corbett 2012, 134-144 for discussion).

1.5 Conditions on agreement

Agreement patterns can be restricted to controllers or environments that satisfy certain conditions (see Corbett 2006, 176-205).[5] Conditions on the controllers include animacy and specificity while conditions on the syntactic context include word order and focus.

Conditions on the controllers A language illustrating an animacy condition on number agreement is Miya (West Chadic, Schuh 1989). In Miya nominal number marking is obligatory with higher animates (23)-a while it is optional with inanimates (23)-b. Agreement in number, however, patterns differently: it is obligatory on higher animates (like plural marking) (24)-a, and **impossible** with inanimates (24)-b.

(23) Number marking with numerals

a. **Obligatory** with higher animates
tèvam tsə́r vs. *'ám tsə́r (Miya)
woman.**PL** two woman.SG two

b. **Optional** with inanimates
zə̀kiyáyàw vaatlə vs. zə́kiy vaatlə
stone.PL five stone.SG five
(Corbett, 2006, 177, ex 2/3)

(24) Number agreement with determiners

a. **Obligatory** with higher animates

[5] It has to be stressed that it may be difficult to distinguish between conditions on agreement and agreement for a feature. For example if agreement is restricted to animate referents, this could be an animacy condition on agreement or the agreement morphology could be analysed as including agreement in animacy.

níykin dzáfə (Miya)
this.PL man.PL

b. **Impossible** with inanimates - gender marking only

(i) nákən viyayúwawàw
this.**SG.M** fireplace.**PL**
Masculine noun

(ii) tákən tləkáyàw
this.**SG.F** calabash.**PL**
Feminine noun

(Corbett, 2006, 177-178, ex 4/5)

As (Corbett, 2006, 177) stresses, the condition on agreement in Miya bears on number but does not affect gender agreement: the inanimates in (24)-b control gender agreement on their determiner.

Conditions on the choice of agreement marker In certain languages the featural make-up of the co-arguments determines the choice of controller.[6] Sumbatova (2011) gives an example from Icari (Dargwa, Nakh-Daghestanian) where the agreement marker is conditioned by the person marking on the arguments: (i) if one of the arguments is in the second person, the verb takes the second person agreement form (25); (ii) if there is no second person argument but a first person argument the verb agrees with the first person (26), (iii) if both participants are third person, the verb has no person marker (27) (only prefixed gender agreement with the absolutive).

(25) a. du-l u r-uc-ib-**di**. (Icari, Nakh-Daghestanian)
I-ERG you.SG(ABS) F-catch.PF-PRET-**2**
I caught you (F).

b. u-l du uc-ib-**di**.
you.SG-ERG I(ABS) M/catch.PF-PRET-**2**
You caught me (M). (Sumbatova, 2011, ex 1a/b)

(26) du-l ʁuʕr b-uc-ib-**da**.
I-ERG hare(ABS) N-catch.PF-PRET-**1**
I caught a hare. (Sumbatova, 2011, ex 1c)

(27) murad-il ʁuʕr b-uc-ib
Murad-ERG hare(ABS) N-catch.PF-PRET
Murad caught a hare. (Sumbatova, 2011, ex 1d)

These patterns have been analysed as instances of argument alignment[7] conditioned by the Personal hierarchy with the ordering 2>1>3. However, Witzlack-Makarevitch

[6] I thank an anonymous reviewer for pointing out the relevance of this phenomenon.

[7] Siewierska (2013) defines ALIGNMENT as "reflecting how the two arguments of the transitive verb, the agentive argument (A) and the more patient-like argument (P), align with the sole argument of the intransitive verb, the S." In particular, the arguments that are aligned pattern together for case assignment and agreement marking. The most common alignment types are accusative and ergative alignment.

et al. (2016) argue that co-argument sensitivity of the expression of agreement should not be analysed on a par with other alignment types (such as accusative or ergative alignment) but instead as conditions on agreement. The main argument to distinguish the effects of person features on agreement marking on the one hand from argument alignment on the other hand is that person effects can combine with other alignment types. Sumbatova (2011) cites Kibrik's 2003 work on Chirag (Dargwa, Nakh-Daghestanian): in Chirag if one of the co-arguments is a speech-act participant, the verb marks agreement with the speech-act participant (28); if none or both co-arguments are speech-act participants, the verb agrees with the ergative argument (29), showing ergative alignment.

(28) a. dicce it r-iqqan-**da**. (Chirag)
I-ERG her(ABS) F-lead-**1**
I lead her. (1st person)
b. ite du r-iqqan-**da**.
s/he-ERG I(ABS) F-lead-**1**
S/he leads me (F). (Kibrik 2003: 483-485 apud Sumbatova 2011, ex 3c/d)

(29) a. dicce ʕu r-iqqan-**da** (Chirag)
I-ERG you.SG(ABS) F-lead-**1**
I lead you (F).
b. ʕicce du r-iqqan-**de**
you-ERG I(ABS) F-lead-**2**
You lead me (F). (2nd person)
c. ite russe r-iqqle.
s/he-ERG girl(ABS) F-lead
S/he leads the girl.
(Kibrik 2003: 483-485 apud Sumbatova 2011, ex 3a,b,e)

Witzlack-Makarevitch et al. (2016) propose to analyse cases of co-argument sensitivity as conditions on argument alignment on a par with tense, aspect, subordination and polarity, with properties such as case-marking on the arguments and agreement patterns on the predicate depending on the alignment of S, A and P.

Conditions on the syntactic context The following two examples illustrate conditioning of agreement patterns by word order and conditioning by focus.

A well-known example of a word-order condition on agreement are the patterns triggered by SV or VS order in Modern Standard Arabic. In SV order the verb agrees in 3rd person, number and gender (30)-a, while in VS order the verb only agrees in 3rd person and gender with number agreement invariably singular (30)-b (singular is the default value for number in this context, see section 4).

(30) a. n-nisaaʔ-u daxal-na/ *daxal-at
the-women-NOM enter.PAST-**3FPL**/ *enter.PAST-**3FSG**

makātib-a-hunna
office.PL-ACC-their.F
'The women have entered their offices.' (SV word order)

b. daxal-at/ *daxal-na n-nisāʔ-u
enter.PAST-**3FSG** enter.PAST-**3FPL** the-women-NOM
makātib-a-hunna(MSA)
office.PL-ACC-their.F
'The women have entered their offices.' (VS word order)
(Fassi Fehri, 1993, 34, exs 53/54)

c. daxal-na/ *daxal-at makātib-a-hunna
enter.PAST-**3FPL**/ *enter.PAST-**3FSG** office.PL-ACC-their.F
'They(F) entered their offices.' (null subject)

d. **hunn-a** jiʔ-na/ *jaaʔa-t
*jiʔ-na/ *jaaʔa-t **hunn-a**
'they.F came.3FPL/ came.3FSG they.F'
(Fassi Fehri, 1993, 111, exs 40/108 ex 31/113, ex42)

Notice that the word order alternation and the concomitant agreement alternation is only observed with DP subjects (30)-a/b as null subjects for all person, number, gender combinations appear with full agreement (30)-c and the strong pronouns are preverbal (30)-d unless focused. Consistent with the full agreement observed for preverbal lexical DPs, preverbal strong pronouns appear with full agreement.

Somali provides an example of different agreement paradigms conditioned by subject focus. When a subject co-occurs with focus on another constituent of the sentence, the verb in the general past, the general present or the present progressive shows agreement in person, number and gender illustrated by the paradigm of the general past in (31)-a. When the subject is focused or extracted from a relative clause, a reduced agreement paradigm with a different tonal pattern appears (31)-b (Saeed, 1999, 96).

(31) Somali simple past *sug* "to wait" (Saeed, 1999, 86,96)

a.

	Full agreement
1sg	sugay
2sg	sugtay
3msg	sugay
3fsg	sugtay
1pl	sugnay
2pl	sugteen
3pl	sugeen

b.

	Reduced agreement subject relative/ subject focus
1sg	sugáy
2sg	sugáy
3msg	sugáy
3fsg	sugtáy
1pl	sugnáy
2pl	sugáy
3pl	sugáy

2 Formal means of agreement

Agreement morphology can be realised by concatenative and non-concatenative exponents, and the exponents found with agreement are the same as those found with inflectional and derivational morphology more generally (see discussions in Stump ch on *Inflection*, Lieber ch on *Derivation*).

Prefixal and suffixal exponents are illustrated by Swahili in (11) and Modern Standard Arabic in (20), infixal exponence is illustrated by the Archi adverb *diīa*< >*u* "early" (see ex. (14)). Agreement morphology expressed by reduplication is found for plural agreement on a subset adjectives in Somali (for the full list of adjectives see Saeed 1999, 48-49).

(32) Plural agreement on adjectives in Somali (from Saeed 1999, 48-49)

sg		pl
adag	'difficult'	*adadag*
dhèer	'tall'	*dhaadhèer* (alt. *dhéerdhèer*)
furán	'open'	*furfurán*
madow	'black'	*madmadow*

Plural agreement for masculine plural on certain adjectives in Modern Standard Arabic is marked by templatic morphology (33)-a (a so-called BROKEN PLURAL). The feminine plural is always suffixal and does not involve a change of template as illustrated by (33)-b.

(33) Masculine plural adjective agreement in Modern Standard Arabic

a.	MSG	*rajul*	***Tawiil***	MPL	*rijaal*	***Tiwaal***
		man	tall.MSG		man.PL	tall.MPL
b.	FSG	*ʔimraʔa*	*Tawiil-a*	FPL	*nisaaʔ*	*Tawiil-aat*
		woman	tall-FSG		woman.PL	tall-FPL

Agreement morphology can also be marked by internal vowel changes such as the 3mpl of perfective verb forms in Omani Mehri (34) (Rubin, 2018) and number marking in the present for certain types of Middle High German verbs (35) (Bendjaballah, 2012).

(34) Mehri 3pl marking by vowel change in the perfective(Ablaut)
(Rubin, 2018, 119, 132-133, 140)

Stem-type	**3MSG**		**3MPL**	
Basic stems	*ktūb*	'he wrote'	*ktawb*	'they.M wrote'
	bəgūd	'he chased'	*bəgawd*	'they.M chased'
H-stems (causative)	*hərkūb*	'he mounted'	*hərkīb*	'they.M mounted'
	(f)fərūḳ	'he frightened'	*(f)fərīḳ*	'they.M frightened'
$\check{S}_1$-stems	*šənðūr*	'he vowed, he promised'	*šənðīr*	'they.M vowed, they.M promised'

(35) Middle High German number marking in the present (Umlaut) (Bendjaballah, 2012, 123)

		nemen 'take'	*helfen* 'help'	*geben* 'give'
indicative	1sg	n[i]me	h[i]lfe	g[i]be
	2sg	n[i]mest	h[i]lfest	g[i]best
	3sg	n[i]met	h[i]lfet	g[i]bet
	1pl	n[e]men	h[e]lfen	g[e]ben
	2pl	n[e]met	h[e]lfet	g[e]bet
	3pl	n[e]ment	h[e]lfent	g[e]bent

In the examples (35) the difference between the stems is associated with featural content: i-stems for singular person agreement and e-stems for plural person agreement forms. For the analysis of stem alternations as marking agreement features it is necessary to take the entire verbal paradigm into account. Stem alternations like those in (35) can become morphomic in the course of diachronic change, as discussed in detail in Maiden (2018) (see Pirrelli and Battista (2000); Bonami and Boyé (2002); Boyé and Cabredo Hofherr (2006) for analyses of stem choice in Italian, French and Spanish verbal morphology in terms of structured stem spaces).

3 Syntactic and semantic agreement

Syntactic and semantic conditions on agreement have been the object of a large number of studies (see e.g. Corbett 1979, 2006, Wechsler and Zlatić 2003; Wechsler 2009). Agreement presents an intriguing paradox: certain instances of agreement are controlled by the formal features of the controller ((36) and (18)) while in other instances, agreement is influenced by the semantic properties of the referent associated with the controller (37)/(38)/(39).

(36) a. **His clothes** are/*is dirty but his hands are clean.
b. **His clothing** *are/is dirty but his hands are clean.
c. On average **1 quart of milk** is consumed per day in this household.
d. On average **1.0 quarts of milk** are consumed per day in this household. (Wechsler, 2009, 394, ex 7a-d)

(37) a. **To err and to forgive** are/*is human and divine, respectively.
b. **To start a war and to blame the enemy** is/#are hypocritical. (Wechsler, 2009, 395, ex 8)

(38) (A waiter in a restaurant, talking about a customer having ordered french fries):
The french fries at table 7 is/*are getting impatient.
(Wechsler, 2009, 395, ex 9 from Nunberg (1995: 115ff))

(39) **The committee** has/ have decided.

In (37)-a plural agreement with conjoined verb phrases correlates with a distributive interpretation of the coordination while in (37)-b singular agreement is required if the predicate is interpreted non-distributively as applying to the coordination but not to its members individually. In (38) singular agreement is motivated by the singular referent associated with the subject corresponding to *the person at table 7 who ordered the french fries*, while in (39) plural agreement can appear with the noun committee that has a plural reference insofar as it designates a group of several people.

Not all agreement targets are equally likely to show semantic agreement. While in (39) plural agreement on the verb is possible, plural agreement on the determiner is always excluded for this type of noun: **these committee*. The Agreement Hierarchy (Corbett, 1979) constrains the patterns of interplay between syntactic and semantic agreement. Semantic agreement becomes more likely in the agreement contexts to the right of the hierarchy (for detailed discussion see Corbett 2006, 206-237).

(40) The Agreement Hierarchy
attributive > predicative > relative pronoun > personal pronoun
(Corbett, 2006, 207)

The Agreement Hierarchy need not apply uniformly to potential candidates for agreement mismatches within a language. For plural agreement with collective nouns Levin (2001) provides a corpus study detailing differences between different types of collective nouns. Corbett and Mtenje (1987) discuss an example from Chichewa showing variable behaviour for different nouns with respect to semantic agreement (in this case agreement forms of classes 1/2 for animate noun phrases in the sg/pl respectively). The Chichewa noun *kamwana* "child" (class 7) allows semantic agreement in class 1 (associated with singular animate referent) for personal pronouns and object agreement marking (41), while semantic agreement in the same context is less acceptable for *nkhalamba* "old person" (gender 5) and not accepted for *chitsilu* "fool" (gender 6).

(41) Semantic agreement with *kamwana* "child" (class 7) in Chichewa (Corbett and Mtenje, 1987)

kamwana ka-mene ka-ma-gona mu-nyumba umu ka-mene
small-child(CL7) CL7-who CL7-habit-sleep in-house this CL7-who
ka-ma-pita ku sukulu ku London,
CL7-hab-go to school in London

a. mai ake a-ma-**ka**-konda **iko(ko)**
mother(CL1) his CL1-HAB-CL7-love CL7PRON
b. mai ake a-ma-**mu**-konda **iyo(ko)**
mother(CL1) his CL1-HAB-CL1-love CL1PRON
'the small boy who sleeps in this house who goes to school in London his mother loves him.' (Corbett and Mtenje 1987, 12, ex 15, glosses adapted)

As Johnson and Joseph (2014, 312) stress, at least some types of semantic agreement are in fact pragmatic in nature since they depend on the properties of the specific referent that is relevant to the discourse context.

Consider the following example from French. In a context with a non-specific use of the noun *personne* "person" the grammatical properties of the noun determine (feminine) agreement (42)-a. In a temporally anchored context, however, masculine agreement reflecting the sex of the referent becomes possible (42)-b.

(42) a. Quand j'appelle, la personne que j'ai au téléphone
when I-ring DET.FSG person(F) that I-have at-the phone
me dit toujours qu'elle ne peut pas m'aider.
1SG.DAT tells always that-**3FSG** NEG can NEG 1SG-help
When I ring, the person I get on the phone always tells me that they (lit. she) cannot help me.' (atemporal context).
b. La personne que j'ai eue au téléphone m'a dit
DET.FSG person(F) that I-have had at-the phone 1SG.DAT-has said
qu'**il** ne pouvait pas m'aider. (Fr)
that-**3MSG** NEG could NEG 1SG-help
'The person (a man) I had on the phone told me he could not help me.'
(temporally anchored context)

For semantic agreement to be an option the value of the agreement form has to correspond to a semantic property if used independently of formal agreement. Semantic agreement phenomena therefore provide evidence in favour of a symmetrical view of agreement for the agreement markers that allow them.

A special case of semantic agreement are antecedentless uses of agreement. For Jóola Fóoñi Creissels et al. (submitted) shows that apart from use as a relative pronoun agreeing with a head noun, a subset of relative pronouns with an agreement marker has antecedentless uses in free relatives whose semantic interpretation de-

pends on the noun class marker.[8] As Creissels stresses it is remarkable that these relativizers includes 4 classes of agreement forms (classes T, D, D' and N) that do not have uses with a corresponding head noun as a controller. In these cases, the class-marking on the relativizer is always semantic agreement.

(43) Jóola Fóoñi relativisers with antecedentless uses

relativizer	class-marker	translation
Ø-an	class A	'the person that'
k-an	class BK	'the people that'
y-an	class E	'the thing that
s-an	class S	'the things that'
b-an	class B	'the place where'
w-an	class U	'the thing that'
m-an	class M	'the manner how'
t-an	class T	'the precise place where'
d-an	class D	'the thing that'
d-ɐn	class D´	'the place within which'
n-an	class N	'the moment when'

(Creissels et al., submitted, ex 28)

4 Default agreement

Several uses of the term DEFAULT have to be kept clearly distinct: (i) normal-case defaults and (ii) exceptional case default (see Corbett 2006, 147-151 for details).

(44) a. **Normal-case default**
E.g.: In Spanish, verbs agree with their subjects.
b. **Exceptional-case default**
E.g.: In English, when the subject does not have any agreement features, the verb agrees in the 3sg form.

Exceptional case defaults with respect to agreement arise in a particular case of mismatch, namely when there are no feature specifications to agree with and the paradim has no dedicated form expressing lack of agreement. This is arguably the case for clausal subjects (45), predicates with a semantically deficient subject such as weather verbs and impersonal modals (46)/(47), but also in constructions without a nominative subject (48).

(45) Clausal subject

[8] Denis Creissels (p.c.) notes that at the present stage of the language *y-an, w-an, d-an* all meaning "the thing that" are in free variation in his corpus of Jóola Fóoñi.

[Ir al cine] **es** muy **divertido**. (Spanish)
go to-the cinema is.**3SG** very entertaining.**MSG**

Going to the cinema is very entertaining.

(46) Weather predicates

a. **Il** fait **froid**. (French)
3MSG makes.**3SG** cold.**MSG**
It is cold.

b. Na Gavajax ne **morozit**. (Russian)
in Hawaii NEG freeze.**3SG**
'It doesn't freeze in Hawaii.' (Perlmutter and Moore, 2002, ex 39)

(47) Impersonal modals

Il faut réparer la porte. (French)
3MSG be-necessary.PRES.3SG repair the door.

'It is necessary to repair the door.'

(48) No nominative subjects

V prudu ne **plavalo** kuvšinok. (Russian)
in pond NEG floated.N water-lilies.GEN

'There weren't any water lilies floating in the pond.'
(Perlmutter and Moore, 2002, ex4b)

As illustrated by the examples (45)-(48), the feature specification of the default agreement varies across languages. The default subject pronoun is masculine singular in French (46)-a/(47) and the default adjective form is masculine singular in French (46)-a and in Spanish (45). Default agreement on verbs is third singular in French and Spanish, while it is 3rd singular for verb forms marking person and number (46)-b but neuter for verb forms marking number and gender (48) in Russian.

The default agreement feature form depends on the type of agreement target. In German, verbs cannot have a non-agreeing form and the 3sg form provides the exceptional case default (49)-a. Pronouns cannot have a non-agreeing form and for expletive subjects the default values are 3neuter singular (49)-b. Adjectives, however, can appear without any suffix and in predicative constructions - that do not agree - it is this form that appears as in (49)-c and not the 3neuter singular strong or weak forms found with appositive adjectives as in (49)-d. (See Shlonsky (1997) for a detailed discussion of default agreement on the inflected negation in Modern Hebrew and Tóth (2011) for a comparison of default agreement on finite verbs and on inflected infinitives in Hungarian).

(49) a. Elegant Rollschuh zu fahren **ist** leider ziemlich schwer.
elegant rollerskate PRT go is.3SG unfortunately quite difficult

(German)

'It is unfortunately quite difficult to rollerskate gracefully.'

b. Gestern hat **es** geregnet.
yesterday has **3n.sg** rain.PTCP
'Yesterday it rained.'

c. Das Haus ist **schön** /***schöne** / ***schönes**
DET.N.SG house is.3SG beautiful /-.N.SG.NOM(STR) / -.N.SG.NOM(WK)
'The house is beautiful.'

d. das **schöne** Haus
DET.N.NOM beautiful.N.SG.NOM(STR) house

ein **schönes** Haus
a.N.NOM beautiful.N.SG.NOM(WK) house

For detailed discussion of defaults in morphology see the contributions to Gisborne and Hippisley (2017).

5 Agreement in coordinations

Agreement mismatches are not limited to contexts where a form with an agreement value has to be chosen even though the controller lacks the relevant feature specification (i.e. *default agreement*).

Coordinations provide another context that requires mechanisms for the choice of the appropriate agreement form. As Corbett (2006, 168) stresses these mechanisms are called RESOLUTION RULES even though the choice of an agreement form does not necessarily imply the resolution of a conflict between feature values. In the Tswana example (50) the coordination of two nouns with human reference that take a singular noun class 9 and a plural noun class 8/10 agreement appear with the the subject agreement corresponding to the noun class 2, (the plural of the noun class associated with human reference). The resolution rule for two noun phrases designating humans applies even though there is no gender mismatch between the coordinated nouns (neither in the singular nor in the plural).[9]

(50) a. qʰósí lí-ŋáká **bá**-ts-íl-è. (Tswana)
chief(9) and-doctor(9) CL2-come-PRF-FV
The chief and the doctor came.

b. Compare
(i) dì-qʰósí **dì**-ts-íl-è.
CL8/10-chief CL8/10-come-PRF-FV
The chiefs came.

[9]Denis Creissels (p.c.) confirms that the coordination of two class 8/10 plurals also takes class 2 agreement forms.

(ii) **dì**-ŋàkà dì-ts-íl-è.
CL8/10-doctor CL8/10-come-PRF-FV
The doctors came. (Creissels, 2003, 62, ex 9a-c)

As Corbett (2006, 256) notes, resolution is a particular case of semantic agreement. In addition to resolution rules, agreement with coordinations may also have an option to agree syntactically with the closest conjunct as in (51)-a.

(51) a. ža ʕomar w Kariim (Moroccan Arabic)
came.**3MSG** Omar and Karim
Omar and Karim came.
b. žaw ʕomar w Kariim
came.**3PL** Omar and Karim
Omar and Karim came.
(Benmamoun et al., 2010, 68, ex 2)

An agreement mismatch of a different type is found with plural nouns modified by a coordination of singular adjectives. As Bosque (2003) notes for Spanish, examples of this type of mismatch are possible under certain conditions (52)a-b but not generally (53).

(52) a. mis abuelas paterna y materna (Spanish)
my-PL grandmothers.FPL paternal.**FSG** and maternal.**FSG**
my maternal and paternal grandmothers (2 grandmothers)
b. los embajadores mexicano y argentino
DET.MPL ambassadors.**MPL** Mexican.**MSG** and Argentinian.**MSG**
the Mexican and the Argentinian ambassadors (2 ambassadors)
(Bosque, 2003, ex 9d/18a)

(53) *Los dos discos caro y barato que compraste
DET.MPL two LPs.**MPL** expensive.**MSG** and cheap.**MSG** that bought.2sg
ayer. (Spanish)
yesterday
Not "the two LPs, an expensive one and a cheap one, that you bought yesterday" (Bosque, 2003, ex 8a)

Bosque (2003) proposes that in Spanish this agreement mismatch is limited to relational adjectives (for an analysis of constructions combining plural nouns with coordinations of singular adjectives in Russian and Italian see Belyaev et al. 2015).

6 Theoretical issues

6.1 Less clear agreement features

The present section discusses three less clear instances of agreement features: Definiteness, respect/politeness and wh-agreement.

6.1.1 Definiteness

Definiteness is widely marked in the noun phrase, but it is typically not marked by agreement morphology (see Lyons 1999, 315). Definiteness is a property of the noun phrase as whole, not a lexical property of the head noun. Multiple marking of definiteness would therefore not be a case of asymmetric agreement in a way comparable to gender agreement in the noun or predicate agreement with an argument.

For Modern Hebrew Danon (2010) argues that definiteness should be analysed as a syntactic feature. Danon stresses that definiteness has to be understood syntactically and not semantically, as definiteness agreement is only found with (i) noun phrases where the noun is marked by the definite article *ha-*, (ii) noun phrases where the noun carries a pronominal possessive suffix, (iii) proper names and (iv) construct state nominals in which the embedded nominal is morphosyntactically definite (54-b).

(54) a. ha-sefer *(ha-)adom ne'elam. (Modern Hebrew)
the-book the-red disappeared
'The red book disappeared.'(Danon, 2010, ex2a)

b. dan makir et ha-yalda arukat *(ha-)raglayim.
Dan knows OM the-girl long the-legs
'Dan knows the girl with long legs.' (Danon, 2010, ex 16)

Sichel (2002, 303) points out that the definiteness marker can be separated from the adjective by negation and certain modifiers. These examples suggest that if definiteness on the adjectives is an instance of agreement, the exponent would be a phrasal inflectional marker.

(55) a. ha-yalda ha-**bilti** memuSma'a ha-SliSit yac'a me-ha-kita.(Mod.
the-girl the-**NEG** disciplined the-third left from-the-classroom
Hebrew)

'The third non-disciplined girl left the classroom.'
(Sichel, 2002, 303, ex 16b)

b. Za kvar [ha-pakid ha-**legamrey** melbulbal ha-revi'i]
this already the-clerk the-**completely** confused the-forth
Se-dibarti ito hayom.
that-talked.I with-him today

'This is already the fourth completely confused clerk I've talked to today.' (Sichel, 2002, 303,ex 16d)

Independently of the correct analysis of definiteness marking in Modern Hebrew and Arabic NPs (cf. Fassi Fehri 1999), it has to be stressed that multiple exponence of definiteness in the noun phrase is not sufficient to postulate agreement in definiteness.

Modern Greek allows multiple definite determiners in a noun phrase, termed *polydefiniteness* or *determiner spreading* in the literature. Kolliakou (2004, 280-281) argues in detail that Modern Greek polydefinites cannot be analysed as definiteness agreement as proposed for Modern Hebrew. In particular Modern Greek polydefiniteness is optional for preverbal adjectives (56)-a and obligatory for post-nominal adjectives (56)-b and allowing adjectives with and without polydefiniteness simultanously (56)-c (Polydefinite noun phrases in Modern Greek have been analysed as indicative of more syntactic structure than the simple form: the proposed syntactic structures include reduced relatives or close apposition see Alexiadou and Wilder (1998); Lekakou and Szendröi (2014) and references cited there).

(56) a. to kokino to podilato (Modern Greek)
to kokino podilato
the-N.SG red-N.SG the-N.SG bike-N.SG
'the red bike'

b. to podilato to kokino
*to podilato kokino
the-N.SG bike-N.SG the-N.SG red-N.SG

c. to kokino podilato to kenurio
the-N.SG red-N.SG bike-N.SG the-N.SG new-N.SG
'the new red bike' (Kolliakou, 2004, 1a/b & 2a/b)

In the rich literature on Scandinavian languages, the enclitic definiteness marking is generally considered an enclitic determiner (see e.g. Delsing 1993; Julien 2005; Dahl 2015). The enclitic definiteness marker does not behave as an agreement marker insofar as the presence or absence of the marker has a semantic effect in certain environments, with the enclitic determiner marking a specific reading (57)-a while the absence of the enclitic D results in a non-specific or a generic reading (57)-b/(58).

(57) a. **Den** dag-**en** jag måste sluta med mitt
DEM day-def I had-to.PRS/PST close.INF with my
pensionat (Swedish)
guesthouse
The day that I had to close my guesthouse (past, temporally anchored particular day)

b. **Den** dag jag måste sluta med mitt pensionat
DEM day I had-to.PRS/PST close.INF with my guesthouse

The day that I have to close my guesthouse (present/future, atemporal)
(examples from Petterson (1976) cited apud Gunkel (2007))

(58) Den spelare(?-n) som får hög-st-a siffra-n börjar.
dem player-def REL gets highest number-DET begins
The player that gets the highest number begins. (atemporal) Gunkel (2007, 233, ex 65a)

In summary, while definiteness is plausibly an agreement feature in Modern Hebrew (and in Arabic varieties), multiple expressions of definiteness are not necessarily best analysed as exponents of definiteness agreement.

6.1.2 Politeness/Respect

Politeness is a well-known factor in language use. The question whether Politeness/Respect should be analysed as a morphosyntactic feature is a matter of analysis.
As Corbett (2012, 138-139) points out, in certain languages respect can be analysed as a condition on the use of an independently attested morphosyntactic feature of the language. In the French ex. (59)-a the value PLURAL of the feature NUMBER is used for polite address. The singular agreement found on predicative adjectives with the polite form of address is then analysed as a case of semantic agreement.

(59) a. Vous êtes **brutal**. (Fr)
2**PL** BE.PRES.2**PL** brutal.**MSG**
You(sg.polite) are brutal. (polite 2sg address)
b. Vous êtes **brutaux**.
2PL BE.PRES.2PL brutal.**MPL**
You.pl are brutal. (2pl address)

Other instances of respect as a condition on a morphosyntactic feature are PERSON in Italian polite address (where polite address is 3rd person), and GENDER in Lak (where polite address to women outside the family is marked as gender III) (for details see Corbett 2012, 138-139).

As noted by Corbett (2012, 140) the analysis of honorification in Korean and Japanese as values of a feature RESPECT is controversial (agreement analysis of honorification: Pollard and Sag 1994, 96-101 for Korean, Boeckx 2006 for Japanese, against honorification as agreement Kim et al. 2006 for Korean and Bobaljik and Yatsushiro 2006 for Japanese).

There are languages in which politeness is plausibly analysed as a morphosyntactic feature. Corbett (2012, 141) gives the example of Muna (Austronesian), a language that marks polite address by a dedicated agreement morpheme (for discussion of further examples of RESPECT as an agreement feature see Corbett 2012, 141-145)

(60) Numbert and politeness markers in Muna

kala 'go'	*singular*	PLURAL
2 PERSON NEUTRAL	o-kala	o-kala-amu
2 PERSON POLITE	**to**-kala	**to**-kala-amu

(van den Berg 1989:51,82 apud Corbett 2012, 141, ex. 39)

Basque has special forms expressing ALLOCUTIVITY, defined as "the encoding in the conjugated verb form of an addressee that is not an argument of the verb" (Hualde, 2003, 248). The neutral 3sg form *da* of the intransitive auxiliary is given in (61)-a. With an addressee that is treated in the familar 2sg form, the use of the allocutive form (*duk* for a male addressee and *dun* for a female addressee) is obligatory (61)-b/c. Hualde (2003, 249) stresses that allocutivity is different from 2sg 'ethical datives', since contrary to ethical datives allocutivity does not indicate that the addressee is affected by the event described.

(61) a. Jon etorri **da**. (Basque)
come AUX.3ABS
'Jon has come.'

b. Jon etorri **duk**.
come AUX.3ABS/2M.ALLOC
'Jon has come.' (familiar, male addressee)

c. Jon etorri **dun**.
come AUX.3ABS/2F.ALLOC
'Jon has come.' (familiar, female addresse)
(Hualde, 2003, 249, ex 185a-c)

The morphology and syntax of allocutive forms is complex and variable across different varieties of Basque (see Hualde 2003, 249-52). In traditional usage, allocutivity clearly differs from non-allocutive person agreement since allocutivity is a main clause phenomenon that is not used in embedded clauses or in interrogatives (Hualde, 2003, 250). While the restriction to main clauses does not hold for all varieties, Hualde (2003, 252) notes that in the Zuberoan Basque variety allocutive forms have been generalised and are obligatorily employed with a single addressee (whether familiar or polite), while plain forms are used with plural addressees and in embedded and in interrogative clauses. (For a discussion of allocutivity phenomena crosslinguistically, see Antonov 2015).

6.1.3 Wh-agreement

A further type of agreement proposed in the literature is wh-agreement. In contexts of wh-extraction certain languages mark extraction by the use of special verb forms on the extraction path (Chung and Georgopoulos 1988, Chung 1998, 2013, Watanabe 1996).

Wh-agreement is studied in detail for Chamorro by Chung 1998, 2013). In this language the verbs of constituent questions, relative clauses, and other wh-constructions agree with the moved wh-phrase in case (Chung, 2013, 252).

(62) a. Hayi lumi'i' *t* i lahi-mu? (Chamorro)
who? **WH[NOM]**.see the son-2SG
'Who saw your son?'
b. Hayi ni-li'e'-ña i lahi-mu [ ] ?
who? **WH[OBJ]**-see-3SG the son-2SG
'Who did your son see?' (Chung, 2013, 252, ex 3a/b)

As Chung (1998, 234) notes, morphological marking of extraction configurations by special verbal inflections is also described for other languages (Tuller (1986) for Hausa, Clements (1984) for Kikuyu and Haïk (1990) for Moore). Furthermore, Chung points out that other analyses have treated extraction marking in terms of the Binding Theory (Chung, 1998, 235) (see also Donohue (2003) for an alternative analysis for Chamorro). Analysing the special verbal inflection as wh-agreement in Chamorro and Palauan is therefore an analytical choice (Chung, 1998, 235). For her analysis of these verb forms as wh-agreement in Chamorro, Chung (1998, 235) stresses that wh-agreement is not a canonical type of agreement: in contrast with argument-predicate agreement and head-modifier agreement, wh-agreement does not rely on a syntactic configuration between two associates.

6.2 Variable plural agreement patterns

For Classical Arabic and for Cushitic languages it has been observed that plural noun phrases (or certain types of plural noun phrases) do not have uniform agreement forms.

Classical Arabic In Classical Arabic, nominal plurals are generally formed by templatic morphology, the so-called BROKEN PLURALS, plurals formed by suffixation are called SOUND PLURALS. The morphological distinction between the two plurals corresponds to a semantic distinction. Wright observes that broken plurals "differ entirely from the sound plurals; for the latter denote several distinct individuals of a genus, the former a number of individuals viewed collectively the idea of individuality being wholly suppressed" (Wright 1974:i, 233, cited apud Belnap 1999, 171).

In Proto-Semitic plurals were suffixal. Broken plurals were an innovation of Classical Arabic appearing with feminine singular agreement, unless the referents were male (Hämeen-Anttila, 2000, 603). For inanimate referents, the gender of the singular does not influence the agreement in the plural (63) (*-at* is the feminine suffix - for a description of agreement on verbal, nominal and adjectival predicates in Classical Arabic see Reckendorf 1921, §15, §16, §41).

(63) Classical Arabic

GENDER OF SINGULAR N	SINGULAR NOUN	PLURAL NOUN	+ MODIFIER
feminine	qiṣṣ-at- story.F	qiṣaṣ- stories.PL 'new stories'	ğadi:d-at- new.FSG
masculine	khabar- story.M	'akhba:r stories.PL 'new stories'	ğadi:d-at- new.FSG

(Hämeen-Anttila, 2000, 604).

The historical distinction between 3fsg as a collective agreement and 3pl-forms as plural agreement is still active in the modern Arabic varieties as plurals have the option of agreeing in the 3fsg-form or in the 3pl-form. Belnap (1999, 171) gives an example from Cairene Arabic. With inanimate plurals the 3fsg agreement is more common (64)-a, while with human head nouns generally take 3pl agreement but 3fsg is also found (64)-b. Belnap points out that for head nouns with a numeral 3pl agreement is nearly categorical independently of the animacy of the head noun (64)-c.

(64) a. biyuut kabiir-a (kubaar) (Cairene Arabic)
houses.PL large-**FSG** large.**PL**
'large houses'
b. riggaala kuwayyisiin (kuwayyis-a)
men.PL nice-**PL** nice-**FSG**
'nice men'
c. talat sitt-aat kuwayyis-iin
three women-FPL nice-**PL**
'three nice women' Belnap (1999, 171, exs. 6-8)

The agreement patterns for plural NPs in Classical Arabic and its modern descendants show that "agreement form found with 3fsg pronouns" should not necessarily be taken to be identical to "3sg-agreement" as the same form also functions as collective agreement (see **?** for discussion of the range of semantic effects of the 3fs-agreement in Arabic). In the same way, the agreement appearing with 3pl pronouns does not necessarily correspond to 3pl-agreement as this agreement form plausibly includes an additional semantic component of distributivity/ plurality of identifiable individuals.

Somali Somali does not mark plural on the determiners. Determiners mark masculine by the formant *-k-* (allomorphs *-g-/-h-* after vowels) and feminine by the formant *-t-* (allomorph *-d-* after vowels) (Saeed, 1999, 28-29).

Singular and plural of a noun may (65)-a/b/d but need not (65)-c differ in gender.

(65) a. aayád 'miracle' aayadó 'miracles' (Declension 1)
aayád-da 'miracle-DET.F' / aayadá-ha 'miracles-DET.M'

b. kúray 'lad' kurayó 'lads' (Declension 2)
kúray-ga 'lad-THE.M' / kurayá-da 'lads-DET.F'
c. béri 'day' beryó 'days' (Declension 3)
béri-ga 'day-DET.M' / beryá-ha 'days-DET.M'
d. **Plural by change of accentual pattern** (Declension 5):
àwr 'male camel' áwr 'male camels'
àwr-ka 'male camel-DET.M' / áwr-ta 'male camels-DET.F'
(Saeed, 1999, 59-61)

The nouns of declension 5 formed by a change in pitch accent show an idiosyncratic agreement pattern: their plural form allows both 3pl and 3fsg agreement on the verb (66).

(66) a. Caráb-tii wày yimaadeen. (Somali)
Arabs-DET.F DM-CPRO3PL came**.3PL**
'The Arabs came.'
b. Caráb-tii wày timi.
Arabs-DET.F DM-CPRO3FSG came.**3FSG**
'The Arabs came.' (CPRO = clitic verbal pronoun, DM = declarative marker)
(Saeed, 1999, 61, ex18a/b)

As Zwicky and Pullum (1983) convincingly show for Somali, this cannot be analysed as agreement according to phonological form of the plural noun. According to Puglielli and Ciise (1984, 81-85) the 3sg-agreement reflects a collective interpretation of nouns in this declension. The accentual pattern of Declension 5 is typical of feminine nouns in Somali, and unlike the other declensions, Declension 5 does not have segmental material marking the plural. This is consistent with a double analysis of these nouns as derived collectives and as an alternative plural formation, reflected in the two choices of agreement. This double agreement behaviour of a subtype of nouns in Somali is not exceptional within the Cushitic languages. Mous (2012, 368-369) states that many Cushitic languages have two options with multiple reference subjects with a choice of either agreement in gender or agreement in the 3pl-form.

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7 Further reading

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