Guglielmo Cinque

On the Merge position of additive and associative plurals

1 Introduction

Differently from the additive plural, which refers to several instances of X, the associative plural refers to a group consisting of X and other individuals associated with X.\(^1\) As noted in fn. 1, in some languages (e.g., Turkish, Ainu, Japanese) ‘additive’ plurals and ‘associative’ plurals are expressed by one and the same morpheme; in others (Bangla (Biswas 2013, 2014), Garo (Burling 2004: 179f), Hungarian (see below)), by distinct morphemes. This suggests that the two plural notions share some common component while differing with respect to other components. Some languages capitalize on the shared component thus using one and the same morpheme (lexically underspecified with respect to the two notions), while other languages capitalize on the differentiating components thus using different morphemes, according to a pervasive source of lexical variation among languages (Cinque 2015a).\(^2\) In this article just one aspect of their syntax will be in focus: their Merge position within the extended projection of the NP, where they appear to occupy two distinct positions.

\(^1\) I thank Paola Benincà, Richard Kayne and two anonymous reviewers for their helpful comments. For a general discussion of associative plurals see Corbett and Mithun (1966), Corbett (2000: 107-110), Moravcsik (1994, 2003), Kibort (2008), Daniel and Moravcsik (2005, 2013), and the other references given below. Languages differ as to how many categories in the so-called ‘Animacy Hierarchy’, (1\(^{st}\) and 2\(^{nd}\) person pronominals > 3\(^{rd}\) person pronominal > proper names > kinship terms > human definite nouns > other animate (> inanimate)) accept an associative plural (interpretation). While English and Italian restrict their associative expressions to (plural) 1\(^{st}\) and 2\(^{nd}\) person pronominals, Central Alaskan Yup’ik draws the line between proper names and the rest (Corbett 2000: 107-8). Hungarian allows associative to be formed from pronominals, proper names, kin terms, title nouns and the noun ‘neighbour’, but not other definite nouns (Moravcsik 2003: 472; Dekany 2011: §9.4), while the split in Slovenian is between human definite and other animate nouns (Lanko Marušič, p.c.). Whether ‘associative plurality’ should be considered a number, as (additive) plurals, duals, etc., or not (Corbett 2000: §4.3.4 argues that it should be regarded as a category distinct from ‘number’) is not crucial here. Nonetheless the fact that in nearly half of Daniel and Moravcsik’s (2013) sample of languages associative and additive plurals are morphologically identical seems to suggest that they belong to the same category.

\(^2\) Alternatively, the single morpheme which expresses the shared component is accompanied by different silent elements, while the two distinct morphemes are specialized to express the differentiating components of meaning.

https://doi.org/10.1515/9781501506734-018
2 The evidence

That associative and additive plurals are merged in two different positions is particularly evident in certain languages, including Turkish, Ainu, Hungarian and Japanese.

As Görgülü (2011) notes, in Turkish, the additive plural morpheme is closer to the noun than possessives (see 1a.), while the same morpheme in its associative interpretation is further away from the noun than possessives (see 1b.).

(1) a. abi-ler-im (additive plural)
   brother-PL-1SG.Poss
   ‘my brothers’
   (Görgülü 2011,72 and Jaklin Kornfilt, p.c.)
   
   b. abi-m-ler (associative plural)
   brother-1SG.Poss-PL
   ‘My brother and his family/associates/friends’
   (Görgülü 2011,73 and Jaklin Kornfilt, p.c.)

With Görgülü (2011) and Nakanishi and Ritter (2009) I take this to mean that the two plurals occupy two distinct projections. Under the Mirror Principle, which yields the predominant, though not the exclusive, order of suffixes (cf. the Yupik case below) the associative plural projection turns out to be higher than the projection hosting possessives, which in turn must be higher than that hosting additive plurals. See (2):

---

3 Görgülü (2011) also argues that in addition to their different morphosyntactic properties additive and associative plurals also differ semantically. The former, attaching to proper names, kinship terms and common nouns, induces both collective and distributive interpretations while the latter, attaching just to proper names and kinship terms induces only a collective/group interpretation (with a focal referent). Richard Kayne mentions the possibility that the associative -ler is actually the same additive -ler appended to a silent AND FRIEND (abi-m-AND-FRIEND-ler), thinking of my brother and his friends, my brother and company in English. As a matter of fact the associative plural in Basque is expressed by ‘and’ following a proper name (*John and* = John and FRIENDS/OTHERS) (Data Point – Basque/ The Associative Plural, WALS online: http://wals.info/valuesets/36A-bsq; perhaps Spanish and Venetian 1st person plural pronouns nosotros/n(o) ialtri ‘we’ is a type of associative (‘I and others’). Also see colloquial Italian (*noi) siamo andati con Maria al cinema (we = I and Maria) went.1st.pl with Maria to the movies).
Exactly the same pattern is found in Ainu (language isolate). See (3):^4

(3) a. *ku-yup-utar-i* (additive plural)
   1sg-elder.brother-PL-poss
   ‘my elder brothers’

b. *ku-yup-i-utar* (associative plural)
   1sg-elder.brother-poss-PL
   ‘my elder brother and others’

A similar case is provided by Hungarian, which differently from Turkish and Ainu, distinguishes morphologically the two plurals, but appears to merge them in the same two different positions, with additive plurals preceding (4a.), and associative plurals following, the possessive suffix (4b.)

(4) a. *barát-ai-m* (additive plural)
   friend-PL_additive-my
   ‘my friends’
   (Hirose 2004, 335)

b. *a barát-om-ék* (associative plural)
   det friend-my-PL_assocative
   ‘my friend and his associates’
   (Hirose 2004: 335)

In Hungarian the two plurals can even co-occur on the same noun, in the expected order N-PL_additive-Poss-PL_assocative. See (5):

---

^4 From WALS online Feature 36A: The Associative Plural of WALS. Also see Hirose (2004: §3.1), based on Shibatani (1990: 32).
(5) a. *barát-ai-m-ék* (Julia Horvath, p.c.)
   friend-PLAdditive (of possessed)-1SG possessor-PLAssociative
   ‘my friends and their associates’

b. *barát-a-i-d-ék-at* (Dékány 2011: §9.4, ex.(29))
   friend-Poss-PLadditive-Poss.2sg-PLassociative-Acc
   ‘your friends and their associates’

Japanese as well gives evidence that the two plurals occupy distinct positions. Even if morphologically identical, so that a single occurrence of the suffix (*–tachi-/-tati-*) is ambiguous between an additive or associative interpretation (see (6)), the two suffixes can co-occur, in the order N > PLAdditive > PLAssociative, as in (7):

(6) a. *kyooju-tachi-ga*
   professor-PL-NOM
   ‘More than one professor’

b. ‘The professor and some others’
   (Hirose 2004: 332)

(7) *gakusei-tati-tati*
   student-TATIAdditive-TATIAssociative
   ‘the students and their associates’
   (Ueda and Haraguchi 2008: 237)

5 Julia Horvath tells me (p.c.) that the associates must be interpreted as joint/shared among my friends. They cannot be distributive, i.e., cannot be different associates for each friend.

6 Hungarian has another possessive suffix, lower than additive plurals.

7 See also Nakanishi and Tomioka (2004). Hirose (2004) explicitly proposes that while additive plurals adjoin to NP associative plurals adjoin to DP, and discusses (§4.1) some consequences which follow from the higher merger of associative plurals in Japanese.

8 The associative plural (ia.) (though not the additive one (ib.)) can apparently be reiterated, modifying a complex DP, already modified by one instance of the associative plural:
   (i) a. *Taroo-tati-tati*
      Taroo-TATI-TATI
      ‘Taroo and his associates and their associates’
      (Ueda and Haraguchi 2008: 237)

   b. *gakusei-tati-tati*
      student-TATI(PL)-TATI(PL)
      ‘*the students’
      ‘the students and their associates’
      (Ueda and Haraguchi 2008: 237)

Not all speakers accept (7) and (i) above. I thank a reviewer for pointing this out to me.
I thus take the order $N \cdot PL_{Additive} \cdot PL_{Associative} (-Case)$ of Japanese to be derived from a structure in which the additive plural is lower than the associative plural by raising the NP with pictures-of-whom pied piping around the ‘heads’ $PL_{Additive}$, $PL_{Associative}$ (and Case) as is typical of well-behaved head-final languages (cf. Cinque 2017a).

The opposite order $N \cdot PL_{Associative} \cdot PL_{Additive}$ which is found in Yup’ik (Corbett and Mithun 1996:12) (cf. (8) and (9)) must instead derive from the same structure by raising the NP in one fell swoop (without reversing their order):9

(8) cuna-nku-t
   Cuna-PL_{associative} PL_{additive}
   ‘Cuna and his associates’

(9) cuna-nku-k
   Cuna-PL_{associative}-Dual
   ‘Cuna and his associate (refers to two people)’

3 The respective position of additive and associative plurals

3.1 Additive plurals

Clearer evidence on the position of additive plurals within the nominal extended projection comes from those languages where additive plurals are expressed by a free morpheme.10 Cross-linguistic evidence appears to point

---

9 One reviewer wonders whether “the additive morpheme here modifies the number of associates of Cuna, rather than the noun itself (being the latter a proper name)”. If so the behaviour of the additive morpheme would be different from its typical one of changing the number of the noun. However, the fact that in (9) the dual interpretation is not on the number of associates, but on the number made up by Cuna and his associate makes one think that in (8) too the plural refers to a plurality made up by Cuna and associates rather than by just the associates. This recalls the colloquial Italian case mentioned in fn. 3 above.

10 Bound morphemes, which end up being affixed to the noun (and often, for concord, to other nominal modifiers as well) do not give as transparent an indication of their position of Merge.

I limit here reference to ‘Plural’, rather than the more general ‘Number’, as it is not at all clear whether other additive numbers (dual, trial, paucal) occupy the same position of Merge. As a matter of fact, Henderson (1995: 73) reports that in the Papuan language Yele dual and plural
to a location of Plural (Number) between cardinal numerals and adjectives (cf. also Dryer 1989). Interestingly, this position appears to correspond to the unique semantic scope position of Number, which Vennemann (1973: 44f) and Heycock and Zamparelli (2005: §4) locate between Cardinal numerals and adjectives.

Here we present a number of representative cases, first of the ‘direct’ order Numeral_{Cardinal} PL <Adjective> N <Adjective>, and then of the mirror-image order N Adjective PL Numeral_{Cardinal}. The two orders are arguably derived from a unique order reflecting the relative scope of the elements (i.e. Dem Num_{Card} CFL PL Adj N) via movement of NP involving pied piping of the picture-of-whom type and of the whose-picture type, respectively (see Cinque 2017a). Other orders, like that of Zaiwa (Dem N Adj Num_{Card} CLF PL – Wannemacher 2010) are presumably derived with a mixture of movements (raising of NP above AP and then raising of NP AP without pied piping above Num_{Card} CLF PL – see Cinque 2005, 2017a for the derivation of different orders).

The direct order of Numeral_{Cardinal} > Plural > Adjective (modulo the Adjective in postnominal position for some of them) is found in Oto-Manguean (Hnonho, Copala Trique), Mayan (Sipakapense Maya), in Austronesian (Hawaiian), and non-Austronesian Papuan (Kuot). See for example (10) to (14):

(10) ár 'bede yoho ya ndo Ø mì=n-jödö
    SG.3POS story two PL man REL 3.IMP=MED-brothers

...can co-occur (see (i)), thus betraying their distinct Merge position (“[t]wo number markers are used, dë for dual items and yoo for plural animate items”):

(i) U kpâm dê y:oo
    His wife DU PL
    ‘his two wives’

Also see the co-occurrence of dual and nonsingular (plural) in the Papua New Guinea language isolate Kuot (Lindström 2002:147), with raising of the noun around the two morphemes without pied piping:

(ii) alaŋ alaŋ-ip alaŋ-ip-ien
    road(sg) road-nsg road-nsg-dl
    ‘road’ ‘roads’ ‘two roads’

As well as the co-occurrence of dual and plural in the Austronesian language Biak (Dalrymple and Mofu 2013: 48).

11 More precisely, between numeral classifiers, themselves below cardinal numerals, and adjectives. See below.

12 Pace Sauerland (2003), who locates Number above DP. On the original proposal for a separate projection of (Additive) NumberP below DP see Ritter (1991), and also Picallo (2008).
On the Merge position of additive and associative plurals

‘the story of two men who were brothers’ 
(Hnonho Otomi – Oto-Manguean – Palancar 2009:163)\(^{13}\)

(11) \(\text{wahnux1 nix nee zah1 yoh}\)
three PL knife good that
‘those three good knives’
(Copala Trique – Oto-Manguean – Hollenbach 1992:280)\(^{14}\)

(12) \(\text{keb’ ke’q nim-a tz‘i’}\)
two PL big-aff dogs
‘two big dogs’
(Sipakapense Maya – Mayan – Barrett 1999:200)

(13) \(\text{élua a’u mau ia}\)
two my PL fish
‘my two fishes’
(Hawaiian – Austronesian – Dryer 1989, 866; from Elbert and Pukui 1979: 159)\(^{15}\)

(14) \(\text{miro naien ma kamilip mila murum}\)
this three PL yam Rel good
‘these three good yams’
(Kuot – East Papuan – Chung and Chung 1993: 19)

The mirror-image of Numeral\textsuperscript{Cardinal} Plural and Adjective is found in several other languages including the following:

(15) \(\text{nìsì wònğjüwe e’ câk}\)
eyes red PL two
‘two red eyes’
(Fali – Adamawa – Kramer 2014: 231)\(^{16}\)

(16) \(\text{Nēb soon bəd ñìrā}\)
person good PL two
‘two good people’
(Samba Leko – Adamawa – Fabre 2004: 194f)\(^\text{17}\)

\[(17)\] naŋ ŋu ɔvu zam voŋ jiu hai sam
this 1sg GEN house be big big PL three
‘These three big houses of mine’
(Leinong Naga – Sino-Tibetan (Kuki-Chin) – Ohn 2010: 88)\(^\text{18}\)

\[(18)\] sira kokan la telu nene nap-a sup-e la a-pisi pani-la
female small PL three these Rel chief PL 3Pl-spoke to-3Pl
‘These three girls that the chiefs reprimanded’
(Lewo – Oceanic – Early 1994:65)\(^\text{19}\)

\[(19)\] baha waitnika araska karna nani wâl ba
these man horses strong PL two def/top
‘these two strong horses of the man’
(Miskito – Misumalpan – Salamanca 2008: 116)

As noted above, in languages that have numeral classifiers co-occurring with card-
dinal numerals and additive plurals, additive plurals appear between the numeral
classifier, itself below cardinals, and adjectives, in the orders in (20), arguably
derived from Dem Num\textsubscript{card} CLF PL Adj N via different options of NP raising with
for some examples:\(^\text{20}\)

\[(20)\] a. \textbf{Num CLF PL} Adj N Dem (Mayan: Jakaltek; Jucatec,..)
b. \textbf{Dem Num CLF PL} N Adj (Mon-Khmer: Khasi,..)
c. \textbf{Num CLF PL} N Adj Dem (Malayo-Polynesian: Northern Roglai;
Tai-Kadai: Nùng,..)

\[(21)\] caw-\textit{aŋ} heb naj winaj
\textbf{two-numeralCLF} PL nominalCLF (gender?) man

\(^{17}\) The order of Samba Leko nominal modifiers is: N Adj PL Num\textsubscript{card} Dem.
\(^{18}\) Another Sino-Tibetan language displaying the same order is Dzongkha (Gelles 2010: 3).
\(^{19}\) Other Oceanic languages displaying the order N Adj PL Num\textsubscript{card} are Daakaka (von Prince
2012:91), Lenakel (Lynch 1978: 74), Sinaugoro (Kolia 1975: 124), Ske (Johnson 2014: §2.4), and
Tawala (Ezard 1997: 147).
\(^{20}\) Although in many languages numeral classifiers and number markers cannot co-occur, a fact
that has been elevated to a universal (Borer 2005: Chapter 4, p. 8–10), these languages show that
there is no absolute ban on their co-occurrence. See also Gebhardt (2009).
‘two men’
(Jacaltec – Maya – Craig Grinevald 1977:143)

(22) ʔaar tllii kii miaw
    two  CLF  PL  cat
‘two cats’
(Khasi – Mon-Khmer – Rabel 1961: 52; from Dryer 1989: 874)21

(23) Cáh mạhn khŏhn dāhm-di hc
    CLF  PL  feather  black
‘the feathers were pitch black’

    two  CLF  PL  child  good  3p  this  in  house
‘these two good children of his in the new house’
(Northern Roglai – Malayo-Polynesian – Thurgood, Thurgood and Li
2014: 149)

(25) to  upat no  buuk  no  mgo  kamuti
    DET  four  LK  unit  LK  PL  camote
‘four (units of) camote’ (four camotes)
(Agusan Manobo – Austronesian (Philippine) – Schumacher and
Schumacher 2008: 22)

3.2 Associative plurals

The fact that nominal extended projections containing associative plurals are
necessarily definite (pronominals, proper names, and definite NPs) suggests that
associative plurals can only modify (definite) DPs, nothing smaller; that is to say,
they must c-command a definite DP. This is natural if one considers the fact that
associative number applies to individuals rather than to something which is still
a predicate (as is arguably the case with additive plurals – Kiparsky 2014:118f –
among others). Interesting confirmation for a Merge position of the associative

21 The order of nominal modifiers given in Rabel (1961:131) is <Qall> Dem Num CLF PL N Adj
<Qall>.
22 The overall order of nominal modifiers given by Saul and Freiberger Wilson (1980) is: Num
CLF PL N Adj Poss Dem. With numeral ‘one’ the order is: CLF N Adj Num (p.14).
plural higher than DP comes from the relative pre-nominal word order of the Associative Plural morpheme and the determiner in Muna. See (26):

(26) no-hamba  ndo  Wa  Marangkululi
    3sR-chase  PL_{Associative}  art  Marangkululi
    ‘He chased Marangkululi and her friends’
    (Muna - Malayo-Polynesian, (van den) Berg 1989: 108)

and the mirror-image order N-art-Associative Trial of Urama in (27):23

(27) Karika=i=obi  asio  p-a’ai  bi=mo
    Karika=DEF=TRIAL  sneeze  DPST-do  TR=PL
    ‘Karika and two others sneezed.’
    (Urama – Papuan (Trans-New Guinea) – Brown, Muir, Craig, and Anea 2016: 25)

This proposal is reminiscent of Li’s (1999) idea that the Chinese associative plural morpheme -men raises from Number to the proper name in D, and Hirose’s (2004, 333) proposal that the Japanese associative -tati- adjoins to DP (also see Ueda and Haraguchi (2008: 237) -tati- as a D°). Biswas (2013, 2014), following Chacón (2011), also assume that the Bangla associative plural marker -ra is higher than DP, and so does Forbes (2013) for the associative plural morpheme dip in Gitksan (Tsimshianic). Nakanishi and Ritter (2008) have similarly suggested that associative plurals are merged in a group phrase, GrP, projected outside DP.

4 Conclusion

The partial map of the fragment of the nominal extended projection encompassing additive and associative plurals thus seems to be24:

---

23 “Within the noun phrase, the trial clitic =obi appears outside of the definite article clitic. [(26)] represents an associative trial” (Brown, Muir, Craig, and Anea 2016: 25).

24 The Hungarian example (4)b and the Japanese example (5)a above, and the Chuvash (Tur- kic) example in (i) from WALS online, seem to indicate, under the Mirror Principle (Baker 1985), holding pervasively but not exclusively (see the case of Yup’ik above, in (8) and (9)), that the associative Plural projection is below the Case projection (see Dékány 2011: §9.4.1 on Hungarian and Forbes 2013 on Gitxsan): (i) ɨvāl - se - n - e kaj - sa  kil - t - ēm
    son - PL_{Associative} - obl  – DA  go  - CONV  come  - pfv  - 1
    ‘I went to my son’s (to my son and his family)’
Actual orders like the (Case) PL\textsubscript{associative} Det N of Muna above, or the mirror-image N-PL\textsubscript{associative} Case one of Japanese are derived via the two options in which the core of the extended projection, the NP, raises to derive the canonical head-initial and head-final word orders (\textit{whose-picture} pied piping and \textit{picture-of whom} pied piping – Cinque 2017a), with the consequent segregation of heads on one side of the N and phrases on the other side.\textsuperscript{25}

\textbf{Acknowledgments:} Ad Andrea, in ricordo dei suoi anni da studente a Padova e a Campi.

\textbf{References}


Aghul and Bagvalal (Northeast Caucasian), Khakas (Turkic), Meithei (Tibeto-Burman) also show the order N-PL\textsubscript{associative} Case in the WALS online Feature 36A (The Associative Plural). In the same archive Dani (Lower Grand Valley) (Papuan) shows that the associative plural suffix can be followed by Case and Topic suffixes. \textsuperscript{25} But see Cinque (2017b) for the possibility of reconciling such apparent segregation of heads and phrases with Kayne’s (2016) idea that heads are invariably silent. For a different movement analysis altogether, see Vassilieva (2005, 2008).


