Chapter 19

Agreement

Roberta D'Alessandro

19.1 Introduction

The term "agreement" usually refers to a relation between two or more items in a sentence or a phrase. This relation can be explicitly (i.e. morphologically) marked, or not. According to Steele (1978:610), '[t]he term agreement commonly refers to some systematic covariance between a semantic or formal property of one element and a formal property of another'. The term co-variance, however, does not explicitly take into account the fact that agreement usually takes place between a core element and one or more dependent elements. The definition we will be using in this paper is therefore the following:

> Agreement is a syntactic dependency relation 'cross-linking' two or more elements. This relation is very often made explicit by means of a marker of some kind on one or all the elements between which it is established.

This definition draws a distinction between a syntactic dependency, called agreement, and its marking, usually also called agreement in the literature. This chapter will consider both the syntactic and the morphological aspects of agreement.

Romance languages have played a substantial role in the development of the theory of agreement as we know it today. In Romance, agreement systematically obtains between the nominative subject and the finite verb and between the article, adjectives, and the noun within a DP. Other typical Romance phenomena, such as clitic doubling or subject clitics, are also considered agreement. Furthermore, some unusual agreement patterns are found in Romance, such as the inflected infinitive in Portuguese and Sardinian, some anti-agreement-like effects in central Italo-Romance, impersonal *si* agreement patterns resembling quirky subject agreement (D'Alessandro 2004), and agreement with adverbials and topic-oriented agreement in some upper-southern Italo-Romance dialects (D'Alessandro 2017). In this chapter mostly core agreement facts will be discussed. For exceptional agreement patterns, the reader is referred to D'Alessandro and Pescarini (2016). The aim of this chapter is to highlight the milestones of the theory of agreement that have been established based on Romance data.

I have selected only some of the agreement facts that have inspired contemporary syntactic theory: starting from Phrase Structure Rules (PSRs), which have been the basis for computational agreement systems, through the Government and Binding period, where Romance data were at the core of the theory, to Minimalism, Romance data have offered food for thought and challenges for those trying to develop a theory of agreement.

The chapter is organized as follows. Section 19.2 presents the first PSRs on agreement; section 19.3 is dedicated to participial agreement and the birth of specifier-head (spec-head) agreement; section 19.4 considers agreement in the Minimalist Program drawing on examples from a revised analysis of participial agreement, unaccusative agreement as the basis of long-distance agreement, agreement under c-command, and finally the theoretical mechanism of Agree. Section 19.5 switches to morphological agreement, and the tests used to distinguish between agreement morphemes and pronominals based on an analysis of subject clitics.

19.2 Phrase Structure Rules for agreement

The early stage of generative grammar, so-called transformational grammar, was characterized by a computational approach to language data. Since then, agreement has been at the core of the development of syntactic theory and is today not considered just a relation between elements, but, rather, the engine of syntax.

Katz and Postal (1964) and Postal (1966) exploited the intuition, also expressed in Chomsky (1957), that agreement is a transformation cross-linking two elements. This transformation consists in attaching an affix to all elements that enter an agreement relation. In 1966, Postal put forward a theory of agreement grounded on the idea that PSRs copy agreement morphemes from the head to the dependent elements. In an NP, for instance, the affix is specified on a noun, and it gets copied to all other elements in the NP. These PSRs were developed on the basis of Spanish, because of its morphological transparency. One of the examples studied by Postal (1966:46) is in (1).

     Spanish (Postal 1966:46)

1   un-o-s   alumn-o-s

      one-M-PL   pupil-M-PL

     'some pupils'

In (1), the affixes attached to a N that undergo copying express gender and number. Not all affixes have the same explicit morphology: the affix can assume different morphological shapes, even if its value is constant. A masculine singular affix on a noun can have a different morphophonological realization from the same affix on a determiner, as illustrated in (2) from Cosentino:

2   Cosentino

    chiss-u   cane

    this.MED-MSG   dog.MSG

    'that dog close to you'

In (2), the masculine singular ending is underlyingly the same on the noun and on the adjective, but its phonetic realization on the noun and on the adjective is different. Postal's proposal obviously concerned the morpheme as an abstract entry, not its phonetic realization. Postal proposed the following PSRs for agreement (also called concord) in a phrase like (1):

3 R56[1] NP → Article Noun (Adjective)

R57 Noun → Noun Stem Affix

R58 Affix → Gender (plural)

R59 Noun Stem → Noun Stem Fem, Noun Stem Masc

R60 Gender → $\begin{cases} \text{M in Noun Stem Masc \_\_\_} \\ \text{F} \end{cases}$ (Postal 1966:46)

(3) can be read as follows:

- Rule 56: rewrite an NP as an Article plus a Noun;
- Rule 57: rewrite the Noun as a Stem plus an Affix, …and so on. In addition, he states that the grammar must contain the following agreement transformation:
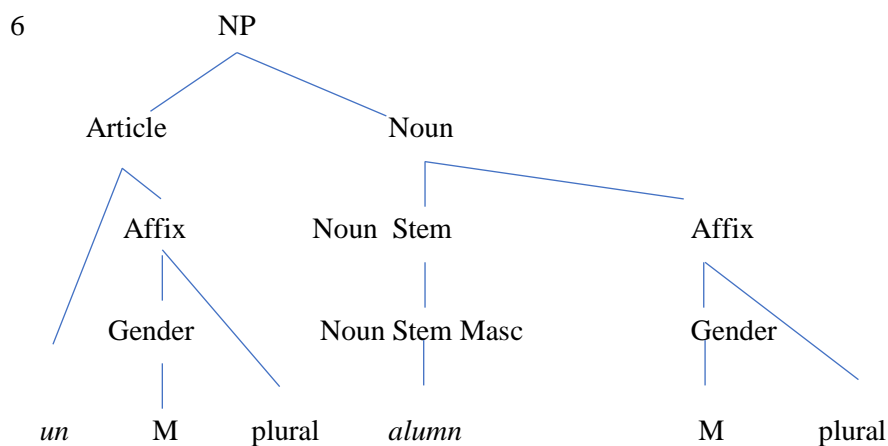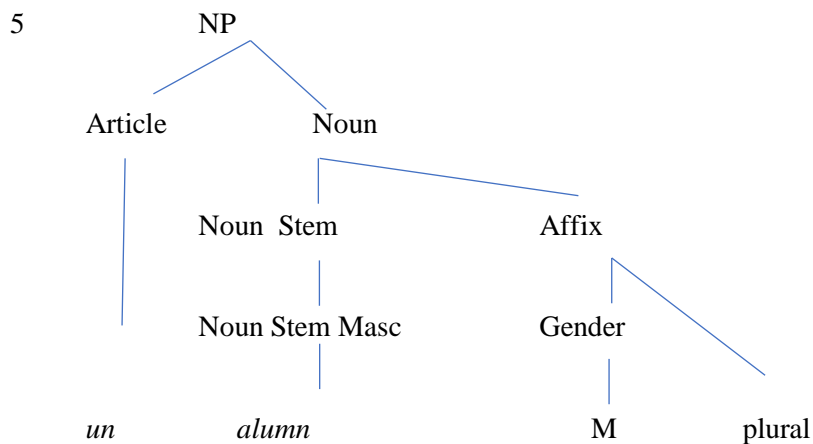
4 T$_{agreement}$

Article, Noun Stem, Affix, (Adjective)

1 2 3 4

1…4 → Article + Affix, Noun Stem, Affix, (Adjective + Affix)

This rule describes the internal structure of a noun phrase. The transformation takes an affix of a Noun and attaches it to the Article and to the Adjective (if there is one). Note that attaching an affix to several elements can be decomposed into two operations: first, make a copy of the Affix; then, attach it to the relevant elements. This two-step concept of agreement is not made explicit in Postal (1966), but was made explicit soon afterwards by Chomsky (1965). It is very important, as it is what underlies the formulation of Agree in the Minimalist Program (Chomsky 1998/2000). The tree diagrams for the transformation representing agreement within the Spanish NP *unos alumnos* 'some pupils' (masculine plural) are reproduced in (5) and (6):

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[1] This example reproduces the PSRs proposed by Postal, with their number. R stands for rule; the number is the progressive number that Postal assigned to the set of PSRs he proposed.

5

          NP
```
         NP
        /  \
   Article  Noun
      |     /    \
      |  Noun Stem  Affix
      |     |        |   \
      | Noun Stem Masc  Gender
      |     |        |      \
     un   alumn      M    plural
```

6

          NP
```
            NP
          /    \
     Article    Noun
      /  \       /    \
     / Affix  Noun Stem  Affix
    /   /  \     |       /   \
   / Gender  \   |   Gender   \
  /    |      \  |     |       \
 un    M   plural alumn  M   plural
                Noun Stem Masc
```

Chomsky (1965) refers to Postal's analysis in his *Aspects*, proposing a transformational mechanism for agreement, assigning a specification to every feature, according to the specification of the most prominent element. He states, for instance, that a grammar must contain transformational rules that assign to an article all the feature specifications of the noun it modifies. The copy mechanism is made more explicit in Chomsky's version of the agreement transformation. The rule he proposes reads as follows:

7

"Article →
$$
\begin{bmatrix} \alpha \text{ Gender} \\ \beta \text{ Number} \\ \gamma \text{ Case} \end{bmatrix} / \underline{\quad} \dots \begin{bmatrix} + \text{N} \\ \alpha \text{ Gender} \\ \beta \text{ Number} \\ \gamma \text{ Case} \end{bmatrix}
$$

where Article … N is an NP"   (Chomsky 1965:175)

This rule means that an article will take the α affix for Gender, the β affix for Number and the γ affix for Case if it appears before a Noun that carries an α affix for Gender, and so on. Observe that English, the language on which Chomsky based his theories in the early years, does not express gender morphologically. The reason why gender is included in the transformation is, arguably, the fact that Postal developed his rules on the basis of Romance.

19.3 Spec-head agreement

The Government and Binding era that followed the publication of Chomsky's *Introduction to Government and Binding* (Chomsky 1981, henceforth GB) introduced several changes to the theory of agreement. There is a far-reaching change in the whole understanding of grammar that we cannot reproduce here. As far as agreement is concerned, one of the key concepts underlying the new system is the *Mirror Principle*, formulated by Baker (1985), according to which morphology reflects syntax. The definition is given in (8):

8   *The Mirror Principle* (Baker 1985:376)

     Morphological derivations must directly reflect syntactic derivations (and vice versa)

In (1978), Emonds, building on Kayne's (1975) observations regarding auxiliary deletion, clitic placement, and other phenomena in French, concludes that in this language auxiliaries and verbs are the same category, while in English they are not. Building on this observation Pollock (1989) brings the theory forward, proposing a rule of finite verb movement (the same movement that auxiliaries undergo) for French, but not for English. Pollock examines French and English finite verbs, such as those in (9)-(11), and concludes that the verb in French moves to receive its inflexion. Given that negation and frequency / temporal adverbs occupy a fixed position in the clause, the difference between English and French with respect to the position of the verb must be due, according to Pollock, to movement in French, and lack thereof in English.

English and French (Pollock 1989:367)

9   a**John likes not Mary.

     b Jean (n') aime   pas   Marie.
        Jean NEG   like.PRS.IND.3SG NEG   Marie

10   a**Likes he Mary?

     b Aime-t-il   Marie?
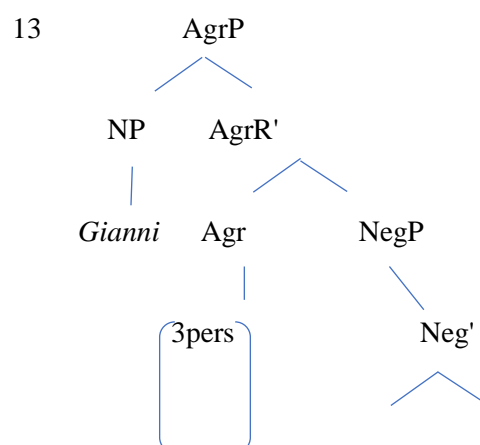   like.PRS.IND.3SG=he   Marie

11   a**John kisses often Mary.

b	Jean	embrasse		souvent	Marie.
	Jean	kiss.PRS.IND.3SG	often		Marie

c John often kisses Mary.

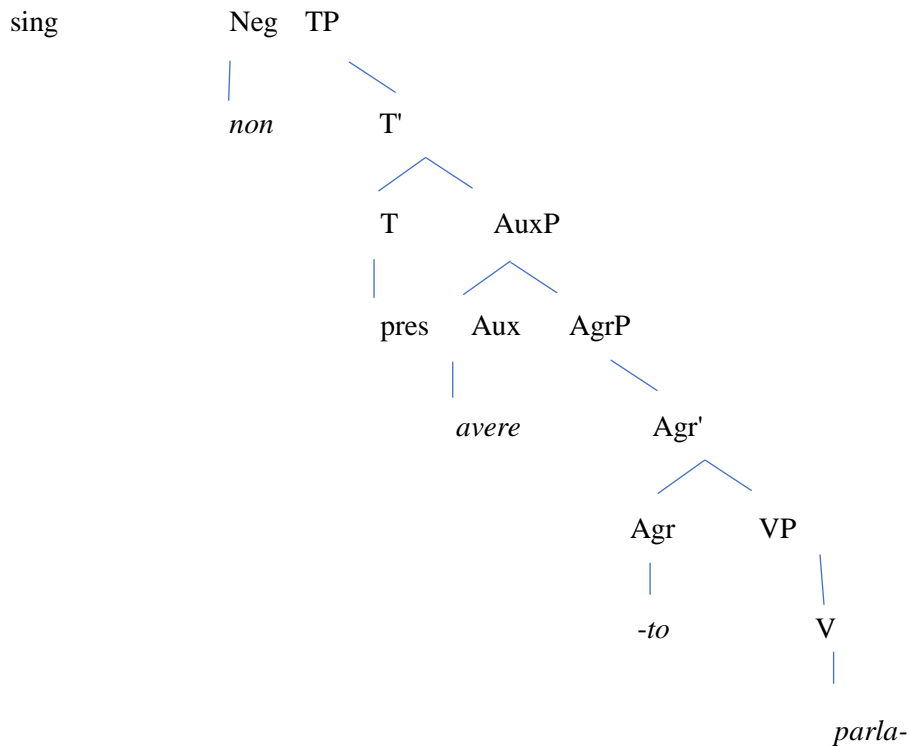| d**Jean	souvent	embrasse		Marie.
Jean	often	like.PRS.IND.3SG		Marie

In (9), the finite verb precedes the negation in French (where negation is represented by *pas*), but not in English. (10) shows that the finite V raises as far as the vacant C position in interrogative sentences in French but not in English. (11) shows that the finite verb precedes the temporal adverb *souvent* 'always' in French, but not in English. Pollock took these data to show that the finite verb moves like an auxiliary in French but not in English, thus supporting Emond's generalization. Pollock also observed that different positions are needed for V movement with infinitival *be* and *have* in French (cfr *Ne pas etre* vs *N'etre pas*) in French . An extra head is thus required to host the infinitival verb. This generalization, together with the considerations about the hybrid categorial status of INFL, which encoded both verbal inflexion and nominal inflexion and was therefore an exceptional mixed category, led to the postulation of a separate Agr(eement) position to which the verb can move in Romance.

The idea of verb movement and the existence of different heads to which the verb can move is synthesized in Belletti's (1990) *Generalized Verb Movement*. She undertakes a thorough comparative study of verbal morphology as well as syntax in Romance, concluding that finite verbs are assembled in the syntax through head movement of the verb through dedicated (inflexional) projections, and according to the *Mirror Principle* in (8). Consequently, the proposed structure for Italian sentences like (12) is, according to Belletti, as in (13).

Italian (adapted from Belletti 1990)

12	Gianni	non	ha		parlat-o.
	Gianni	NEG	have.PRS.IND.3SG	talk.PTCP.-MSG	

'Gianni did not speak.'

13

```
sing          Neg   TP
               |     \
              non     T'
                     /  \
                    T    AuxP
                    |    /  \
                  pres  Aux  AgrP
                        |      \
                      avere    Agr'
                              /  \
                            Agr   VP
                             |     |
                            -to    V
                                   |
                                 parla-
```

The verb head-moves successive-cyclically to incorporate morphemes on every functional head, acquiring the necessary inflexion. Belletti proposes a more elaborate structure than Pollock, introducing two Agr heads: a higher one, which is the head that contains subject agreement inflexion, and a lower one, which contains participial agreement inflexion.

Belletti's model is also adopted in early Minimalism, given its strong descriptive adequacy. In her model, Belletti tacitly assumes movement of the subject to the specifier position of the higher Agr projection licensing the person/number formative for nominative assignment. This assumption has solid roots in Kayne's proposal for object agreement, which we review hereafter, and from which the whole spec-head agreement theory stemmed. Kayne's theory is also entirely based on Romance data.

19.3.1 Agreement in a spec-head configuration
We have just seen that, according to Belletti, nominative case is assigned in the specifier position of the Agr projection. The reasons for this assumption stem from different concepts that emerged more or less during the same period within the GB framework. A specifier-head (henceforth spec-head) relation is obtained under Government: a head governs whatever falls under the maximal projection that it heads, and in particular, a head also governs its associated specifier position. That the spec-head relation was important was a generally held notion in the early 90s. However, the assumption that this would be the only way for two syntactic items to agree with each other was only developed after the publication of a key paper by Kayne (1989). This article is the milestone of agreement in the GB framework, and is entirely based on Romance data. Kayne's (1989) work examines participial agreement in French and Italian. He considers the following agreement alternation:
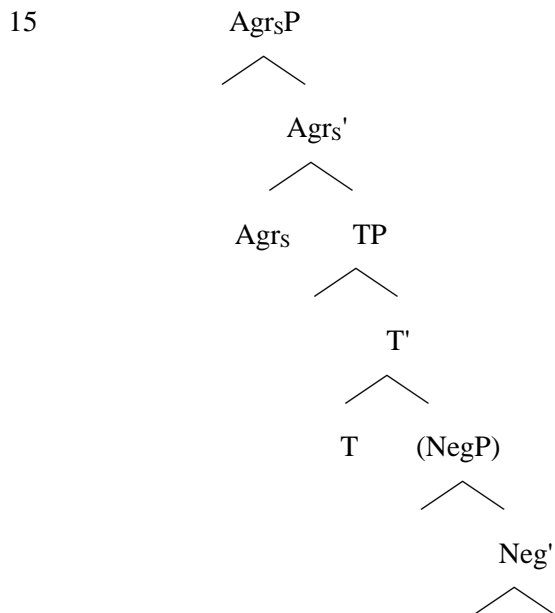
14 a Paul a   repeint   / **repeintes   les   chaises.

    Paul have.PRS.IND.3SG paint.PTCP.MSG   painted.PTCP.FPL the chairs.F

    'Paul has repainted the chairs.'

  b Paul les   a   repeintes.

    Paul them= have. PRS.IND.3SG   paint.PTCP.FPL
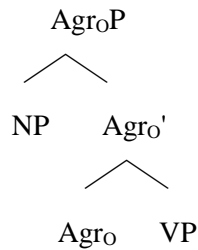
    'Paul repainted them.'

The agreement alternation we see in (14a-b) is quite straightforward: whenever the DP object is postverbal, the past participle fails to agree with it, as shown by the ungrammaticality of *repeintes* in (14a). If the object moves and appears before the participle, the participle agrees with it. From this, Kayne concludes that there is a correlation between movement and agreement, a concept which provided the basis for agreement theory until very recently. In particular, Kayne proposes that agreement stems from the movement of the object into the specifier of an Agr projection. The participle moves to this Agr head in languages like French and Italian (but not in Spanish, where the participle is incompatible with Agr) and enters into a spec-head relation with the object, therefore yielding agreement between the two.

    Kayne only discusses the lower Agr projection, the one that connects with the object. The idea that a specific syntactic configuration is the only configuration in which agreement can take place was very appealing in the GB framework, and therefore the spec-head configuration was immediately extended to all kinds of clausal agreement (as well as some cases of intra-DP agreement).

    The general structure adopted for agreement, until early Minimalism, is the following:

15   Agr_SP

             Agr_S'

        Agr_S TP

             T'

          T   (NegP)

              Neg'

$$\text{Agr}_\text{O}\text{P}$$
$$\text{NP} \quad \text{Agr}_\text{O}{}'$$
$$\text{Agr}_\text{O} \quad \text{VP}$$

The higher Agr and the lower Agr have become Agr_S (agreement with the subject) and Agr_O (agreement with the object) respectively.

While Kayne capitalized on the clitic nature of the moved object to justify obligatory movement out of the VP for the object, movement for the subject was linked to the Extended Projection Principle, which was formulated in many ways, but which was basically a requirement for SpecIP, the canonical preverbal subject position, to be filled (Williams 1980; Chomsky 1981; 1982; Rothstein 1983; Lasnik 2001, and many others). Furthermore, A-movement of the subject is required for it to receive nominative case: the INFL head governs the NP subject and assigns nominative case to it in SpecIP.

In a sentence like (16), the subject has to move to SpecIP obligatorily. If SpecIP has to be independently filled, and if the I(NFL) head is split into INFL proper and Agr, movement of the subject through Agr is an obligatory requirement. This causes agreement between the subject and the finite verb to emerge.

Provençal (Ledgeway 2012:432)
16 Li bregands m'= an   cremat   l'=   ostau! (Provençal)
   the brigands me= have. PRS.IND.3SPL burn.PTCP the= house
   'The brigands have burnt my house down!'

Finally, while nominative was assigned under government and in a spec-head configuration, accusative was still assigned to the complement of the V head under government, and not in a spec-head configuration.

In order to unify case assignment, Chomsky (1993) proposes that accusative too is assigned in a spec-head configuration, and that the object always moves to $\text{SpecAgr}_\text{O}\text{P}$ to get accusative case. Kayne's spec-head agreement, based on Romance data, soon became the only way to represent agreement in GB. Overt agreement started to be separated from cases of covert agreement through an appeal to overt movement through Agr, in a way that we will discuss in the next section.

19.4. Agreement in the Minimalist Program
19.4.1 Participial agreement revisited

Chomsky (1998.2000) puts forward a new conceptualization of agreement, according to which the relevant syntactic relation for agreement to take place is closest c-command, and no longer spec-head. Agreement is obtained through an operation, called Agree. The definition of the operation Agree is as follows:

> '[t]he φ-set we can think of as a probe that seeks a goal, namely "matching" features that establish agreement. […] Locating this goal, the probe erases under matching. […] The erasure of uninterpretable features of probe and goal is the operation we called Agree.[…] Matching is a relation that holds of a probe P and a goal G. Not every matching pair induces Agree. To do so, G must (at least) be in the domain D(P) of P and satisfy locality conditions. More generally, uninterpretable features render the goal active, able to implement an operation. The operations Agree and Move require a goal that is both local and active. (Chomsky 2000:122)

Syntactic agreement is therefore defined as a locality sensitive operation, and does not happen as a consequence of movement. It is, in fact, completely independent of movement. In this new framework, agreement is conceptualized in terms of structural precedence rather than a specific configuration like spec-head.

D'Alessandro and Roberts (2008) propose to capture Kayne's intuition regarding agreement by considering domains within which agreement can apply, rather than movement of the agreeing elements. In this section, their analysis of participial agreement in Italian is reviewed.

We start with the observation that past-participle agreement in standard Italian is associated with promoted internal arguments, namely:

- internal arguments that are moved or linked to subject position: unaccusatives (17a), passives (17b), and impersonal-passives (17c);
- reflexive constructions (18), which are also argued to also involve promotion of the 'antecedent' of the reflexive (Kayne 1989);
- object clitics (19).

Italian (D'Alessandro and Roberts 2008:478)

17 a L-e   ragazz-e   sono   arrivat-e.
       the-FPL   girls-FPL   be.PRS.IND.3PL   arrived. PTCP-FPL
       'The girls have arrived.'

    b L-e   ragazz-e   sono   stat-e   arrestat-e.
       the-FPL   girls-FPL   be.PRS.IND.3PL   be. PTCP-FPL   arrest.PTCP -FPL

'The girls have been arrested.'

c Si   sono   vist-e   l-e   ragazze.

REFL=be.PRS.IND.3PL   see.PTCP-FPL   the-FPL   girls-FPL

'We have seen the girls/the girls have been seen.'

18 L-e   ragazze si   sono   guardat-e   allo   specchio.

the-FPL   girls-FPL REFL= be.PRS.IND.3PL look.PTCP-FPL at.the   mirror

'The girls looked at themselves in the mirror.'

19 L-e   abbiamo   salutat-e.

them-FPL have.PRS.IND.1PL   greet.PTCP-FPL

'We greeted them.'
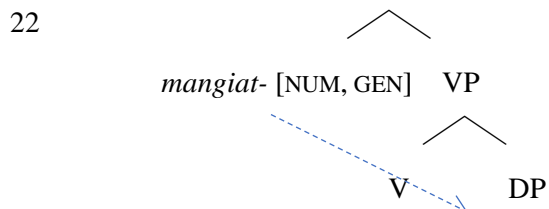

If the object stays *in situ*, agreement does not obtain:

20 **Abbiamo   salutat-e   l-e   ragazz-e.

have.PRS.IND.1PL greet.PTCP-FPL the- FPL girls-FPL

'We greeted the girls.'

In light of this theoretical development, the data of French and Italian participial agreement are quite difficult to explain. If we adopted Agree *tout court*, we would predict agreement with all postverbal subjects in modern Italian, contrary to fact. The past participle c-commands the object *in situ* in a simple transitive clause, and it has the relevant features to match the object. In a sentence like (17), the past participle is in the right configuration to Agree with the feminine singular object. We also know that the participle assigns accusative case to the object, so according to this new definition the past participle should show overt agreement with the object, but it does not.

21 **Ho   mangiat-a   l-a   mel-a.

have.PRS.IND.1SG   eat.PTCP-FSG the-FSG apple-FSG

The relevant part of the structure is presented in (22):

22

mangiat- [NUM, GEN]   VP

V   DP

mangiat- *mela* [SG.F]

D'Alessandro and Roberts build on the distinction between Agree, which is a syntactic operation taking place at narrow syntax, and morphological insertion of inflexional material, which takes place at Phonological Form (PF), the module where morphological insertion takes place. The idea is that only if two elements that have entered into an Agree relation are Spelled-Out together (Chomsky 1995) do they belong to the same phonological phrase, and can therefore receive the same morphological specification. They propose a condition on the morphophonological realization of agreement (D'Alessandro and Roberts 2008:482), according to which:

23 a   Given an Agree relation A between Probe P and Goal G, morphophonological agreement between P and G is realized iff P and G are contained in the complement of the minimal phase-head H.
    b XP is the complement of a minimal phase head H iff there is no distinct phase head H' contained in XP whose complement YP contains P and G.

In sum, (23) means that the domain in which agreement can take place at PF is mapped directly from syntax. If the participle and the object are in the same phonological domain, they 'see' each other's values, and they can receive the same agreement. In the case in which they belong to two different domains, they will not be able to retrieve the information about agreement on the other element, and a default ending will be inserted.

For transitive verbs, the external argument (viz. the subject) is inserted in Spec*v*P and *v* hosts the participle. At Spell-out, if the object has not moved to the same domain as the participle, it will belong to a different phonological phrase than the past participle. Given the condition on morphophonological realization of agreement in (23), it will not be possible to insert the same ending on the participle as the object. A default ending (masculine singular) will then be inserted on the participle.

Consider now the contrast between the following examples, where spell-out domains corresponding to phonological phrases are represented:

Italian

24 a   Ho   mangiat-o   ‖   l-a   mel-a.
        have.1SG   eaten.PTCP-MSG   ‖   the-FSG   apple-FSG

    b**Ho   mangiat-a   ‖   l-a   mel-a.
        have.1SG   eaten. PTCP -FSG   ‖   the-FSG   apple-FSG
        'I have eaten the apple.'

In (24), *La mela* belongs to a different phonological domain than *mangiato*. This is the reason why the participle cannot receive a feminine singular specification, but must receive the default ending instead.

In the case of unaccusative verbs, *v* is generally argued to be defective. Specifically, this means that the sentence in which it occurs constitutes a single phase, inasmuch as there is only one domain for the whole sentence and not a lower phase in the *v*(erb) phrase. We therefore expect agreement between the internal argument (which is also the surface subject with unaccusative verbs) and the participle independently of their position. This prediction is indeed borne out:

25 | Sono arrivat-e   l-e   ragazz-e.
   | are   arrived. PTCP-FPL   the-FPL   girls-F
   | 'The girls have arrived.'

Passives and reflexives basically work the same way: if the participle (probe) and the nominal (goal) surface in the same phonological phrase, they will carry the same (*mutatis mutandis*) ending. If not, the participle will be assigned a default ending.

Object clitics trigger overt, morphologically realized agreement, because they move to the Spell-out domain of the participle, which means that they will belong to the same phonological phrase as the past participle: they will trigger overt morphological agreement with the participle. In other words, the idea developed in D'Alessandro & Roberts (2008) is that what matters is whether the past participle and the element it agrees with end up in the same phonological domain or not. If they do, we see overt morphological agreement. If they do not, we see default agreement.

However, the case of old (Tuscan) Italian is somewhat problematic for this analysis, since participles do agree with the *in situ* internal argument, as in example (26).

Old Tuscan (*Novellino* 18, 15-16)

26 mio padre   ha   offert-i   duomila   march-i
    my father have.PRS.IND.3SG offer.PTCP-MPL two.thousand marks-MPL
    'my father has offered two thousand marks'

One possible explanation for this pattern comes from word order: in older stages of the language, and importantly still at the time of the writing of the *Novellino* (viz. fifteenth century), from which this example is taken, word order was rather different from that of modern Italian. In particular, many elements could be scrambled in front of the past participle (see Franco 2009; Benincà and Poletto

2010), suggesting that the participle itself occupied a lower position in the clause. See for instance the following sentences from thirteenth-century Tuscan:

27 Old Tuscan (Bono Giamboni, *Orosio*, 2, 9, 15-16)

   […] i   nimici   avessero   già   il   passo pigliato
        the enemies have.SBJV.IPF.3PL   already   the pass   take.PTCP
   'the enemies had already taken the pass'

Given this, it is possible to argue that in old (Tuscan) Italian the past participle surfaces in the same Spell-out domain as the internal argument, as it stays low, possibly in the head of the lexical VP. Note that the object has moved in this particular sentence, but that was not always the case: the object could follow the participle in old Italian. Moreover, the participle could be preceded by a number of other elements, like adverbs and quantifiers, that can no longer appear pre-participially in modern Italian. Poletto (2014) shows that this correlation is borne out, inasmuch as when we get the order DP + PtP we always get participial agreement, but when the order is past participle + DP agreement becomes optional/variable (see also Egerland 2010 for similar conclusions).

   There are other exceptions to the agreement generalization, in addition to the old Italian data we just saw. In some Italo-Romance dialects it is possible to have participial agreement with an *in situ* internal argument as long as the argument is plural, as in (28), an example of omnivorous participial agreement to which we will return in greater detail below.

   Arielli, Abruzzo
28 So   magnitə   ddu   melə.
    be.PRS.IND.1SG   eat.PTCP.PL two   apples
    'I ate two apples.'

French agreement patterns are basically the same as those of Italian, but they also present some divergence from Italian. In French, agreement also obtains between the past participle and moved wh-objects:

   French (Kayne 2000:26)
29 Je me demande   combien de tables   Paul a   repeint-es.
    I   me=ask.PRS.IND.1SG how.many of tables.F Paul have.PRS.IND.3SG repaint.PTCP-FPL
      'I wonder how many tables Paul has repainted.'

In (29), the wh-object *combien de tables* has been moved and agreement with *repeintes* obtains. This kind of agreement is not possible in standard Italian, but it was in older stages of the language. Below follow examples of standard vs old (Tuscan) Italian:

Italian

30 Mi chiedo   quanti   tavoli Paul abbia   ridipint-o/**ridipinti.
    me=ask.PRS.IND.1SG how.many tables-M Paul has.PRS.SBJV.3SG repaint.PTCP-MSG/-MPL
    'I wonder how many tables Paul has repainted.'

Old Italian (*Novellino* 1, 41-42)

31 le   pietre […] avevano   perdut-a   loro   virtude
    the   stones-F   have.PST.IND.3PL lose.PTCP-FSG   their   power-F
    'the stones had lost their power'

Modern spoken French is arguably losing participial agreement completely and is moving towards the Spanish-style system. In any case, in standard written French agreement between a wh-object and a participle is obligatory, as in old Italian. Furthermore, in French gender agreement of the participle with first- and second-person clitic pronouns is obligatory, and not optional as in Italian, where, for example, *ti ho vista*-FSG and *ti ho visto*-MSG are both accepted. Finally, unlike in Italian, modern French does not show agreement in causative constructions, as illustrated in (32):

French (Belletti 2017:38)

32 a Un pantalon   a   été   fait   faire   (par
       a.M pair.of.trousers.MSG have.PRS.IND.3SG be.PTCP make.PTCP.MSG make.INF by
       Marie).
       Marie
       Marie
    b Une   jupe   a   été   fait(**e)   faire   (par Marie).
       a.F   skirt.FSG have.PRS.IND.3SG be.PTCP make.PTCP.MSG(FSG) make.INF by   Marie

Compare (32) with their Italian counterparts in (33):

Italian

33 a Un pai-o   di pantaloni è   stat-o   fatt-o
       a.M pair-MSG of trousers   be.PRS.IND.3SG   be.PTCP-MSG   make.PTCP-MSG
       fare   da Maria.
       make.INF by Maria

	b	Una gonna	è	stat-a	fatt-a	fare	da	Maria.
		a.F skirt.FSG	be.PRS.IND.3SG	be.PTCP-FSG	make.PTCP-FSG	make.INF	by	Maria

The difference between French and Italian agreement patterns remain an open issue.

19.4.2 Unaccusatives

As we saw, in *Minimalist Inquiries* (1998/2000) Chomsky takes the step of finally dissociating agreement from movement formally as well, through the formulation of Agree.

A theory of agreement based on structural precedence, like c-command can very straightforwardly account for agreement in inversion constructions, or with post-verbal subjects in Romance. Take, for instance, the example from Romanian in (34): the subject of unaccusatives is underlying generated as the object but it does not appear to have moved given its postverbal position. Yet, it shows agreement with the finite verb. Under the spec-head theory of agreement, the only way to analyse this simple sentence was to postulate the presence of a silent expletive subject (pro) in the preverbal subject position (SpecIP) which formed a representational chain with the *in situ* subject (cf., among others, Rizzi 1982; Belletti 1982).

Romanian

34	astăzi	se	nasc	mulți	băieți.
	today	REFL=	be.born.PRS.IND.3L	many	boys

‘Today many boys are being born.’

With Agree, this agreement pattern follows straightforwardly: the finite verb searches for (probes for) a DP, finds the subject in its c-command domain, and then Agrees with it.

19.5 Morphological agreement

So far we have treated agreement in syntactic terms alone. We now turn to the other definition of agreement, namely the morphological one. In the introduction, we gave the first definition of agreement as 'co-variance of a semantic or formal property of one element and a formal property of another' (Steele 1978:610). This definition focuses more on the marking of an agreement relation between two elements than on the agreement relation itself. Morphological agreement refers in fact to the marking of agreement on syntactic items rather than to the syntactic operation or the structural configuration that holds between them. A second meaning of 'morphological agreement' refers instead to the full inflexional paradigm of a lexical entry such as, for instance, the whole set of declensional endings of a noun in Latin, or the whole set of finite verb conjugational suffixes in Romanian. This definition is further removed than the previous one from the syntactic, operation-like definition we have considered in the first part of this article. The set of all morphological inflexional

elements characterizing a verb, a noun, or an adjective, is also called 'agreement'. This particular meaning is what we refer to when we talk about 'rich agreement': a language has rich verbal agreement if it has a large set of non-syncretic endings for the finite verb, for instance. Rich agreement has had a very important role in linguistic theory, and for this reason it will be discussed in this chapter[2].

Romance languages have had a large impact on the understanding of morphological agreement. Some aspects for which Romance data have been of fundamental importance are the classification of clitics, and in particular the difference between agreement clitics and subject pronouns.

19.5.1 Rich agreement and null subjects

It is usually assumed, in traditional grammars, that if a language has a rich agreement paradigm, then it will be pro-drop. By rich agreement we mean here that the language has a number of inflexional verbal morphemes, and that there are at least some differentiated inflexional morphemes in the paradigm. A definition of rich agreement has recently been given by Koeneman and Zeijlstra (2014) and is reproduced in (35):

35 A language exhibits rich subject agreement if and only if agreement involves at least the same featural distinctions as those manifested in the smallest (subject) pronoun inventories universally possible. (Koeneman and Zeijlstra 2014:574)

For our purposes, it is not necessary to define rich agreement too precisely. We will use the working definition of rich agreement as 'dedicated, differentiated inflexional morphology'.

The observation that rich agreement 'licenses' null subjecthood has been around since the beginning of modern linguistic thinking. The underlying intuition is that if you can retrieve the information about the subject from the verb inflexion, you do not need to express the subject overtly. This correlation has been observed in several languages. In Brazilian Portuguese, for instance, where the rich agreement paradigm has been radically reduced, witness Table 19.1 (cf. Nuñes 2011:17), null subjects are also more restricted. As for overt subjects, first- and second-person pronouns are almost always overt, while third-person subjects are still omitted, but much less than in European Portuguese.

Table 19.1: Verb agreement paradigm in (colloquial) Brazilian Portuguese, present indicative of *cantar* 'to sing'

eu (I)	*canto*	Person:1; Number: SG

---

[2] Romance languages offer an important empirical basis also regarding generalizations on the verb roots. See for instance Maiden (2004; 2012; 2018).

você (you.SG)		
ele (he)	*canta*	Person: default; Number :default (= 3SG)
ela (she)		
a gente (we)		
vocês (you.PL)		
eles (they.M)	*cantam*	Person: default; Number: PL (= 3pl)
elas (they.F)		

However, despite the fact that first-person singular has a dedicated form, first- and second-person pronouns are almost never omitted. This suggests that the one-to-one correspondence between presence of inflexion and absence of an overt subject is not so straightforward.

Several scholars have attempted to analyse the structural conditions for pro-drop and its relation with agreement. Barbosa, Duarte, and Kato (2005) performed an extensive study of some newspaper interviews, to check subject omission in European Portuguese and Brazilian Portuguese. Following Lammoglia Duarte (1995), they identified four main patterns of subject drop:

36 Pattern I: the antecedent of the null subject is the subject of the matrix clause

Pattern II: the antecedent is the subject of the previous adjacent sentence

Pattern III: the antecedent is the subject of a previous, non-adjacent sentence

Pattern IV: the antecedent is in the previous adjacent sentence, but is functionally distinct from the null subject (Duarte and Varejão 2013:107)

The results of the inquiry are summarized in the Table 19.2:

Table 19.2: Null (vs overt) subjects in transcribed interviews according to structural context (adapted from Barbosa, Duarte, and Kato, 2005:24, in Duarte and Varejão 2013:108)

Pattern	European Portuguese	Brazilian Portuguese
I	39/40 (97%)	18/23 (78%)
II	49/55 (89%)	28/48 (58%)
III	20/28 (71%)	07/28 (25%)
IV	16/24 (67%)	10/23 (43%)

Table 19.2 shows that overt subjects do not correlate only with the loss of agreement. Diachronically, the gradual disappearance of pro-drop might have correlated with an impoverishment of the

inflexional system, but synchronically the distribution of overt subjects depends on structural, as well as featural, reasons.

Another example of a former pro-drop language which is no longer pro-drop is French, whose inflexional system today is heavily impoverished, with the simultaneous emergence of obligatory subject clitics. Roberts (1993), building on Vance (1989), proposes that the loss of pro-drop in French is due to both the loss of agreement inflexion and the loss of nominative assignment under government. This also explains why null subjects are lost in inversion structures during the sixteenth century. Together both causes led to the complete disappearance of null subjects in French.

Within the generative framework, the correlation between null subjecthood and agreement inflexion was first formalized by Taraldsen (1980), followed by Rizzi (1982), and then Rizzi (1986) who, with different formulations, proposed the null subject parameter, linking null subjecthood, rich agreement, inversion and *that*-trace effects in languages (see also Chomsky 1981). The idea is that languages with rich agreement have a rich INFL head that can license an empty pronominal category (viz. pro) that is present only in null-subject languages. More specifically, Rizzi proposes that INFL in null subject languages governs the subject and it is rich enough to license the subject if empty by virtue of an empty pronominal on INFL coindexed with the empty subject. Consequently, the difference between (37a) and (37b) is that in Italian INFL is rich while in English it is not.

37 a   __   Verrà. (It.)
                    come.FUT.3SG

    b**   __   will   come. (Eng.)

While a correlation between null subjecthood and rich verbal agreement systems seems plausible, many scholars have noted several exceptions. Chinese, Japanese, and Korean are, for instance, pro-drop languages, but lack agreement inflexion altogether (Huang 1984). Notice however that these languages are now considered topic-drop languages, and are not in the same group as the pro-drop. According to Huang, then, languages with no agreement (no Agr) can also license null subjects. A middle way between these two views is offered by Jaeggli and Safir (1989), who propose the Morphological Uniformity Hypothesis, according to which null subjects are permitted in all and only languages with morphologically uniform inflexional paradigms (see D'Alessandro 2015 for a thorough discussion of the Null Subject Parameter).

Rich agreement corresponds, for Rizzi and Taraldsen, to the presence of agreement morphology on the INFL head. Such a view is also assumed, with some substantial modification, by Alexiadou and Anagnostopoulou (1998). They compare the null-subject status of Germanic, Celtic, Greek, and Romance languages, and propose that a full agreement paradigm has a separate lexical entry to that of the verb. In particular, they take rich agreement to be pronominal, insofar as each of the endings of a

rich verbal agreement paradigm has pronominal status. Default or impoverished agreement is instead totally dependent on its host, and therefore does not constitute a separate lexical entry from the verb. If rich agreement attached to the verb root is pronominal, it carries a D-feature with which it can satisfy the requirement on INFL (viz. the Extended Projection Principle) that each clause must have a subject. This means that pro-drop languages do not need a subject to satisfy the Extended Projection Principle: they can satisfy it via verb movement. This approach captures the correlation between being a pro-drop language, having rich agreement, and having movement of the verb to INFL.

A direct consequence of having languages with a D-feature that can satisfy the Extended Projection Principle is that subjects in the canonical preverbal position, SpecIP, have a different status than their corresponding subjects in non pro-drop languages. More precisely, preverbal subjects in rich agreement languages are said to be in a left-peripheral positions (viz, in an A'-position) outside of the sentential core (IP), and are therefore not in SpecAgrP within the sentential core (which is the landing position of the subject in early Minimalism, as we saw in the previous section). Alexiadou and Anagnostopoulou further demonstrate that subjects in rich agreement languages with verb movement to INFL do indeed not surface in a canonical preverbal subject position, but are rather topicalized. To support their claim, they present empirical evidence that subjects in null-subject languages are topics, and in a clitic-left dislocation configuration. The first piece of evidence they offer is that in Romance (as well as in Greek and many other languages) subjects can precede adverbs and *if*-clauses. For instance, Italian allows sentences like (38):

<u>Italian</u>

38 Gianni ieri   dopo aver   mangiato ha   fatto   una passeggiata.
    Gianni yesterday after have.INF eaten   have.PRS.IND.3SG make.PTCP a   walk
    'After having eaten, Gianni took a walk yesterday.'

From the comparison between the Italian sentence in (38) and its English counterpart it appears evident that Italian, a null-subject language, offers the possibility of having the subject very far from the verb (on INFL). The same does not hold for English, where the subject must occur next to the finite verb. Alexiadou and Anagnostopoulou (1998) further remark that this generalization does not hold for Spanish, where the subject must occur next to the finite verb as in English.

A second piece of evidence they offer comes from binding facts. Alexiadou and Anagnostopoulou first introduce the generalization, originally put forward in Montalbetti (1984) that overt personal pronouns cannot be bound variables in null-subject languages, as shown in (39) for Catalan:

<u>Catalan (Alexiadou and Anagnostopoulou 1998:509)</u>

39 **Tots els estudiants$_i$ es=pensen   que ells$_i$ aprovaran.
   all the students   REFL=think.PRS.IND.3PL that they   pass

If the subject appears in post-verbal position, binding is possible, as in (40). Following Solà (1992) and Barbosa (1994), Alexiadou and Anagnostopoulou conclude that this is the case because only subjects in post-verbal position are in an A-position, unlike those in preverbal position.

Catalan (Alexiadou and Anagnostopoulou 1998:510)

40	Tots	els	jugadors$_i$	estan	convençuts	que	guanyaran	ells$_i$.
	all	the	players	be.PRS.IND.3PL	persuade.PTCP	that	win	they

'All the players believe that they will win.'

If these generalizations are true, when a language loses rich agreement it will lose its null-subject status and have to express the subject overtly. Subject clitics are often pressed into service, together with expletive subjects, in this function. Their nature is however not completely straightforward, and several scholars have shown that there are several kinds of subject clitic. One of the most debated issues is whether they are pronominal or simply inflexional. We will return to this in the next section.

19.5.1.1 Agreement and subject clitics

Contrary to what intuition might suggest, the presence of subject clitics does not entail non null-subjecthood. If this were the case, we would expect subject clitics to be overt pronominals, always overtly expressed.

If subject clitics were overt pronominals, and therefore counted as 'subjects', we would expect them to be more frequent in languages with little or no verbal inflexion (as in the case of Brazilian Portuguese). This generalization is not borne out, as we shall see below. If, on the other hand, they were inflexional, agreement elements, we might expect them to replace agreement inflexion completely. This is also not the case.

Whether subject clitics are inflexional or pronominal elements is discussed extensively by Rizzi (1986). Before looking at Rizzi's diagnostics, let us first have a look at the distribution of subject clitics, and their co-occurrence with inflexion (see further the discussions in §5.2 and §23.2.1). Roberts (2010), but see also Kayne (1975), presents a classification of languages according to the distribution of subject clitics and verbal inflexion. He identifies 4 language types:

41   a   SCL [+ agr]   V [+agr]

      b   SCL [+agr]   V [−agr]

      c   SCL [−agr]   V [+agr]

      d   SCL [−agr]   V [−agr]

In (41) [+agr] indicates a full set of morphological person/number distinctions. A full set can contain at most one zero exponent and one syncretism, and V [+agr] indicates a null subject language. A language like (38a) is a fully redundant null subject system in which clitics and the verb endings co-vary. An example of such a language is Florentine in (42):

Florentine, Roberts (2010)

42 (*E*) *parlo*   *Si parla*   I speak   we speak

    Tu parli   *Vu parlate*   you speak   you.PL speak

    E parla   *E parlano*   he speaks   they.M speak

    La parla   *Le parlano*   she speaks   they.F speak

Languages of type (41b) are non-null-subject systems in which the verbal inflexion is unable to identify a null subject, and the pronominal paradigm is fully realized. One such language is French:

43 French (Roberts 2010)

    je dors   (dɔʁ)   I sleep
    tu dors   (dɔʁ)   you.SG sleep
    il/elle dort   (dɔʁ)   he/she sleeps
    nous dormons   (dɔʁ.mɔ̃)   we sleep
    vous dormez   (dɔʁ.me)   you sleep
    ils/elles dorment (dɔʁm)   they.M/.F sleep

Languages like (41c) are null-subject systems with fully differentiated verb inflexion but syncretism and gaps in the clitic paradigm. One example is Comasco, a northern Italian dialect:

44   Comasco (Roberts 2010)
   a dorm-i
      sleep-1SG
      'I sleep.'
   b ta   dorm-at
      SCL.2SG sleep-2SG
      'You sleep.'
   c al/la   dorm-a

SCL.3SG.M/SCL.3SG.F   sleep-3SG

'He/She sleeps.'

   d dorm-um

sleep-1PL

'We sleep.'

   e dorm-uf

sleep-2PL

'You sleep.'

   f dorm-an

sleep-3PL

'They sleep.'

    The last group of languages illustrated in (41d) show a full set of forms that together form a single, complementary (or near-complementary) pattern.

45   Carrara (Roberts 2010)

   a a   dorm

SCL sleep

'I sleep.'

   b t   dorm

SCL.2SG   sleep

'You sleep.'

   c i/al   dorm

SCL.3M/F sleep

'He/She sleeps.'

   d a   durm-in

SCL sleep-1PL

'We sleep.'

   e durm-it

sleep-2PL

'You sleep.'

   f i/al   dorm-n

SCL.3M/ F sleep-3PL

'They sleep.'

Roberts (2010) treats subject clitics as agreement inflexion. In fact, most subject clitics in Italian varieties are inflexional, not pronominal, as shown by Rizzi (1982). He proposes a number of diagnostics to distinguish between pronominal and inflexional subject clitics. His first observation is that subject clitic paradigms are often defective, while the absence of a subject pronoun is quite rare. Second, subject clitics are (almost always) obligatory in coordinated structures, while pronouns can be omitted in the second conjunct of coordination. Even in non null-subject languages, like English, the subject can be omitted in the second conjunct, as shown in (46):

46 You eat and laugh.

In the case of subject clitics in most Italian varieties such omission is not possible. In the Bergamascan dialect of Grumello del Monte, for instance, it is not possible to omit the subject clitic from the second conjunct, as shown in example (47). Observe that the clitic paradigm is defective, and Grumellese lacks a first-person subject clitic.

Grumello del Monte (Manzini and Savoia 2005,I:152)

47 a mang-e   e   bi-e
       eat.PRS.IND -1SG and   drink.PRS.IND -1SG
       'I eat and drink.'
   b ta   mang-et   e   ta   bi-et
       SCL.2SG eat.PRS.IND -2SG and SCL.2SG   drink.PRS.IND -2SG
       'You eat and drink.'
   c al   mang-ia   e   l   bi:-f
       SCL.3SG eat. PRS.IND-3SG and   SCL.3SG drink.PRS.IND-3SG
        'He eats and drinks.'

In French, by contrast, coordinated subject clitics can be omitted, since, unlike those found in Italo-Romance dialects, they are pronominal, as shown in (48).

French

48 Il   mange   et   boit.
   he= eat.PRS.IND.3SG   and   drink.PRS.IND.3SG
   'He eats and drinks.'

The second observation concerns the fact that, while inflexional subject clitics can co-occur with negative quantifiers, subject pronouns cannot. In (49), for instance, the subject clitic can co-occur with *nigy* 'nobody':

49 Grumello del Monte (Manzini & Savoia 2005,I:62)

    nigy   i   ve

    nobody SCL.3PL   come.PRS.IND.3

    'Nobody comes.'

This is again not possible in French, where subject clitics are pronominal in nature:

    French

50 **Personne il   ne   fait   cela.

    nobody he= NEG   do.PRS.IND.3SG   that

    'Nobody does that.'

Finally, agreement markers may follow preverbal negation, but pronouns cannot. In (51) negation precedes the subject clitic, which is therefore an agreement marker, whereas in (52) we are dealing with a genuine pronoun, as in (50), with the result that negation can only follow the pronoun.

    Venetan

51 No   el   magna. (Ven.)
    NEG   SCL.3SG eat.PRS.IND.3SG
    'He doesn't eat.'
    French
52 Il   ne   mange   pas.
    he= NEG   eat.PRS.IND.3SG NEG
    'He doesn't eat.'

The facts reviewed in this section show that clitics come in at least two forms: pronominal and agreement-like. While French clitics are, for instance, pronouns, northern Italian dialects are agreement markers. The implication from this conclusion is that while northern Italian varieties are

pro-drop languages with rich inflexion, instantiated by subject clitics, languages such as French are genuine non pro-drop languages (Rizzi 1986; Brandi and Cordin 1989).

Many studies have focused on subject clitics especially in relation to establishing their underlying, base positions and their surface positions. However, given that they are phonologically reduced, it is quite difficult to find evidence for their original, underlying position. One further important aspect of the debate on clitics that we should finally mention here is the theory advanced by Roberts (2010) that subject clitics represent the spell-out of an Agree relation with T, the inflexional core of the sentence. According to Roberts, dislocation is only apparent inasmuch as subject clitics are inflexional, ultimately the spell-out of a subset of features of the subject on T. As such they are the result of an Agree operation and have nothing to do with pronouns and case.

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