Aspects of the evolution of the Latin/Romance verbal system

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Declaration

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except where specifically indicated in the text.

Statement of Length

This dissertation does not exceed the 20,000-word word limit.
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—J. Baker, 31st May 2014

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1 Introduction

1.1 Aims

The aim of this thesis is to contribute to understanding of the developments of the verbal system between Latin and the Romance languages, specifically within the framework of minimalist syntax (though many of its findings will be of more general interest). Specifically, it focuses on issues pertaining to tense, aspect and voice, using evidence primarily from Latin of the first millennium AD and (early) Old French, which in terms of the changes discussed is probably illustrative of developments that affected Romance as a whole.

A number of related issues will not be discussed. I largely overlook issues not relating to tense, aspect or voice, including issues regarding mood. The discussion of tense and aspect is also simplified in that the future is not generally considered, and certain details regarding the precise nature of 'perfect' forms are set aside. Concerning voice, I consider neither the use of reflexive forms with passive function or passive forms with reflexive function, both of which are attested (Harris 1978, p. 192, Cennamo 1998, p. 79–90), nor do I consider passive auxiliaries other than BE (see Cennamo 1998, p. 88). I also overlook the issue of parallel developments to the tense/aspect system in language families geographically contiguous to Romance, which also appear to have innovated a HAVE perfect (Haspelmath, 1998, pp. 274–275, 281).

After a brief discussion of issues of periodisation, the remainder of this introduction provides the necessary background information on the verbal systems of Classical Latin and Romance. Section 2 provides a formal syntactic analysis of the systems of Classical Latin and French. Sections 3, 4 and 5 then discuss the diachronic aspects, dealing respectively with passives, deponents/unaccusatives and the passé compose with HAVE, though these cannot be wholly separated. Each of these sections employs textual evidence (including that drawn from other authors) to establish a formal diachronic analysis of the changes in each of the three areas, and to relate the three to one another. Section 6 concludes.

1.2 Periodisation

I assume a primary division (necessarily artificial) between **Latin** and **Romance**, the latter instantiated in separate languages of which the present focus is on **French**. Where necessary, I also distinguish **Old French** (spoken up to the fourteenth century) from **modern French** (as spoken today). Likewise, it is sometimes necessary to refer to **Classical Latin** as distinct from Latin of other sorts—practically, here, this means the distinction between a 'classical' period of around the times of the late Republic and early Empire, and later periods. Regarding the structures considered here, I will model the Romance languages as descended directly from Classical Latin, although this may be an oversimplification.

My theoretical focus is on spoken language, but the primary source of evidence is written texts. In writing, the distinction between Latin and Romance is generally clear-cut—texts can nearly always be classified as one or the other without difficulty. However, this masks periods when the spoken language differed considerably from written 'Latin' (i.e. it was closer to what we would call 'Romance'), and when Latin and the Romance languages were both employed in writing and seen as to some extent distinct (see Wright 1982 for discussion). My approach to this is simple. I refer to manuscripts as 'Latin' or 'Romance' based on their textual characteristics regardless of the period to which they date. However, I do not automatically assume that 'Latin' texts, so classified, necessarily accurately reflect everyday spoken language, particularly in the later periods. On the other hand, I assume more readily that Romance (French) texts do reflect the language as it was spoken at the time—though some caution must still be exercised.

I will now proceed to an overview of the verbal systems of Latin and Romance.

1.3 The verbal system of Classical Latin

The verbal system of Classical Latin morphologically distinguishes three tenses and two aspects.

The regular verb *amare* 'to love' has the following third-person singular forms in the **active** voice of the **indicative** mood, together with the traditional labels for each of the tense-aspect combinations (which are sometimes just called 'tenses'):[1]

	past	**present**	**future**
infectum	*amabat* 'was loving' IMPERFECT	*amat* 'loves' PRESENT	*amabit* 'will love' FUTURE
perfectum	*amaverat* 'had loved' PLUPERFECT	*amavit* 'loved, has loved' PERFECT	*amaverit* 'will have loved' FUTURE PERFECT

Table 1

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[1]Vowel length distinctions, historically not made in written Latin, are not shown in this thesis.

A separate **subjunctive** mood is also distinguished, although there are no separate future tense forms in the subjunctive.

There are also forms for the **passive** voice. In the infectum these are formed morphologically. In the perfectum, the passive is formed periphrastically with a participle and an infectum form of *esse* 'to be'. For the sake of consistency in the discussion of both Latin and Romance, I shall refer to this participle as the **past participle**, though note that it is not restricted to the past tense. The third-person singular indicative forms of the passive of *amare*, with the past participle inflected for masculine singular subject agreement, are as follows:

	past	**present**	**future**
infectum	*amabatur* 'was being loved'	*amatur* 'is loved'	*amabitur* 'will be loved'
perfectum	*amatus erat* 'had been loved'	*amatus est* 'was/has been loved'	*amatus erit* 'will have been loved'

Table 2

The participle may also take endings to agree with subjects of other persons or genders.

There also existed a class of verbs known as the **deponents**, traditionally described as 'passive in form but active in meaning' or similar. These verbs always take passive endings and are formed periphrastically in the perfectum. A typical example of a deponent verb is *mori* 'to die', which has the following third-person singular indicative forms:

	past	**present**	**future**
infectum	*moriebatur* 'was dying'	*moritur* 'dies'	*morietur* 'will die'
perfectum	*mortuus erat* 'had died'	*mortuus est* 'died, has died'	*mortuus erit* 'will have died'

Table 3

The various other forms of the verb—the imperative and the non-finite forms beside the perfect passive participle—do not concern us here.

1.4   The verbal system of Romance

The Romance languages, even in their earliest attested forms, differ substantially from the Classical Latin verbal system outlined above. The classical synthetic future is scarcely attested in Romance, and the synthetic pluperfect is also largely absent. The 'perfect' (i.e. present perfect) survives in Romance in a restricted function. I shall refer to this form by its French name as the **passé simple**.

The Latin 'present' and 'imperfect' tenses are retained, for example *(il) aime* '(he) loves', *(il) aimait* '(he) was loving'.

The function of the Latin perfect is taken to varying degrees by a periphrastic construction which I shall refer to by its French name as the **passé composé**. The passé composé is formed with an auxiliary plus the past participle, prototypically derived from the Latin past participle. In what is likely the most conservative system, forms derived from Latin *habere* 'to have' are employed as auxiliaries with transitive and some ('**unergative**') intransitive verbs, and forms derived from Latin *esse* 'to be' are employed as auxiliaries with the remainder of intransitive verbs ('**unaccusative**' verbs). The examples below are from modern French for consistency, though the system is retained more fully in (e.g.) Old French and Standard Italian. *a* is the third-person singular present of *avoir* 'to have' and *est* the corresponding form of *être* 'to be'.

(1) Transitive: *il a aimé (une femme)* 'he has loved (a woman)'

(2) Unergative: *il a travaillé* 'he has worked'

(3) Unaccusative: *il est mort* 'he has died'

avoir and *être* may also occur in other forms to create a variety of further meanings, for example *il avait aimé* 'he had loved' (the **plus-que-parfait**, with an imperfect auxiliary), *il eut aimé* 'he had loved' (the **passé anterieur**, with a passé simple auxiliary).

The unaccusative passé composé construction with *être* (or its cognates) resembles the perfectum forms of Latin deponent verbs. In the pair *mortuus est*–*il est mort* 'he has died', French *est* and *mort* are direct reflexes of Latin *est* and *mortuus* respectively.

The mood systems of Romance also differ from Latin in various ways, but these are of little consequence for the present discussion.

The voice system has also seen major changes. The synthetic passive has been lost, replaced with periphrastic forms, formed with reflexes of *esse* 'to be' plus the past participle. The main forms of the passive which concern us in French are the following:

(4) Present: *il est aimé*
Imperfect: *il était aimé*
Passé simple: *il fut aimé*
Passé composé: *il a été aimé*

A key difference from Latin is that while the classical construction *esse* + past participle denoted a perfectum form, in Romance the corresponding construction can also be used outside of perfect contexts. Thus, whilst *amatus est* means 'he was loved, he has been loved', *il est aimé* means 'he is loved', in spite of the fact

that French *est* and *aimé*, taken as individual words, are direct reflexes of Latin *est* and *amatus* respectively.

Romance past participles often exhibit subject or object agreement for gender and number, although in many instances this does not occur.

Apart from the apparent survival of their classical perfect formation in the passé composé of unaccusatives described above, the deponent verbs have not left any trace in Romance.

Now that the relevant background on these systems has been described, we can proceed to the theoretical and diachronic discussions which form the main focus of this thesis.

2 A formal analysis

2.1 Functional structure of the clause

In this section, I will propose theoretical analyses of the verbal systems of Classical Latin and French (essentially modern French, though the system as described is also applicable to Old French and the other Romance languages with fairly minimal modification). These synchronic analyses will form the basis of the diachronic analysis of the subsequent sections. 'Latin' here refers to Classical Latin. Note that I do not attempt to analyse differences in surface word order.

I assume, following Cinque (1999) and others, that Latin and French, as all other languages, both instantiate a universal clausal hierarchy of a large number of functional projections. These projections correspond to formal features, e.g. $\text{Mood}_{\text{speech act}}\text{P}$, T(Future)P, $\text{Asp}_{\text{habitual}}\text{P}$ etc. Here, however, I consider only those features realised morphologically on the Latin or French (finite) verb, or periphrastically in the auxiliary+verb complex. Further, I ignore any features relating to the future, or to mood. The functional heads which I do consider, therefore, are as follows:

- **T(Past)**, which can take the values [T:+past] or [T:−past];

- **v**;

- **Asp$_{\text{perfect}}$**, which can take the values [Asp:+perf] or [Asp:−perf];

- **Voice**.

I will here write T(Past) and $\text{Asp}_{\text{perfect}}$ simply as **T** and **Asp** respectively, as no ambiguity will arise from this notation in the discussion that follows.
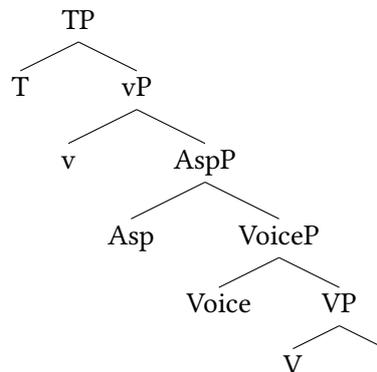
For reasons that will become clear, it is necessary in the discussion of the French verbal system to make a distinction between those constructions that take an external argument (transitives, unergatives) and those which do not (unaccusatives). Here I will refer to a head **v**, assuming that when v has the value [Ext:+ext] an external argument is merged in the specifier of vP, and when v has

the value [Ext:−ext] there is no external argument. Beyond those necessary for the analysis to follow, I make no further assumptions about the nature of v; note in particular that I hold v and Voice to be distinct. I assume v is present in Latin as well as in French, although it does not seem to have any effect on verbal forms in the latter language.

Note that the reduction of Asp to [±perf] values probably ought to be viewed as a simplication to some degree. It is justified on paradigmatic grounds: in Latin perfectum forms can be seen as [+perf] and infectum ones are [−perf]; this analysis also captures concisely the system of modern French varieties without the passé simple. However, Harris (1978, pp. 133–134) divides the Latin form considered here as 'present perfect' ([−past, +perf]) into two functions: 'present perfective' (actions viewed as complete in the present) and 'past punctual' (past actions viewed as unanalysed wholes). Since at least 1100, the French passé composé has also had both of these functions (Fleischman 1990, pp. 45–46). The status of the French passé simple, derived from the Latin perfect, is however more complex. It is basically a past punctual, though it occasionally had perfective meaning in Old French (Fleischman 1990, p. 48). However, I shall regard the details of 'perfect' meaning as beyond the scope of the discussion that follows. Hence, I shall consider both passé simple and passé composé as [+perf], and overlook the distinction between them except insofar as one is synthetic and one analytic. I will, however, briefly return to the distinction between perfective and punctual meanings in the discussion of auxiliary usage in post-classical passives (subsection 3.3). Note that under the analysis adopted here an event which takes place in the past may still be featurally [−past] provided it is [+perf], e.g. the [−past, +perf] perfect *amavit* '(has) loved', which stands in contrast to the [+past, +perf] pluperfect *amaverat* 'had loved'.

The values of Voice are most obviously designated in terms of ±passive— [Voice:+pass] vs. [Voice:−pass]—and that is indeed the analysis I will adopt here for French. In Latin, however, there is reason to believe that deponent verbs share the same feature specification for Voice as passive verbs do, and so the [Voice:±pass] notation may be misleading at this stage of the languages' history. Instead, I will refer to both deponent and passive verbs as [Voice:+R] (the 'R' referring to the *-r* present in several of the morphological endings of these forms) and to non-deponent active verbs as [Voice:−R]. It is also, of course, necessary to refer to the lexical head **V**. Using Cinque (1999) as a starting point, it is then possible to arrange the heads discussed into the following hierarchy (other heads which may intervene in the hierarchy are omitted):

(5)

```
                    TP
                   /  \
                  T    vP
                      /  \
                     v    AspP
                         /   \
                       Asp    VoiceP
                             /    \
                          Voice    VP
                                    |
                                    V
```

This functional structure applies in both Latin and French. Note that I do not assume a non-configurational structure as has sometimes been argued for Latin; see Ledgeway (2012, ch. 5) for arguments against a non-configurational analysis of this language.

The reasons for assuming the precise clausal architecture given in (5) deserve some comment. Firstly, this is the universal order posited by Cinque on various independent grounds, principally adverb placement and the orders of grammatical morphemes in a range of languages. Secondly, this order of heads seems to capture well the behaviour of periphrastic verb forms in Latin and French, as the discussion below will illustrate.

However, there is also some evidence from the languages themselves which does challenge this analysis, and other authors have analysed the same data in different ways. The first of these issues concerns the order of morphemes in Latin synthetic constructions. Assuming 'a generalized version of' Baker's (1985) Mirror Principle, Cinque (1999, pp. 52ff.) and others take the order of affixes to reflect the order of functional heads: specifically, a linear affix ordering ROOT-*a-b-c* reflects an underlying hierarchical ordering [*c* [*b* [*a* [ROOT]]]]. One analysis of the order of the relevant morphemes in the Latin finite verb is as follows:

(6)   1. the root;

   2. voice and aspect marking:
      (a) [±R, −perf]: infectum stem;
      (b) [−R, +perf]: perfectum stem;
      (c) ([+R, +perf]—periphrastic construction; participle formed from supine stem).

   3. tense marking, also sensitive to other categories:
      (a) [−past]: -[zero]-;
      (b) [−perf, +past]: -*ba*- (with vowel length alternations according to voice and person/number);
      (c) [+perf, +past]: -*era*- (with vowel length alternations according to voice and person/number);

4. person/number agreement, also sensitive to voice, aspect and tense.

Thus for example ('TV' stands for the semantically empty 'theme vowel'):

am-	-a-	-Ø-	-Ø-	-nt	***amant***
love	TV	[−R, −perf]	[−past]	3PP	'they love'
am-	-a-	-Ø-	-ba-	-mus	***amabamus***
love	TV	[−R, −perf]	[+past, −perf]	1PP	'we were loving'
am-	-a-	-v-	-era-	-t	***amaverat***
love	TV	[−R, +perf]	[+past, +perf, −R]	3PS	'he had loved'

Table 4

Clearly, it is too simplistic to view this as an agglutinative series of morphemes each expressing a single category; however, the general order *root–(TV)— voice/aspect–tense–person/number* can nevertheless be seen. A complication, however, involves the person/number endings of the passive, which are as follows (the corresponding endings of the active infectum are also given for comparison):

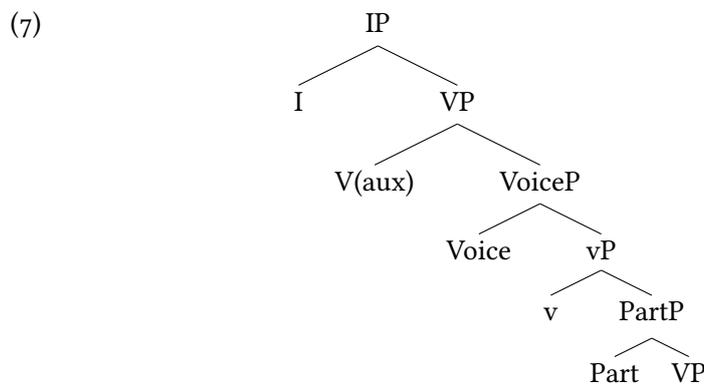| PASSIVE	singular	plural	ACTIVE	singular	plural
1p	*-or, -r*	*-mur*	**1p**	*-o, -m*	*-mus*
2p	*-ris*	*-mini*	**2p**	*-s*	*-tis*
3p	*-tur*	*-ntur*	**3p**	*-t*	*-nt*

Table 5

With the exception of the second-person plural, the passive forms all contain a distinctive *-r* element, which appears to be suffixed onto or infixed into the active ending with various associated phonological changes. This is problematic for the analysis of head ordering given here as it may suggest that Voice ought to come higher than T and Asp.

There is other evidence, however, for a lower Voice head: in Latin the participle (which I assume to bear the [+R] feature, for reasons which will become apparent) in perfect passives would appear to be lower in the structure than the person/number agreement- and tense-bearing auxiliary; in French, passive participles can follow both a tense/agreement-marked auxiliary and a participle indicating perfect aspect (e.g. *il a été aimé* 'he has been loved'). We have also seen that, in the perfect, the form of the verbal stem varies according to Voice, again suggesting a position for the Voice head close to V. Thus there is reason to keep the analysis proposed. However, the problem of the morphology still remains. Cinque's (1999) discussion of passive morpheme orders is not extensive (though see pp. 53–57, 197fn.63), but in the 530-language sample of verbal morphology of Julien (2002, pp. 330–357), in only one (Khanty: Ugric, Russia) of the twelve languages which have both passive and tense/aspect marking on the same side of the

verbal root is the passive morpheme not closer to the root than the tense/aspect morphemes. This is good evidence for the universal ordering proposed. It is possible that the Latin surface morphology simply does not reflect the underlying syntactic structure that well in this instance; matters are already confused by the tendency for one feature to be marked in some way in multiple places, after all. Calabrese (1985), cited by Cinque (1999, p. 197fn.63), argues that Latin *-r* may in fact be a clitic.

The present analysis also conflicts with Collins' (2005) analysis of the passive in English, adapted for Latin and Romance by Roberts (2014). Collins takes the basic clausal spine in passives to be as follows (p. 90, adapted):

(7)

```
              IP
             /  \
            I    VP
                /  \
           V(aux)  VoiceP
                   /    \
                Voice    vP
                        /  \
                       v   PartP
                           /   \
                        Part    VP
```
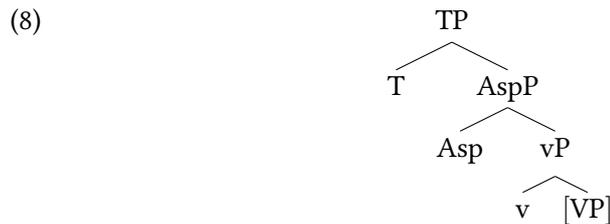
Collins refers to 'IP' rather than 'TP' and considers the auxiliary to be inserted as a lexical V rather than simply to be a spell-out of the functional heads as I will assume; I do not think either of these differences constitutes a major issue. More significantly, he posits that the participle is the head of a phrase 'PartP' (which moves to the Spec of VoiceP), does not mention a separate Asp projection, and posits that VoiceP is above vP. Regarding PartP, I regard my analysis as superior, as it provides principled reasons for the distribution of the participle. Collins mentions that the participle can be c-selected by the auxiliary or else be licensed by (passive) VoiceP (p. 91), but this does little more than simply stipulate that a PartP happens to occur in the contexts where it is required (neither he nor Roberts is primarily concerned with the details of the verbal formation itself, as I am here). If Collins's 'PartP' corresponds to my 'VoiceP' (in English passives, though AspP may also have participle properties elsewhere)—largely a matter of labelling—then the other aspects of his analysis can be retained with little modification.

Collins also claims (p. 85) that 'there is no difference at all between the passive participle suffix and the past participle suffix', which is likely at least partially responsible for his failure to posit an Asp projection. This is one claim I do wish to reject; I believe Collins's evidence—which seems to be based largely around the morphological syncretism—is weak. On the other hand, an Asp projection is a natural way of capturing the presence of an aspectual contrast in a language.

Collins's 'VoiceP' can then be thought of as some higher head between TP and vP, required (in English) as the landing site of the participle phrase—cf. Cinque's

(1999, pp. 102–3) claim that passive participles in Italian generally move upward to check the T(Anterior) head. Given the strong possibility of cross-linguistic variation in this type of phrasal movement of participles, and the fact that the precise identification of the head in question is not relevant here, I will not pursue this matter further.

Another analysis of the Latin verbal system, similar to mine in many respects, is that of Embick (2000). Embick, however, places AspP above vP, and does not explicitly posit a separate Voice projection (p. 195):

(8)

```
              TP
             /  \
            T    AspP
                /   \
              Asp    vP
                    /  \
                   v   [VP]
```

I believe that there is strong reason from the Romance languages to place v above Asp, given that in periphrastic constructions the presence or absence of an external argument (a property of v) is manifest on the auxiliary whereas the aspectual information can be seen as contained in the participle, as argued below. (Note that Embick also (p. 196) associates v with features such as agentivity, causativity and eventivity, which I do not necessarily assume here.) Embick associates the feature [pass] (equivalent to my [Voice:+R]) with various different positions; I believe it is simplest to posit a single Voice head. The complications discussed at length by Embick regarding the association of the [pass]/[+R] feature with deponents—essentially, whether this feature is present on the roots themselves or else present separately but required for the deponent roots' insertion—remains, but this problem can probably be overlooked here and need not imply that a Voice projection ought not to be posited.

To summarise, this subsection has argued for a hierarchy of functional heads presented in (5). The following subsections will discuss how the different verbal forms can be derived from this.

2.2   Derivation of simple and compound verb constructions

Once the structure in (5) is adopted, the derivation of the simple (non-periphrastic) verb forms such as *amat* 'he loves', *moritur* 'he dies', *(il) aime* '(he) loves' etc. seems obvious enough. These forms can be seen as formed from successive incorporations via head movement: V to Voice, V+Voice to Asp, V+Voice+Asp to v, etc.

The correct derivation for the constructions employing auxiliary verbs—for our purposes, those using *esse/être* 'to be' or *avoir* 'to have' together with a past participle—is less apparent. The remainder of this section will explore this problem.

Firstly, observe that the Tense information is manifested in the auxiliary. Compare for example the Classical Latin forms *amatus est* 'he has been loved' and *amatus erat* 'he had been loved'. In each case, the form of the participle remains the same, whilst the Tense information is encoded in the auxiliary: [−past] by *est*, the (third-person singular) present active indicative form of *esse*, and [+past] by *erat*, the equivalent imperfect form. This argument can be extended to include *amatus erit*, 'he will have been loved', where *erit* is a future tense form, and the identical pattern found with deponent verbs.

We observe similar in the periphrastic tenses of French verbs, for example *il a aimé* 'he has loved' vs. *il avait aimé* 'he had loved', which employ present ([−past]) and imperfect ([+past]) forms of *avoir* respectively. The same is true of periphrastic tenses formed with *être*, e.g. *il est allé* 'he has gone' (with a present form) vs. *il était allé* 'he had gone' (with an imperfect form). This *avoir*/*être* distinction demonstrates that the French passé composé and related constructions are also sensitive to the presence or absence of an external argument, here denoted by the feature [±ext] on v. This suggests that an Agree relation holds between the auxiliary and v, or that v is incorporated into the auxiliary by head movement.

Note crucially that in all of these cases—the Classical Latin passive (and deponent) perfect, and the French periphrastic tenses—the auxiliary does not take the marking for Aspect and Voice that it might have as a main verb:

(9) **amatus fuit* (perfect auxiliary)

(10) **il est eu aimé* (passive auxiliary, lit. 'he is had loved')

This suggests that the auxiliary cannot distinguish different values of Aspect and Voice features in these cases. There are, however, two exceptions—the French passé anterieur (11) and '*passé surcomposé*' (12), where the auxiliary appears to be marked [+perf] using the forms of the passé simple and the passé composé respectively:

(11) *il eut aimé* 'he had loved'

(12) *il a eu aimé* 'he had loved'

The meaning of these forms is not distinct from *il avait fait* with a [−perf] auxiliary. The passé surcomposé is of marginal status and will be overlooked here. The passé anterieur will be discussed briefly in subsection 5.3.

The post-classical passive, however, shows a different behaviour: the auxiliary in these constructions may clearly distinguish aspect. For example:

(13) *il est aimé* 'he is loved'

(14) *il a été aimé* 'he has been loved'

The auxiliaries used in these passives, then, do make an Aspect distinction. They do not, however, indicate Voice in and of themselves: the presence of auxiliary *être* need not mean that a form is passive, and the auxiliary cannot itself take on a passive form:

(15) *il est été aimé* (lit. 'he is been loved')

It may also be possible to make judgements on the featural content of the participles, although these should be viewed with caution. The most secure judgement is that the participle contains the features of the lexical verb, maintaining its semantics, phonological form, selectional properties etc. It may also be observed that participles seem to be valued for Aspect and/or Voice features. This can be deduced from the fact that, if there is no option of distinguishing Aspect and/or Voice on the auxiliary, it is most natural to consider these features to be present on the participle.

In summary, we can assign the following minimal featural content to each of the various verbal forms of (Classical) Latin and French, assuming that (i) a feature is present on a form if that form can carry two (or more) distinctive values for that feature, and (ii) if a feature is not distinctive on an auxiliary it must be present on the participle:

Latin/French main verb in synthetic tenses:	
Tense, Aspect, Voice	
Latin perfect passive	
Auxiliary:	**Participle:**
Tense	Aspect, Voice
French passé composé	
Auxiliary:	**Participle:**
Tense, [±ext]	Aspect, Voice
French passive	
Auxiliary:	**Participle:**
Tense, Aspect	Voice

Table 6

It will be observed that when certain features are only distinctive on the auxiliary, they are on the approach adopted here associated with heads higher than those relating to features associated with the participle.

Here, I will take the view that when an auxiliary is associated with certain formal features, it is simply the spelled-out form of the head associated with those features with no additional semantic content. Specifically, each of the auxiliaries above is the spell-out of T when no lexical material is incorporated into it. However, other functional material may be incorporated or enter into an Agree relation with this head. In the case of the French passive, the spelled-out form of T is

affected by the nature of the Asp head. T does not, however, incorporate or Agree with Asp in the cases of the French passé composé and the Latin perfect passive. But in the passé composé it does incorporate/Agree with v, yielding the *être*/*avoir* distinction. (A similar relation between T and v may also hold in the other cases, only without morphological realisation of the different values of v.)

I also suggest that the participle form of the verb is that which is spelled out when the lexical head V is not incorporated with a functional head above a certain position, in these cases Asp (Latin; French passé composé) or Voice (French passive). It is the same failure of these verbs to incorporate into higher heads that forces these same heads to be spelled out as auxiliaries. Note that, in French, this requires the featurally distinct forms Asp+Voice+V (perfect participle) and Voice+V (passive participle) to show morphological syncretism.

The outstanding question that arises from this analysis is this: what is it that prevents the lexical head V from incorporating into the higher heads in those instances where an auxiliary + participle construction arises? I shall attempt to deal with this in the following subsection, taking Roberts (2010) as a starting point.

2.3   Defective goals analysis

Roberts' (2010, see especially ch. 3) analysis of head movement is based around the notion of 'defective goals'. These are defined as follows:

(16) 'A goal G is defective iff G's formal features are a proper subset of those of G's probe P.' (Roberts 2010, p. 62)

Under this analysis, a goal incorporates into a probe only if it is defective, i.e. incorporation of a lower head G into a higher head P takes place only when all the features of G are also found on P. Lower copies of the defective goal are generally deleted in the phonological output, which gives the impression of movement of G to P.

The way to account for the case of French verbs under this approach is simple enough. In instances where V incorporates into all the higher heads (i.e. all of Voice, Asp, v and T), this can be seen as due to each head (including V) being a defective goal for all those heads above it—that is, the formal features of each of these heads form a subset of those of those heads higher than it. Thus the features are only realised phonologically on the highest head (T). This occurs with all the synthetic forms.

In the passive and the passé composé , however, V does not incorporate higher than Voice or Asp respectively. Under the defective goals analysis, we can say that these heads are not defective goals for the higher heads in the instances where incorporation into higher heads does not occur. Thus, a [+pass] Voice is not a defective goal for Asp, v or T. Likewise, some [+perf] Asp heads are not defective goals for v or T, although some are (hence the distinction between the passé composé and the passé simple).

The reason these heads are not defective goals for the higher heads is, in these instances, that the former have features which the latter lack (i.e. the feature sets of the lower heads are not subsets of the feature sets of the higher heads). It is difficult to determine with any certainty which feature or features are found on the lower heads but not the higher ones, though correct identification of said feature(s) is not of great importance to the present argument. However, I will assume [+pass] Voice and (passé composé) [+perf] have unvalued [Gender] features which are not present on other (non-nominal) heads. Some evidence for this is found in the morphology of the participles, which show agreement for gender, whereas other verb forms do not:

(17) *il est détruit* 'he is destroyed'

(18) *elle est détruite* 'she is destroyed'

(19) *il est mort* 'he died'

(20) *elle est morte* 'she died'

Gender is not, however, manifest on all participles in the passé composé, which complicates this analysis:[2]

(21) *il a dit* 'he said'

(22) *elle a dit* (*dite*) 'she said'

Possibly the [Gender] feature has been replaced by some other in these cases. Here and throughout, I will leave aside the details of agreement for reasons of space, and assume [Gender] is present on all participles.

The Latin case, however, is more problematic. Most heads incorporate into higher heads, and therefore seem to be defective goals for them. However, an Asp head valued [+perf, +R] does not incorporate into v or T. This suggests it is not a defective goal for these heads, i.e. it has features which they lack. However, [+perf, −R] Asp, and [−perf] Asp into which a [−R] Voice has been incorporated, are defective goals for v and T—their feature sets are subsets of the feature sets of the higher heads. [−R] Voice is itself a defective goal for [+perf] Asp. Thus:

(23) $Y \subseteq X$ *(Y is a subset of X)*

(24) $Z \subseteq X$ *(Z is a subset of X)*

(25) $(Y \cup Z) \nsubseteq X$ *(the union of Y and Z is not a subset of X)*

— where X is the feature set of T or v, Y is the feature set of [+perf] Asp and Z is the feature set of [+R] Voice.

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[2]The issue is further complicated by the fact that, in modern French, agreement endings are in most cases not pronounced, for reasons of regular sound change. They are retained, however, in other varieties including older French.

There is a mathematical contradiction between the first two statements and the third. This would appear to cause problems for this approach. The next subsection will discuss a possible solution to this problem.

2.4 Conditional features

In order to resolve the problems created by trying to understand the Latin verbal system in terms of defective goals, I propose a general schema for 'conditional features', as follows:

(26) [F ← G]

Found in the lexical entry of a given head, this is to be read 'a feature F is active on the head if and only if a feature G is also present'. [G → F] would be an alternative notation. An 'active' feature can be defined as one which is visible for the purpose of syntactic operations.

An expanded notation would be as follows:

(27) [F:x ← G:y]

This is to be read 'an feature F with value x is active on the head if and only if a feature G is also present and has the value y'. x may be no value, i.e. [F:x] may be unvalued [F:__].

In order to bear a feature of the form [F ← G], a head must also carry the feature G (or [G ← H], where H is some other feature).

It is possible that there may be universal constraints on the allowed instantiations of F and G, brought about by Universal Grammar or otherwise. This opens up the possibility of a great deal of further discussion which I will not attempt to make here.

The schemata in (26) and (27) may be understood either as more-or-less 'literal' representations, or else as shorthand for some other phenomenon. Read 'literally', this approach is obviously a fairly major departure from the standard minimalist conception of features. One objection to this might be that it creates two types of features—'simple' features of the type [F] as in existing theory, and the more complex conditional features of the type [F ← G]. However, it is possible to maintain that there is only one type of feature if the 'simple' features are understood as also of the form [F ← G], where G is a feature that is always present on the same head. For example, if a language has a V feature on T, this might be represented as [V ← T]. As T is always present, so is V. If this approach is adopted, our understanding of the make-up of features changes, but we still only have one type of feature. (A possible issue with this is that if every feature is to be defined in this form, each head must either have at least one feature determined only by the features of another head or a 'circular' pair of features [F ← G, G ← F], where each defines the presence of the other. This is not necessarily problematic, however. Heads do not generally (if ever) occur except in the presence of other

heads, and circular feature pairs need not be unworkable. In any case, this issue is probably not of particular importance to the main line of argument here.)

In order to deal with the Latin problem, we might posit the following feature on [+perf] Asp, along with an unvalued Voice feature:

(28) [Gender:__ ← Voice:+R]

That is: [+perf] Asp has an active [Gender] feature if and only if its Voice feature is valued [+R] (through Agree with a lower [+R] Voice).

As with the French case, the feature here labelled 'Gender' could also be some other feature. Provided it is absent on the higher heads, preventing [+perf, +R] Asp from being a defective goal for these heads, and is also absent on Voice, its exact nature is not of great importance to the current argument. There is evidence that it may be [Gender], however, from morphology. Latin participles, unlike simple verbs and auxiliaries, exhibit gender agreement:

(29) *amatus est* 'he has been loved'

(30) *amata est* 'she has been loved'

(31) *amatum est* 'it has been loved'

The presence of active [Gender] on [+perf, +R] Asp means it is not a defective goal for the higher functional heads and does not incorporate into them. However, the featural composition of the other heads is such that they are defective goals for the higher heads and incorporation does occur. This is true of all Voice heads, unlike in French, and is also true of [+perf] Asp with [−R] Voice, where the feature [Gender] is not activated.

In order to demonstrate that this is a useful theory, it will help to show that it can apply to a range of constructions across a range of languages—we do not wish to make such a substantial change to the theory of features purely to explain a single phenomenon in a single language. The following subsection will present some other cases in which this new approach to features may be of utility.

2.5   Conditional features in other languages

2.5.1   Basque verbs

Basque, like Latin and the Romance languages, has both synthetic and periphrastic verbal formations, the latter consisting of an inflected auxiliary and a participle or some other non-finite form of the verb[3]. However, the use of the simple constructions is limited. Only a small set of so-called 'strong' verbs allow them, and then only in certain tense/mood/aspect/voice (TMAV) combinations:

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[3]All Basque data presented here are taken from de Rijk (2008).

(32) a. *dator* 'he is coming' (present (non-habitual)—**synthetic**)[4]

    b. *etorri da* 'he has come' (present perfect—**periphrastic**)

(33) a. *erortzen da* 'he is falling' (present imperfect—**periphrastic**)

    b. *erori da* 'he has fallen' (present perfect—**periphrastic**)

Let us assume that, as claimed for Latin and French above, the synthetic forms in Basque are brought about when V incorporates into T, whereas in the periphrastic tenses V moves only as high as some head lower than T, with the higher heads being spelled out as the auxiliary. Thus the complex of heads that (in periphrastic constructions) contains the non-finite form of the verb is a defective goal for T if and only if (i) the V head is strong, and (ii) it has those TMAV features which allow the simple construction with strong verbs. With weak verbs and the other TMAV combinations, this complex of heads is not a defective goal, implying it has some feature or features not present/active on the higher heads.

Without going into all the details of this system, it can be seen that the problem here parallels closely the problem for Latin presented in subsection 2.3 above. To illustrate this, let us assume a simplified version of the system where the only distinction is made between the perfect and imperfect (i.e. [Asp:±perf]) on Asp and there is also a T(ense) head which is always valued [+present]. Putting aside the derivation of head-final ordering, the structure of the clause in this system is as follows:

(34)

                                TP
                      T   AspP
                         Asp   VP
                                V
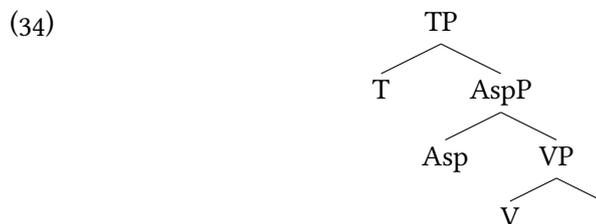
Let us also assume that verbs are marked lexically as [Strength:±strong]. [+perf] strong verbs, and all weak verbs, raise into Asp but not into T; the Asp+V complex is spelled out as the (perfect or imperfect) participle and T is spelled out as the auxiliary (*da* in the 3ps. present). [−perf] strong verbs, however, incorporate into Asp and the Asp+V complex incorporates into T; the resulting complex T+Asp+V is spelled out as the simple form of the verb.

Under a defective goals analysis, then, we would wish to claim:

(35) a. V is always a defective goal for Asp.

    b. Asp+V is a defective goal for T only when it is both [+strong] and [−perf].

---

[4]Strong verbs also have periphrastic present imperfect forms, e.g. *etortzen da* 'he (usually) comes', but these can only express habitual meaning. Weak verbs do not make this distinction.

c. Asp+V is not a defective goal for T when it is either [−strong] or [+perf].

T must contain all the features of [−perf] Asp in order to allow incorporation in the case of simple strong verbs. [−perf] Asp must in turn contain all the formal features of both [+strong] and [−strong] verbs, as either of these can be incorporated into it. Therefore, T must contain all the formal features of both [+strong] and [−strong] verbs. Thus, T would seem to have all the features both of [−perf] Asp and [−strong] V.

However, when [−perf] Asp and [−strong] V coincide as part of a [−perf, −strong] Asp+V complex, this is not incorporated into T, suggesting it has an additional feature that T lacks. This appears to contradict the final statement of the preceding paragraph. A solution is to posit the following feature on [−perf] Asp:

(36) [F:__ ← Strength:−strong]
    − where the nature of F remains to be determined

This is further evidence for this type of feature, therefore.

2.5.2   Split ergativity

Many languages have a 'split ergative' system wherein ergative case, which marks only the external arguments of transitive verbs, is found only in certain tenses or aspects. In Kurmanji Kurdish (Indo-European, Turkey), for example, the ergative alignment is found in past tenses; the present tense has a nominative-accusative alignment (McGregor 2009, p. 491):

(37) *min   hon   dit-in*
     1SG.ERG 2PL.NOM saw-2PL
     'I saw you'

(38) *ez   we   di-bin-im*
     1SG.NOM 2PL.OBL PRES-see-1SG
     'I see you'

If we assume that ergative case is assigned by v (as argued for example by Legate 2004, Aldridge 2004) and that perfective aspect is marked separately on a [+perfective] Asp$_{perfective}$ head, then the presence of ergative marking seems to be sensitive to two separate heads, neither of which is sufficient to assign ergative case on its own. We might then assume v (which we can take as being higher than Asp$_{perfective}$) to be marked with the following feature:

(39) [Case:ERG ← Asp:+perfective]

Note, however, that it is not obviously if this can be related well to current approaches to split ergativity. For some discussion of these, see Sheehan (to appear, §2).

2.5.3 Split-S case

In some 'split-S' languages (where two or more different cases are available for the arguments of intransitive verbs) case assignment seems to be sensitive to multiple factors. One such language is Central Pomo (Pomoan, USA). Under the analysis of Mithun (1991, pp. 518–524) one case is assigned to the arguments of intransitive verbs which are semantically [+event, +control] or [–event, –affect], and another to those which are [+event, –control] or [–event, +affect]. For example (the bolded forms are the case-marked pronouns):

(40) [+event, +control]: **ʔa·** swélan 'I play'

(41) [–event, –affect]: **ʔa·** ʔe qól 'I'm tall'

(42) [+event, –control]: **to·** ʔésʔesya 'I sneezed'

(43) [–event, +affect]: **to·** kasíla 'I'm cold'

In Baker (2013, p. 31), I suggested that each of the features [±event], [±control] and [±affect] might plausibly be connected to a different functional head. Possible identifications of these heads with other heads posited in the literature are discussed in that work; here for simplicity's sake I will refer to them as Event, Control and Affect respectively. Given this, the case-marking facts might be captured with the following features:

(44) a. On [+event] Event: [Case:AGENTIVE ← Control:+control])

b. On [–event] Event: [Case:AGENTIVE ← Affect:–affect]

That is, [+event] Event can assign 'agentive' case if valued [+control] (through Agree with Control), and [–event] Event can assign that same case if valued [–affect] (through Agree with Affect). The other, 'patientive' case can tentatively be assumed to be a variety of nominative/absolutive assigned by T (see Baker (2013, p. 9–12) for some arguments in favour of this).[5]

Again, then, we see more cases where this type of feature seems to be useful for analysis. This subsection, then, has demonstrated that this type of analysis may be of utility beyond the Latin case.

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[5]Alternatively, we might want to argue that agentive case is an inherent case assigned by v, in the manner of the ergative, in which instance instead of [Case:AGENTIVE] we would want to posit some other feature—call it [A:+a]—on Event, and a feature [Case:AGENTIVE ← A:+a] on v. The argument that this type of conditional feature seems useful in describing the case relationship in this language still holds, however.

2.6 Summary

The featural specifications proposed for the Voice and Aspect heads in Latin in this section can be summarised as follows:

(45) a. [Asp:+perf, Voice:__, V:__, Gender:__ ← Voice:+R]

    b. [Asp:−perf, Voice:__, V:__]

    c. [Voice:+R, V:__]

    d. [Voice:−R, V:__]

The featural specifications argued for the same heads in French can be represented as follows:

(46) a. i. [Asp:+perf, Voice:__, V:__] (passé simple)
      ii. [Asp:+perf, Voice:__, V:__, Gender:__] (passé composé)

    b. [Asp:−perf, Voice:__, V:__]

    c. [Voice:+pass, V:__, Gender:__]

    d. [Voice:−pass, V:__]

These analyses being established, they will be used as the basis for tracing the changes that took place between the two systems, the focus of the next three sections.

3 Diachronic developments I: the passive

3.1 Introduction

This section will concern itself with the diachronic developments to the passive between Latin and Old French. It is useful to make a distinction between three forms of the passive/deponent which occur. The first are the synthetic passives. Second are the analytic passives with an auxiliary based on the infectum of *esse* 'to be', which will be referred to as the **s-forms**, as they are derived from a shared root containing *s (Mallory and Adams 2006, p. 64); in Latin these forms of the auxiliary variously contain either /s/ or /r/ in the stem, in most cases preceded by /e/. Thirdly, the innovative analytic passives with an auxiliary based on the perfectum of *esse* will be referred to as the ***fu*-forms**; these forms of the auxiliary all have a stem formed with *fui-* or *fue-*.

Note that these labels refer strictly to the *forms* of the passive, and not to their *functions*. In Classical Latin, as has already been discussed, the *s*-forms of the passive are used with perfect meaning, e.g. *amatus est* 'he was loved, he has been loved'. In Romance they have a non-perfect meaning, e.g. *il est aimé* 'he is loved'.

Despite this change in meaning, passives and deponents using the infectum forms of the auxiliary will be referred to as '*s*-forms' regardless of their semantic content.

According to the reconstruction of Harris (1978, ch. 8), 'Vulgar Latin' had a purely analytic system of passives, where *amatus est* replaced the classical infectum present *amatur*, *amatus erat* replaced the imperfect *amabatur*, and the perfectum forms were replaced either with *amatus fuit* (in the present perfect only) or forms based on the *habere* periphrasis. That is to say, *s*-forms came to be used in the infectum—in contrast to the classical language, where they were used in the perfectum—and *fu*-forms (to a limited extent) and forms with *habere* took on the perfectum function. However, closer examination of the textual record suggests that this analysis is an oversimplication. Such examination, together with formal analysis of the data, will be the concern of the remainder of this section.

3.2   Stage 1: Classical Latin

The status of the passive in Classical Latin, as already described, can be summarised as follows: in the infectum, the passive is formed synthetically; in the perfectum, it is formed analytically with a participle plus a form of *esse* 'to be'. The same applies to deponent verbs. It was suggested that the Voice head is specified [Voice:+R, V:__] in both perfectum and infectum passives/deponents, and that the difference between the two lies solely in the Asp head, specified either [Asp:−perf, Voice:__, V:__] or [Asp:+perf, Voice:__, V:__, Gender:__ ← Voice:+R].

The following subsections offer an analysis of the changes of the voice system just described to that of Romance, with reference to textual evidence from a number of different periods.

3.3   Stage 2: The Vulgate

The Vulgate is a Latin translation of the Bible dating to the late fourth century, primarily produced by Jerome (Sutcliffe 1969). Here I consider only the Vulgate text of the Gospel of John. The version used here is that of Weber and Gryson (1994)—the possibility that this may obscure variation between manuscripts is mitigated by comparison with other texts, to be discussed below.

All three types of passive occur in Jerome's text of John: in the first three chapters there are around 17 synthetic passives, 26 *s*-forms and 5 *fu*-forms. Numbers are approximate as in a small number of cases the identification of a form is dubious: for example, sometimes a construction can be read as either auxiliary + past participle or copula + adjective. Another example is *fuit homo missus a Deo cui nomen erat Iohannes* (1:6), which could be interpreted 'a man was sent [passive] from God whose name was John', but read here as 'there was [=existed] a man, sent from God, whose name was John'—there are no other instances of *fuit* as an auxiliary in this text, and the Greek on which it is based has εγενετο ανθρωπος απεσταλμενος παρα θεον … '[there] came a man sent from God …' (references to the Greek text are based on the edition of Aland et al. 1993).

I have not made a complete further count of synthetic passives and *s*-forms as it is clear from this sample (about one-seventh of the complete text) that they are both very frequent, as an informal study of the rest of the text will confirm. This may suggest that the synthetic passive was still in use during this period. Further evidence for this comes from the fact that the Vulgate uses passive forms where they are not present in the Greek text, which suggests that 'the synthetic passive was still part of the spontaneous grammar of Latin in the fourth century' (Herman 2002, p. 39)[6].

The main interest lies in comparing the use of the *s*-forms, which already existed in older Latin, with the innovative *fu*-forms. There are around 23 *fu*-forms in the text—less, that is, than the number of *s*-forms in the first three chapters alone. However, it is instructive to consider these forms on the basis of tense and mood. Using the third-person singular forms of each tense/aspect/mood category as cover forms for all occurrences of the auxiliary with those tense/aspect/mood combinations, we find the frequencies in table 7. (The future tense and subjunctive are included here for comparison.)

		past	**present**	**future**
Indicative	*s*-	*erat* – 7	*est* – very many	*erit* – 1
	fu-	*fuerat* – 10	*fuit* – 0	*fuerit* – 1
Subjunctive	*s*-	*esset* – 1	*sit* – 0	—
	fu-	*fuisset* – 2	*fuerit* – 9	—

Table 7

The total number of present indicative *s*-forms (denoted by *est* above) has not been counted precisely, but it is certainly much larger than the figure for any of the other analytic forms. There are 23 instances of present indicative *s*-forms in the first three chapters alone, whereas all the other *s*-forms and *fu*-forms given in the table above sum to only 31 forms across the whole book.

One other issue here that deserves special mention is the syncretism (especially in writing, where vowel length is not marked) between many forms of the (present) perfect subjunctive and the future perfect indicative. Determination of how to classify such forms therefore requires closer examination of the surrounding context: though these judgements are not necessarily reliable, as it cannot automatically be assumed that the factors conditioning the subjunctive in this period are the same as those in the classical period described in modern grammars (see Harris (1978, chs. 7, 8) for an illustration of how developments in indicative and subjunctive paradigms may differ). Comparison with the original Greek text has also been utilised. My own judgement is that the ambiguous cases are probably all perfect subjunctives (not future perfects), though this may be open to debate. (The one form that I have designated a future perfect is not ambiguous—it is first-person singular *fuero* (in 12:32); the perfect subjunctive would be *fueram*.)

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[6] 'le passif synthétique ait fait encore partie de la grammaire spontanée du latin au IVᵉ siècle'

It is clear that *s*- and *fu*-forms are not evenly distributed across the tenses and moods. There is an overwhelming preference for *s*-forms in the present perfect indicative, though conversely for *fu*-forms in the present perfect subjunctive; the past (i.e. the pluperfect) is split between *fu*- and *s*-forms. As elsewhere, I largely put aside the future and subjunctive. A clear question which remains, though, is this: what factor conditions the split between the *fu*-forms and the *s*-forms in the pluperfect?

One possibility is that the variation is purely random, perhaps due to semi-consistent conservatism on the part of the translators. Evidence against this position, however, is furnished by comparison with other Latin Gospel texts. *Vetus Latina Iohannes* (VLI; Burton et al. 2007) is an electronic edition of 36 Latin manuscripts of the Gospel of John dating to between the fourth and twelfth centuries. The locations in which the manuscripts were probably copied vary considerably: most are from Italy or France, as well as a number from the British Isles, but there are also ones plausibly from Illyria, Egypt and Lebanon. It should be noted that not all of the manuscripts contain the entire Gospel.

The *s*-forms in the Vulgate are generally *s*-forms in all the VLI texts with one exception. This concerns *esset/fuisset (...) mortuus* 'would not have died' in 11:32, which is (i) subjunctive (based on the present tense, subjunctives may show different behaviour to the indicative), and (ii) deponent (see section 4 for arguments that deponents and passives cannot be assumed to have identical behaviour). Conversely, the Vulgate *fu*-forms are frequently replaced by *s*-forms elsewhere. This asymmetry might not be expected to occur from random deployment of conservative forms, suggesting there is some other basis for the use of either form.

Unfortunately, it is not altogether clear what this basis might be. Comparison of the Vulgate with the Greek text reveals that Greek participles are only ever translated with *fu*-forms, but 4/9 uses of pluperfect *fu*-forms translate Greek finite forms. Whilst there does seem to be something of a pattern here, it is not clear what if anything this can tell us about the Latin system, or why the translators made these choices.

The most promising categorisation of the two forms is perhaps this: *s*-forms are punctual, *fu*-forms are perfective (and synthetic forms are imperfective). This follows the division of the perfect into perfective and punctual made by Harris (1978, pp. 113–114). This works well in the majority of cases. It is also compatible with the other texts of the VLI corpus—where there is variation between *fu*- and *s*-forms across versions, it is generally where either a perfective or a punctual reading could make sense in context, for example:

(47) *nondum enim **missus fuerat** in carcerem iohannes* (3:24, Vulgate)
      'for John had not yet been cast in prison'

(48) *nondum enim · **misus erat** in carcere iohannes ·* (3:24, Codex Monacensis)
      'for John was not yet cast in prison'

There are, however, a few cases where this analysis is more questionable, for example:

(49) ... *in horto monumentum novum in quo nondum quisquam **positus erat***
      (19:41, Vulgate)
      '... in the garden was a new tomb in which no-one had ever been laid'

It is not clear that the punctual reading potentially suggested by the auxiliary—something like '... ever was laid'—would be preferable to the perfective reading here. However, as this punctual/perfective distinction seems to be the best hypothesis, it is the one I will tentatively adopt. In any case, little rests on the decision.

Note also that the *s*-forms in the Vulgate still retain their classical, perfect sense. Consider for example the following:

(50) ... *locus ubi **crucifixus est** Iesus ...* (19:20)
      'the place where Jesus was crucified'

This sentence does not translate '... is crucified'; comparison with the Greek text confirms this. It is true that some sentences could be read either way (e.g. *in lege vestra scriptum est ...* 'it is/has been written in your law ...', 8:17), especially when no reference is made to the Greek text, but there do not seem to be any cases where such formations with the *s*-forms have unambiguous non-perfect reading as they do in Romance.

There are only two instances of present tense indicative *fu*-forms in the entire VLI corpus (though note the caveat of conservatism in these texts, to be discussed in subsection 3.4). In 19:41 it appears in Codex Palatinus (fifth century; likely the earliest manuscript) in the unusual construction *fixus cruci fuit* 'he was fixed to the cross' (cf. *crucifixus est* in the other versions). Plausibly *fixus* 'fixed' here is to be seen as an adjective rather than a participle in a passive construction, although this is somewhat problematic as Christ has been removed from the cross in the previous verse. In any case this is an isolated instance of auxiliary *fuit* used alone: in the other example (Codex Interlinearis Sangallensis, 960–970), it appears in 7:39 in the phrase *glorificatus fuit uel est* 'was not yet glorified', where *uel* 'or' seems to indicate an uncertainly between the correct form of the auxiliary. This may suggest that present tense *fu*-forms have entered the spoken language by this late date, as will be argued further below, though the scribe possibly still has some awareness of their perceived inappropriateness in writing.

A system similar to the Vulgate seems to be in play in the contemporary *Itinerarium Egeriae* (381–384). According to the analysis of Winters (1984), the writer Egeria generally respects the use of synthetic forms, and only uses *s*-forms (with *est* etc.) in the present indicative perfect. Outside of the present indicative, perfect periphrases frequently though not exclusively use *fu*-forms. Winters does suggest (pp. 447–450) that some *s*-forms have non-perfect meaning—but most of

the cases cited, as Winters herself recognises, are ambiguous and I do not believe that they furnish enough evidence to posit a general use of non-perfect *s*-forms at this time. Two examples for which she does convincingly argue for a non-perfect interpretation in context are *facta sit* 'may be done' and *auditus sit* 'is heard'. It is plausible, however, that subjunctives such as these show separate behaviour from indicatives, and my main focus is on the latter, so I will set these examples aside.

A number of formal analyses of this system seen in the Vulgate and the *Itinerarium Egeriae* are possible, especially given the uncertainties regarding the factors conditioning the use of the various forms. For present purposes the details are perhaps not of particular importance, as it seems probable that the system may shortly after this stage have reverted to a state that, featurally, was more like that of the classical language; this will be discussed in subsection 3.5. One possible analysis will be briefly sketched, however.

It can be assumed that the featural content of the Voice and Asp_{perf} heads may well have remained unchanged, as the distribution of participles and auxiliaries, though not the forms of the latter, remained the same as in the classical language. To account for the variation in the form of the auxiliary, I propose an additional Aspect head above Asp_{perf}, which incorporates into T and determines whether the auxiliary takes the *s*-form or the *fu*-form depending on its aspectual value—tentatively [±punctual]. This head only affects the form of the auxiliary in the presence of [+past] Tense (and plausibly also [+future], though this is not within the present remit).

Subsection 3.5 will attempt to reconstruct some subsequent stages. As a preliminary to this, however, the subsection immediately following will discuss textual conservatism with regard to passive forms.

3.4   Conservatism of texts

Analysis of texts from across a wide timescale appears to reveal a considerable amount of conservatism in the use of passive forms, which makes it difficult to employ the textual record in investigating changes to the passive.

This is apparent, for example, from the *Vetus Latina Iohannes* corpus. Although separated by centuries, frequently there is no variation at all between the manuscripts with regard to a passive or deponent form, e.g. every manuscript which contains John 1:10 has *factus est* 'was made' there, all examples of 3:13 contain the deponent *loquitur* 'speaks' in that form, all have *mittebantur* 'was put' in 12:6.

There are, however, a number of instances where the manuscripts vary on whether they use a synthetic or an analytic passive. For example, most in 8:12 use *locutus est* 'spoke', whereas Codex Palatinus and Codex Vercellensis both use *est interpretatum*. It may be tempting to see examples such as this as instances of the Romance-type passive, with *s*-forms used without a perfect meaning. In context, however, either a perfect or a simple present verb makes sense: '... you will be called Cephas (which *is translated* as Peter)' or '... you will be called Cephas

(which *was translated* as Peter)'. When one considers the other examples of this type of variation, there is no clear case where we can claim that an *s*-form is being used with non-perfect meaning.

Similar patterns are seen in other texts, e.g. the *Liber Manualis* or 'Manual' of Dhuoda (ninth century). The analysis here is based on the edition of Riché (1975). The *Manual* contains a large number of passives and deponents, the vast majority of which are either synthetic forms (e.g. *opertur* 'he worked', I 3 17) or present tense *s*-forms, which seem to translate naturally as perfects (e.g. *accusatus est* 'was accused', III 3 40). Dhuoda's system of passive auxiliaries appears to be very similar to that of the Vulgate. Given the evidence to be discussed below, it seems unlikely that this reflected the speech of the time.

I feel this conservatism justifies the use of reconstructed evidence in the development of the passive between the forms attested in the Vulgate and contemporary texts and those found in the earliest attestations of Romance (which seem very similar to the present-day system), the focus of the next subsection. However, it may be that the manuscripts can still be of use, and more detailed study is an opportunity for further research.

3.5   Intermediate stages between the Vulgate and Old French

It will be useful to repeat the analysis of the Romance system already presented so that the end point of the changes to be reconstructed in this subsection can be seen. Textual justification for this system in Old French will be the focus of subsection 3.7. The passive auxiliary in French inflects fully for tense and aspect: present *il est aimé*, imperfect *il était aimé*, passé composé *il a été aimé* etc. Recall that it was suggested that in Romance the passive head has the values [Voice:+pass, V:__, Gender:__]. The [Gender:__] feature means [+pass] Voice does not incorporate into higher heads and a participle is realised, leaving the auxiliary (or auxiliaries) to realise Asp, v and T. This is in contrast to the active, where [Gender:__] is absent and Voice incorporates into Asp (and subsequently, outside the passé composé, into v and T). Romance does not have a separate class of deponents, though there are certain formal similarities between Latin deponents and Romance unaccusatives in [+perf] contexts.

Two major changes occur, therefore, from Classical Latin: the spread of *fu*-forms to [+perf] contexts, and the innovation of periphrastic constructions (with *s*-forms of the auxiliary) in [−perf] ones. We have already seen that the first of these changes was already underway by the time of the Vulgate, though *fu*-forms had not yet spread to the present perfect and *s*-forms were still possible in some pluperfect contexts. Let us assume that the next stage in the changes was the completion of this spread, with *s*-forms ceasing to be used as passive auxiliaries altogether, and *fu*-forms taking their place in all contexts where they originally occurred, as follows (third-person singular indicative; future tense forms provided in the interests of completeness):

	past	present	future
[−perf]	*amabatur*	*amatur*	*amabitur*
[+perf]	*amatus fuerat*	*amatus fuit*	*amatus fuerit*

Table 8

Featurally, this system can be seen as the same as that of Classical Latin, with one key difference: [+perf] Asp is realised morphologically on the auxiliary as well as on the participle. Given that T must, at least under the defective goals analysis adopted here, already have an [Asp:__] feature in order to incorporate Asp in other voice/aspect combinations, we do not need to posit any syntactic featural differences from the classical system. However, whereas in the classical language auxiliary *esse* was realised in its infectum forms in spite of the presence of this feature (which, presumably, would be valued [Asp:+perf] by the Agree operation), by this stage this same feature is realised through the perfectum forms: in essence, a morphological regularisation of the auxiliary to conform to the pattern of lexical *esse*, where [+perf] always triggers the *fu-* stem. In terms of the changes from the system posited for the language of the Vulgate, we must also say that the higher Asp head, responsible for the variation in the form of the auxiliary in the pluperfect (and possibly also the future perfect), has once more ceased to have any superficially apparent effect.

Why posit that the spread of the *fu*-forms to all perfectum contexts precedes the innovation of the periphrastic [−perf] passives? Crucially, to do the inverse implies a period of ambiguity: where *amatus est* could mean either 'he is loved' or 'he has been loved, he was loved'. Whilst such a stage cannot be ruled out entirely, it would seem more likely that a sequence of changes which would have brought about this type of ambiguity would not have occurred.

Some evidence for this stage is found in Vielliard's (1927, p. 159) analysis of Merovingian legal texts from the from the period 584–751 (predominantly from around 630–720). Vielliard lists a number of *fu*-forms in different tenses, including present tense forms such as *fuit conscissus* 'was torn to pieces' and *fuit factus* 'was made'. A more precise textual analysis of the forms use would be useful. The texts also make much use of synthetic passive forms (p. 158), although—given the arguments in subsection 3.6 below —it is likely that these do not represent spoken usage, at least not by the time of the later texts in Vielliard's corpus.

There is also some evidence from the *Vetus Latina Iohannes*. The graph in figure 1, based on the data in table 9, shows the percentage of *s*-forms out of the total number of attested periphrastic passives for each of the 13 verses which show variation in auxiliary usage. Manuscripts which do not include any of the verses in question are excluded. Note that a few texts only include a small number of the relevant constructions, which may affect the overall trend. When the date given for a manuscript covers a period of time, points are plotted at the midpoint, e.g. texts dated '400–500' are plotted at 450.

| Ms.	Copied	*s*-forms	*fu*-forms	Percentage *s*-forms
2	300–400	5	6	45%
3	350–400	9	4	69%
5	400	5	5	50%
8	400–500	7	4	64%
16	400–500	2	0	100%
4	450–500	7	6	54%
22	c. 500	1	1	50%
22A	c. 500	2	0	100%
32	500–550	1	1	50%
10	500–600	6	6	50%
33	500–600	6	7	46%
13	500–700	4	5	44%
14	600	5	6	45%
25	500–700	2	0	100%
11	700–750	2	6	25%
20	700–800	1	2	33%
9A	750–800	7	5	58%
35	750–800	3	10	23%
28	800	2	0	100%
30	800	4	8	33%
39	c. 800	0	1	0%
47	800	3	9	25%
11A	800	4	5	44%
7	810	6	7	46%
46	800–850	1	3	25%
15	775–800	5	6	45%
48	c. 900	3	10	23%
29	900–1000	4	8	33%
40	900–1000?	0	1	0%
27	960–970	3	5	38%
6	1100–1200	8	4	67%

Table 9: Auxiliary variation in the VLI corpus
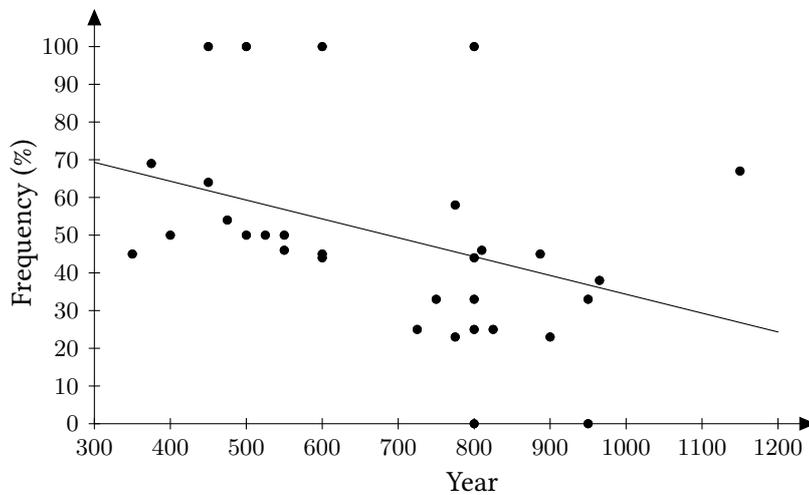
Figure 1: Frequency of *s*-forms over time in variable contexts

The frequency of *s*-forms appears to decrease over time. The correlation is statistically significant (r=−0.41, p=0.022), though this is not the case when texts with only three or fewer of the relevant constructions are omitted (r=−0.36, p=0.091). The overall conservatism of these texts discussed above should also be considered. Thus, while the data does give some suggestion that *s*-forms may have become less used over time, this must be treated with caution.

If a stage at which only *fu*-forms are used is posited, a complication arises concerning the forms of deponents. If we wish to claim that the passé composé forms of Romance unaccusatives are derived in some sense from the perfect construction of deponents—and it would seem reasonable to make this claim, given their formal similarity—then we predict that (at least some) deponents did not undergo this stage of exclusively having *fu*-forms in the perfect (as Romance unaccusatives still occur with *s*-forms), but rather split off into a class with separate behaviour from the passives. This will be discussed in section 4.

The spread of the analytic construction to [−perf] contexts can be posited as the next stage in the sequence. This suggests the development of new [−perf] Asp heads which—apart from their aspectual content—are specified in the same way as the [+perf] heads: that is [Asp:+perf, Voice:__, V:__, Gender:__ ← Voice:+pass]. (Note the use of the notation [Voice:+pass] rather than [Voice:+R], now that the deponents and passives have split into separate classes.) The key change here is the gain of a [Gender:__ ← Voice:+pass] feature on [−perf] Asp, presumably by analogy with the presence of that feature on [+perf] Asp. In surface terms, the analogy is that as [+perf] passives employ a [+perf] form of *esse*, [−perf] passives might also be expected to involve a [−perf] form of *esse*. We may assume a stage in which both the old and the new [−perf] Asp heads were present in the language— and hence both simple and periphrastic [−perf] passives occurred—followed by one in which the old head was lost and all passives become periphrastic. (I have

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not included the future tense forms in these tables—plausibly the synthetic future may have ceased to be used by this point.)

	past	**present**
[−perf] (1)	*amabatur*	*amatur*
[−perf] (2)	*amatus erat*	*amatus est*
[+perf]	*amatus fuerat*	*amatus fuit*

Table 10

	past	**present**
[−perf]	*amatus erat*	*amatus est*
[+perf]	*amatus fuerat*	*amatus fuit*

Table 11

A final featural change can then be posited: Asp (whether [±perf]) loses its [Gender:__ ← Voice:+pass], while [+pass] Voice innovates a (non-conditional) [Gender:__] feature. This change, which does not result in any changes to the system as realised phonologically, is a reasonable reanalysis of the data available to the learner if we assume that conditional features are somehow more marked and hence avoided where possible: cf. Roberts and Roussou (2003, ch. 5) on how change can be seen to be driven by similar featural markedness constraints. Once the changes to the tense/aspect system (loss of synthetic pluperfect, rise of passé composé) are brought into account, we arrive at the present-day system. Evidence that something like this system was in play by the time of Old French will be discussed in subsection 3.7.

It may be asked what the benefit is of positing these various intermediate stages: why not, for example, have [−perf] Asp gain its new (sub)feature straight after the Vulgate stage? This would reduce the burden of having to posit intermediate stages for which we have limited textual evidence. However, it would also create the issue already covered, of an ambiguous stage where the *s*-forms can have either [+perf] or [−perf] meaning. Further, it seems more plausible that the changes to the system would take place in a number of smaller stages, each quite similar to the last, rather than fewer stages where the reanalysis is less justified by the input data. Each of the smaller stages described above seems a reasonable change to be enacted in a single generation, whereas it seems unlikely that learners presented with input from the Vulgate stage would innovate a system on the basis of that input where not only are only *fu*-forms used in [+perf] contexts but *s*-forms can be used in [−perf] ones.

Whilst it is difficult to know when exactly these putative changes may have occurred, it may be possible to date the loss of the synthetic passive in speech, toward the end of the chronology proposed. This issue—which is of pertinence in

relating the changes to the passive to other changes affecting the verbal system—will be discussed in the next subsection.

3.6 Dating the loss of passive morphology

The most detailed recent discussion pertaining to the changes which affected the passive system between Latin and Romance is probably Herman (2002). This article is particularly useful in attempting to date the loss of the synthetic passive. Concerning this, Herman begins by citing Politzer's (1961, pp. 212–214) argument that the high degree of precision to which the still frequent synthetic forms conform to classical spelling in French and northern Italian texts of the seventh and eighth centuries points to their being no longer current in speech: instead, they would appear to have been learned by explicit instruction. Thus, for example, although classical intervocalic /t/ is frequently written *d* in other contexts, this does not occur in passive endings such as third-person singular present -*tur* (e.g. *amatur* 'he/she is loved'). This is in contrast to the situation in central Italy in the same period, where the endings seem still seem to have been retained, and the artefacts of sound change can be seen in the spelling.

Herman attempts to date this change more precisely, focusing on the spoken usage of Gaul. (Given our main focus here on the development of Latin into French specifically, the fact that the change may have occurred at different times elsewhere does not concern us particularly.) He considers the *Liber Historiae Francorum* (LHF), which is in two parts, the first based on the writings of Gregory of Tours from about one hundred and fifty years before the production of the rest of the text which was completed in 727. There is a strong tendency in the early part of the text for synthetic passives or deponents used by Gregory to be eliminated, with some other construction being preferred: for example, where Gregory has *nisi quae tibi sors vera largitur* 'except that which the lot justly grants to you', the LHF employs the active form *dederit* 'will give' in place of the deponent *largitur* (pp. 34–35). This is in contrast to a similar adaptation of Gregory by Fredegarius, made seventy or eighty years earlier, which retains the passive forms in spite of a general trend toward simplification (p. 39). This suggests that the later writer, but not the earlier, considered that the inclusion of passive morphology would be likely to confuse his audience. (Compare the argument of Herman (1996) that illiterate people in at least the first half of the seventh century were able to understand biblical texts and homilies containing synthetic passives.) The loss (at least, the loss of comprehension by ordinary speakers) of the synthetic passive in France, then, can likely be dated to about this period—the second half of the seventh century and the beginning of the eighth.

Herman also claims (2002, p. 38) that the new analytic formation of the non-perfect passive had not arisen by this time: there is only one case where the LHF replaces one of Gregory's synthetic forms by an analytic construction, and this (*successus est* 'it is/was kindled' for Gregory's *succenditur* 'it is kindled') may simply be a change of tense (p. 37). Herman thus explicitly rejects the claim of Green

(1991, p. 81) that '[i]t is totally implausible that speakers of Late Latin would have allowed the synthetic passive to collapse before they had available to them a fully operative replacement structure'. Certainly, Green's strong claim is likely not supportable on typological grounds: probably the majority of languages lack passives altogether (Siewierska 2013),suggesting that there may be no particular pressure for languages to retain them. Alternative ways of expressing passive meaning exist in the Romance languages, for example 'reflexive' constructions with *se* or (in French) impersonal constructions with *on*. However, there are reasons for not subscribing to Herman's view: it implies that the Romance analytic passive is an entirely innovative construction with no basis in Latin, and while this could be true, it would be more interesting if we could trace a way in which it developed out of the pre-existing construction. This leaves open the question, of course, of why the LHF does not employ analytic passives in place of synthetic ones. One possible solution to this problem is that the writer, whilst avoiding constructions that are by this point markedly dated and unlikely to be understood by his audience, is also avoiding markedly 'Romance' constructions—i.e. those which do not appear in older texts, and which he may consider inappropriate for written language.

To conclude this subsection, then, we are able to put quite a firm date on the loss of the synthetic passive in France. This further allows us to date the reconstructed stages prior to this (hypothesised above) to between about the fifth and seventh centuries. The significance of this dating will become apparent in later sections.

3.7 Old French

Clear textual evidence for what is essentially the modern French voice system is found from the Old French period, squaring with the chronology just established. This subsection will present some of this evidence.

The earliest text generally considered to represent French, as opposed to Latin, is found in the 'Strasbourg Oaths' (AD 842). The Oaths contain no examples of passive (or deponent) constructions. The next earliest text, the *Sequence of Saint Eulalia* (c. 880–82), contains two candidates for such constructions.[7] The first is a clear example of a passive:

(51) … *fut presentede maximiien* (l. 11)
        '… she was presented to Maximian'

The second has the form of a Latin passive, but also of a Romance unaccusative passé composé: *furet morte* 'she died' (l. 18). As it concerns a verb which is deponent in Latin, it is difficult to be sure on the basis of this one text whether it should be analysed as an example of a 'passive' construction or not. Given the arguments to be presented in section 4 for the loss of the classical deponent class

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[7] The versions of those two texts consulted are those given in Ayres-Bennett (1996, pp. 16–17, 31).

at a much earlier date, I will treat this as an unaccusative and not consider it at present.

A number of clear examples of the passive occur in *The Life of Saint Alexis* (eleventh century). The text employed here is that of Perugi's (2000) critical edition; there is some variation between the manuscripts (which date to the twelfth and thirteenth centuries), although not to the extent that any of the findings presented here are significantly affected. Four of these forms involve an auxiliary in the passé simple form of *estre* 'to be', based on the *fu-* stem:

(52) *fud baptizét* 'was baptised' (l. 31)

(53) *fut cointe* 'were known' (l. 43)

(54) *fu faite* 'were made' (l. 576)

(55) *fut … parez* 'was decorated' (l. 586)

The remaining six or so forms all use forms of *estre* based on the root containing /s/. Four are present tense forms:

(56) *est agravét* 'was troubled' (l. 58)

(57) *est oneurét* 'he was honoured' (l. 542)

(58) *sunt … salvedes* 'were saved' (l. 605)

(59) *esmes avoglez* 'we are weighed down' (l. 616)

The other two employ imperfect forms of *estre* formed with *est-*:

(60) *esteit cuvert* 'was covered' (l. 346)

(61) *esteie penét* 'have been absolved' (l. 405)

There are no signs of the synthetic passive anywhere in the text.

There are also a large number of intransitive perfects with active meaning that are formed with *estre*. I take these to be instances of the new unaccusative structure rather than of Latin-style deponents (indeed, many of them involve verbs that were not deponent in Classical Latin)—this type of structure will be discussed in the subsequent sections.

One difficulty that arises when looking at this text concerns the use of tenses. In Old French it was common for present tense forms to be used in recounting events that took place in the past ('tense switching'; Fleischman 1990). This is frequent in *Alexis*, for example:

(62) *escrit la cartra tute de sei med[is]* (l. 284)
     'he wrote [lit. 'writes'] the document by himself'

Thus, although three of the forms using the present tense of *estre* above have been translated into the past tense, it should not be assumed that these are equivalents of the Latin perfect passive. More probably, they represent true analytic present passives, akin to those found in modern French, that are however being employed in an 'narrative present' capacity. If we assume this is the case, and also consider example (59), which does seem to be a clear use of a present tense auxiliary with present reference, we can conclude that the 'new' passive with *s*-forms used outside of the perfect has already developed by this time.

A number of *fu*-forms are also found in the text: notably, the auxiliary here is derived from the Latin present perfect *fuit*. As the Latin synthetic pluperfect and future perfect are no longer used in French, and it is in any case not clear that there would be an appropriate context for these forms to occur in, their absence is not surprising.

There are no attestations in these texts of a passive with an auxiliary that is itself periphrastic (cf. modern French *a été aimé* 'has been loved'). This may not be significant, however, given the relative rarity of both the passive and the passé composé.

Various textual complications aside, then, it appears that by this point the language likely has what is essentially the modern French system, with only periphrastic passives and an auxiliary sensitive to tense and aspect. This is a broadly straightforward continuation of the final stage posited in subsection 3.5, table 11.

This concludes our discussion of the passive system on its own terms. Discussion of changes involving deponents and the passé composé, and their relation to the changes considered above, will be the focus of the next two sections.

4 Diachronic developments II: the deponents

4.1 Introduction

Subsection 3.5 posited a stage in the development of passives where only the *fu*-form could occur, regardless of tense. This is problematic if we assume that Romance unaccusative forms like *il est mort* 'he has died' are derived directly from Latin deponent forms like *mortuus est*, which generally is assumed traditionally (Ledgeway 2012, p. 317). If the stage posited for passives also applied to deponents, then we might expect the Romance unaccusatives to be formed with the reflexes of *fu*-forms, so that for example we would see *il fut mort* (< *mortuus fuit*) in place of *il est mort* 'he has died'. This does not, however, occur.

One possible solution to this problem is to analyse (some or all) deponents as having already split off from passives in terms of their paradigmatic behaviour prior to the stage where *s*-forms ceased to be used for perfect passives. Thus, they—unlike passives—retain their *s*-forms, eventually yielding the Romance system. Another plausible scenario is that the forms of the auxiliary used with deponents/unaccusatives did change, but later were remodelled so as to encode the same tenses/aspects as the auxiliary HAVE in the passé composé of unergatives

and intransitives. Given the independent evidence, to be discussed, that the class of deponents underwent significant changes in approximately the period in question, I will not however pursue this line of argument here.

Instead, I will assume that the changes we see to the deponent class in the textual record occur during its reanalysis as a class more distinct from the passives than before. The account of the changes to the passives presented leads to the hypothesis that, prior to the general loss of passive morphology, deponents had already split into a separate class in terms of their auxiliary selection behaviour. The evidence to be discussed below suggests, in addition, that deponents had (in speech) likely ceased to be used with passive morphology prior to the loss of that morphology generally. The more general loss of synthetic passive forms, then, was not a causal factor in the loss of the deponent class (contra e.g. Clackson and Horrocks 2007, p. 280), which had likely already disappeared (in its classical form) by that point. It seems reasonable that these two changes might be connected— that is, at a particular point in time the deponents split off into a separate class that differed from passives both in terms of their synthetic morphology and the forms of their auxiliaries, and also behaved differently from other actives.

We also likely want to assume that the class of deponents, at some point, underwent a significant restructuring to become the 'unaccusative' class. It is plausible that this change was connected to the changes in the forms. Whilst membership of the deponent class is not semantically random, there does not exist the same semantic regularity as governs membership of the unaccusative class in Romance. (This point will be discussed in more detail in subsection 4.3.) A reanalysis of the deponent class as a class of unaccusatives may plausibly have given rise to the formal changes. It is perhaps implausible that a significant number of verbs would have 'passive' forms in the perfectum but active morphology in the infectum (though a few, the 'semi-deponents', did just this even in Classical Latin), as the lower frequency of the perfectum would make this class very difficult to learn accurately—unless there was a common semantic factor behind membership of the class. Once the deponent class was reanalysed as an unaccusative one, this precise system could be adopted, and further would then start to be seen as significantly distinct from the passive class (there being no shared infectum morphology) that the changes in auxiliary usage would not have to affect both. Whilst this scenario can be questioned, and need not necessarily be proposed for the wider analysis to work, it does provide a unified explanation for the changes.

Note that I do not assume (contra Penny 1991, p. 142, Cennamo 2008, p. 125) that there was a stage in spoken Latin or early Romance where BE perfects could be used with all verbs. This does not capture the semantic link between deponents and unaccusatives (such as it does exist). It is more likely that the textual evidence that might support this is merely a result of 'hypercorrect' deponentisation, as also seen with synthetic forms.

The following subsection will consider some data in favour of these ideas. After this data is presented, and the semantic relation between deponents and

Period	Dates
I	169 BC
II	80 BC
III	80–43 BC
IV	43 BC – AD 14
V	14–68
VI	69–117
VII	117–192
VIII	193–337
IX	337–423
X	423–600
XI	600–800
XII	(grammarians and glosses)

Table 12: The dates of Flobert's periods (1975, p. 39)

4.2 Data

Flobert (1975) surveys in great detail the use of deponents in Latin texts from the second century BC to the ninth century AD. For each of eleven periods (plus a twelfth given over to glosses and grammarians), he lists all the deponent forms which occur in his corpus in the first time in that period, as well the first uses of deponent verbs as passives or actives and many other details. The data is not entirely ideal for present purposes—it would be useful to have information on the overall frequency of deponent verbs in each period, not just of new forms—but is nevertheless valuable.

The graph in figure 2 gives the number of new 'activations' (the use of originally deponent verbs as actives) for each period, relative to every one hundred other new deponents. The points plotted, as in the subsequent graphs, are at the midpoint of each of Flobert's periods. (The data for this and the subsequent graphs are give in table 13.)

Particularly if we overlook the value of period II, which is unusually high for the early periods and may simply be an anomaly, we see that from period VII (second century AD) onwards, and particularly in periods X and XI (fifth to eighth centuries) the relative frequency of 'activations' is much higher than previously. It is natural to read this as pointing to some sort of decline in the use of deponents, with them becoming increasingly assimilated to the regular pattern of morphology.

It has been argued that the loss of passive morphology took place in the second half of the seventh century and the beginning of the eighth (in France, and later in parts of Italy). It can be assumed that this would also have affected the

Period	Deponents excluding 'variantes'	'Variantes'	Activations	Passivations
I	270	51	14	29
II	66	35	15	25
III	113	9	19	53
IV	49	5	7	23
V	33	6	9	6
VI	15	2	1	4
VII	33	20	11	29
VIII	90	45	55	27
IX	71	24	50	35
X	50	72	75	26
XI	18	30	231	9

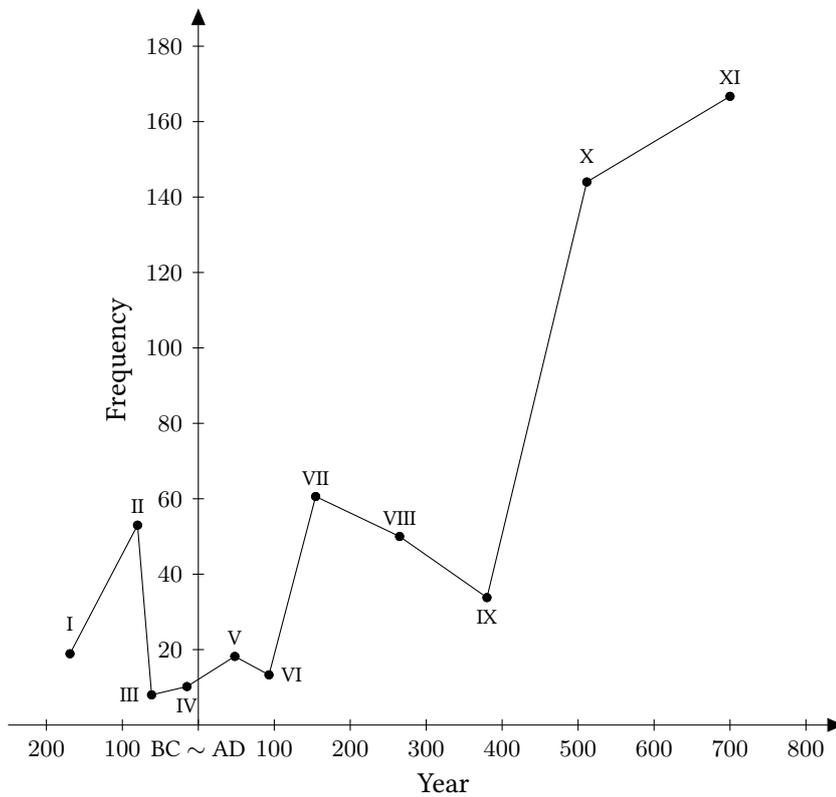Table 13: Data from Flobert (1975)

Figure 2: 'Activations' for every 100 deponents

morphology of deponents, if these still took passive endings. However, we see that the rate of activations in this period (corresponding to part of Flobert's period XI) is on relative terms similar to that of the previous period (X). If we are to argue that the high frequency of activations in period XI corresponds to the loss of the old class of deponents in the spoken language, we would probably want to make a similar argument for period X—placing the loss in about the fifth or sixth century. We could even argue on the basis of the higher frequency of activations in periods VII–IX as opposed to previously, that the loss had happened earlier still, in the second century or thereabouts. This conclusion, though, is perhaps less well supported.

We find similar results when we consider the frequency of what Flobert calls 'variantes' (active forms used as deponents without any clear change in meaning— Flobert 1975, p. 35), again giving the number of new forms for every 100 new deponents (excluding activations), as shown in figures 3 and 4 (the two graphs are the same, but that in figure 4 is scaled so as to exclude the extremely high value for period IX).

Again, we see an increase in the frequency of new 'variante' forms from period VI onwards, and particularly in the last two periods. One interpretation of this is that more active verbs are being assimilated into the deponent class even in everyday speech. This analysis becomes increasingly implausible in later centuries, suggesting as it does that deponent morphology ceased to be used even as it was at its most productive. A more natural interpretation is that this formation reflects a growing uncertainty by writers as to the correct form of a verb as the deponent class ceases to be used in speech, but remains expected in written language. Again, we arrive at the conclusion that the old deponent class had disintegrated in speech possibly as early as the second or third centuries, and almost certainly by the sixth or later (by which point the frequency of deponent morphology with historically active verbs suggests the choice of ending is becoming essentially random). The question remains, of course, as to why the frequency of 'mis-use' in writing of a form obsolete in spoken language should rise over time: such a rise cannot reflect any changes in speech. However, it seems plausible that as time goes on and writers have increasingly less exposure to texts from the period when deponents were still used in speech in the classical style, the 'correct' usage should diminish.

The graph in figure 5 considers the rate of new 'passivations' (deponents used as passives) in each period, once more giving the number of occurrences for every 100 new deponent forms.

There is less variation here, apart from a notable peak in period VII (AD 117–192). One potential interpretation of this is that as use of passive endings with deponent verbs broke down in the second century, writers (and likely also speakers) assimilated many old deponent forms into the passive class on the basis of their shared morphology. Subsequently, however, the old class of deponents (verbs taking these endings) has disappeared from speech and writers have less reason to make this reanalysis, no longer being exposed in spoken language to deponent
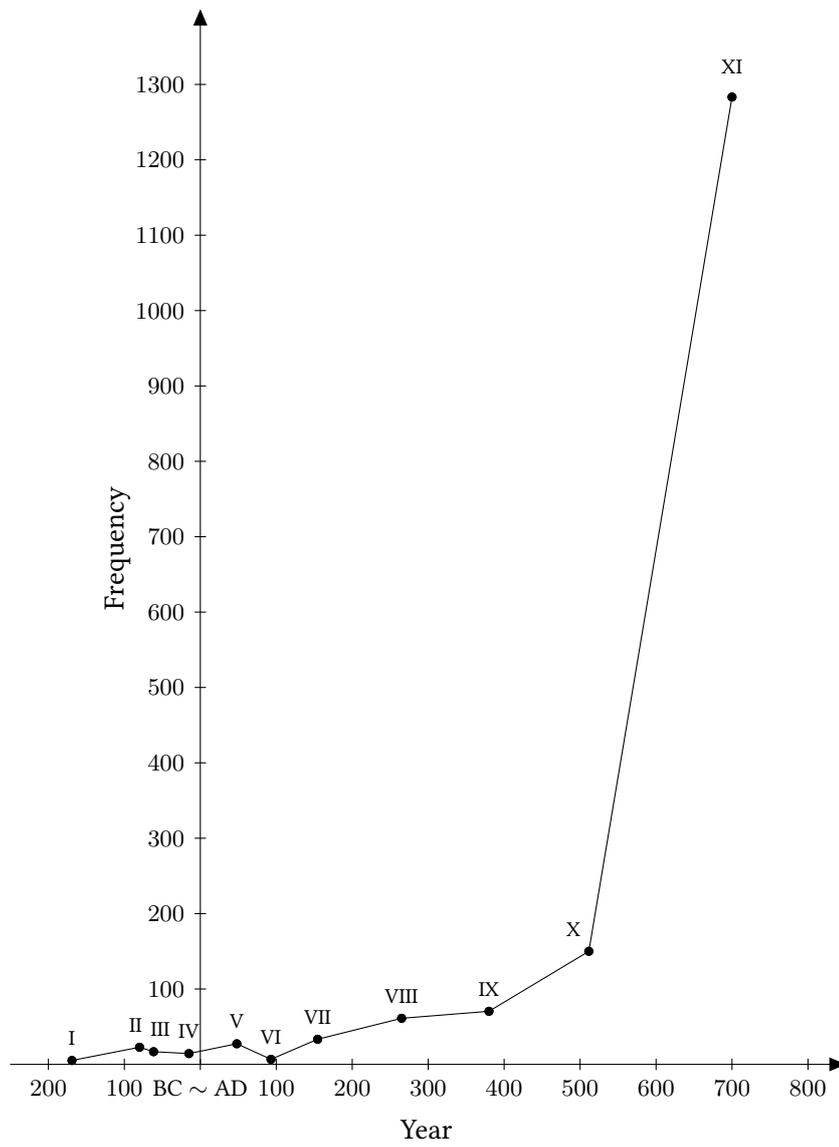
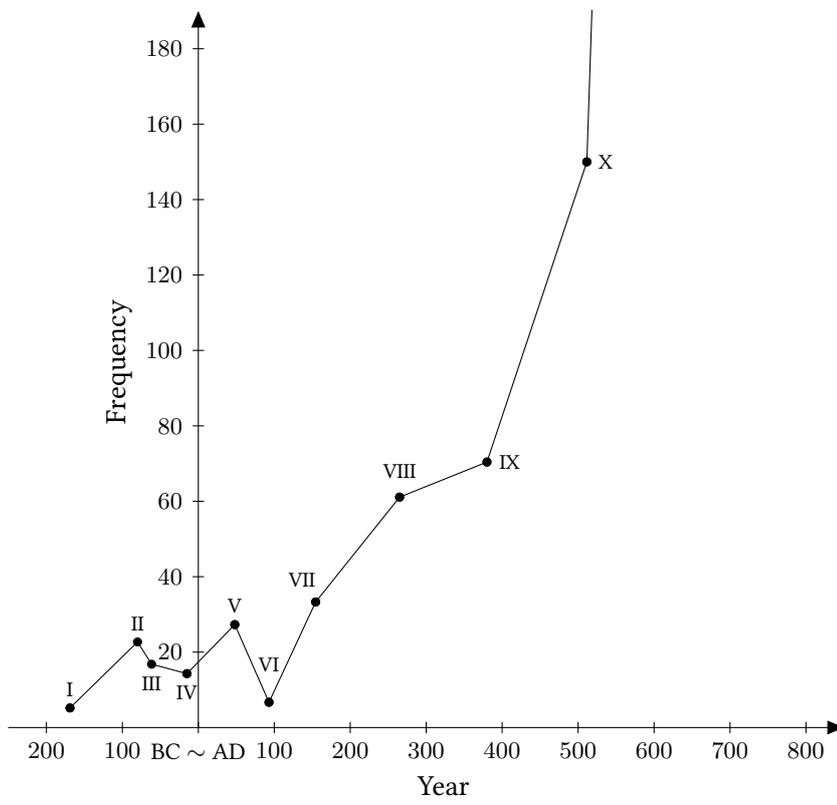Figure 3: 'Variantes' for every 100 other deponents

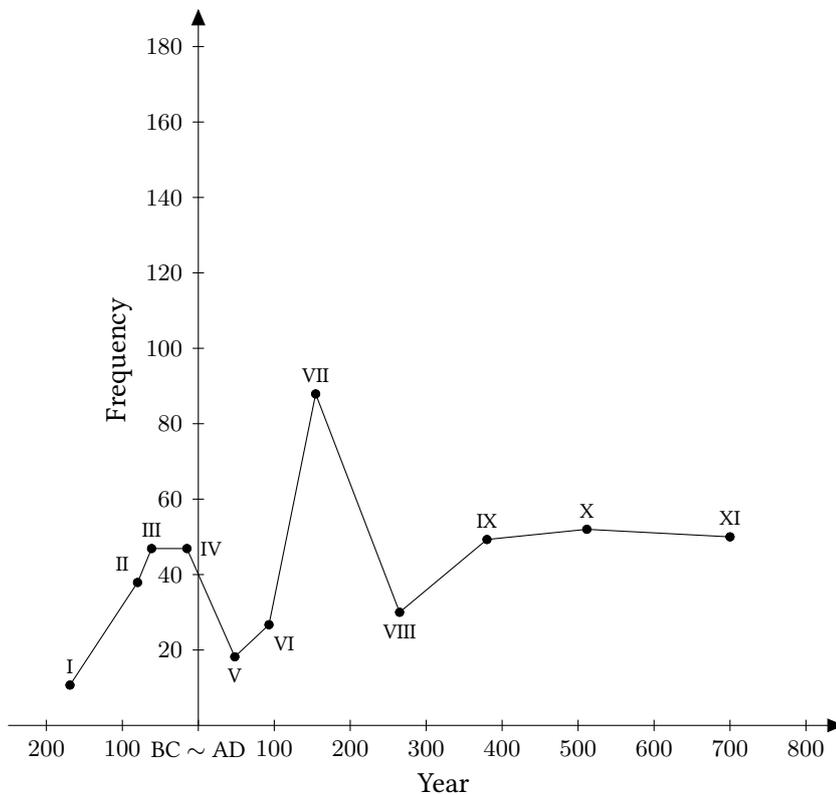Figure 4: 'Variantes' for every 100 other deponents

Figure 5: 'Passivations' for every 100 deponents

forms which they might confuse for passives. This places an early date on the changes to the deponent class, though the evidence is not strong.

Flobert lists a number of periphrastic deponent forms (including 'variante' forms). Even in the latest periods, however, he lists no *fu*-forms with present indicative meaning, suggesting these forms may never have spread to the present indicative with deponent verbs, as predicted. Indeed, of the 12 periphrastic forms listed for periods X and XI, in a variety of tense/mood/aspect combinations, only one (from the earlier of the two periods) takes a *fu*-form. This may suggest awareness from the fifth century onwards of a separate class which did not form its periphrastic tenses in the same way as passives: there are instances listed of 'passivised' deponents occurring with *fu*-forms in this period. A complication, though, is provided in the data of Vielliard (1927, p. 160), who does cite deponent forms *professus fuit*, *professa fuit* 'he/she has confessed' in the Merovingian corpus. This usage could, however, be basically hypercorrection. Further investigation into this issue would be helpful.

To summarise, there is evidence to support the claim that major changes affected the deponent class prior to the loss of passive morphology. Subsection 4.4 will present a possible formal analysis of these changes. Prior to this, however,

the following subsection will clarify the semantic distinctions between the Latin deponents and Romance unaccusatives already alluded to.

4.3 The semantic relation between deponents and unaccusatives

Sorace (2000) classifies intransitive verbs in Romance (and Germanic) according various semantic categories on an 'Auxiliary Selection Hierarchy', where verbs nearer the top of the hierarchy are more likely to be associated with auxiliary BE, and those nearer the bottom with auxiliary HAVE:

BE	Change of location	*come, arrive, leave, fall ...*
	Change of state	*rise, become, die, be born ...*
	Continuation of a pre-existing state	*stay, last, survive, persist ...*
	Existence of state	*be, belong, sit, seem ...*
	Uncontrolled process	*cough, tremble, skid, rain ...*
	Controlled process (motional)	*swim, run, walk ...*
HAVE	Controlled process (non-motional)	*work, play, talk ...*

Table 14: Sorace's (2000) Auxiliary Selection Hierarchy

However, considering a sample of 172 deponent verbs, classified according to Sorace's categories, we observe no particular tendency for such verbs to occur closer to the BE/unaccusative end of the hierarchy: indeed, they cluster more toward the opposite end, as shown in the graph in figure 6.[8]

Many deponents, indeed, are transitive, e.g. *sequi* 'to follow' or *aggredi* 'to attack' (Embick 2000, p. 193)—and these have been included in figure 6. All unaccusatives, on the other hand, are necessarily intransitive.

Furthermore, a number of Romance unaccusatives derive from verbs which are not deponents in Latin. This is true for example of French *venir* 'to come' (< *venire*), *descendre* 'to go down' (< *descendere*), *entrer* 'to enter' (< *intrare*) and others.

It is not true to say that the class of deponents is semantically incoherent, and indeed many interlinked semantic groupings can be identified within the class. In the sample used above, there were 23 verbs relating to speech and argument, 9 in the related category of fighting, acts of war or hunting, 10 in the related category of more general 'acts of procurement', 9 in the related category of business transactions, and so on. However, the class cannot be considered an 'unaccusative' class, and would appear to lack the semantic regularity of the Romance unaccusatives.

The question arises, therefore, of how the class of deponents changed into the class of unaccusatives, if that is indeed what occurred. I will not attempt to give

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[8]A number of deponents are formed by adding a prefix to another deponent form, e.g. *consequi* 'to follow' from *sequi* 'to follow'. No such verbs were included in this sample. The semantic classification of some verbs could be contested, though this would be unlikely to significantly affect the findings.
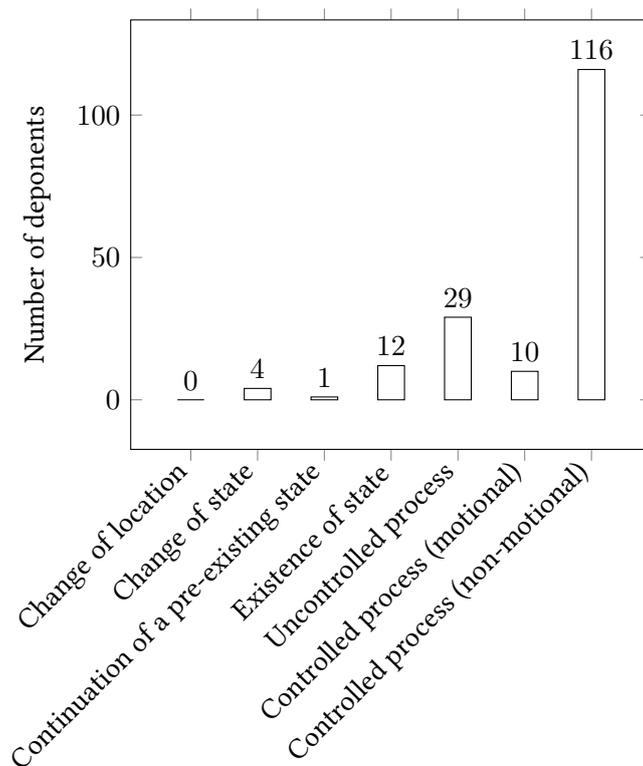
Figure 6: Deponents and the Auxiliary Selection Hierarchy

a full answer here, but note that some high frequency deponents such as *mori* 'to die' and *nasci* 'to be born' are close to being prototypical unaccusatives, falling in Sorace's 'change of state' class and giving rise to unaccusative verbs in Romance (e.g. French *mourir—il est mort* 'to die—he has died', *naître—il est né* 'to be born—he has been born'). If the Latin system was to undergo semantic regularisation, it seems natural that it might take common verbs such as these as a starting point and recast the deponent system as one reflecting unaccusativity.

One problem with the present diachronic data is that it is not obvious that the 'deponent' class is becoming any more like the Romance 'unaccusative' class. Many of the periphrastic deponent forms listed by Flobert as first occurring at the later stages do not belong to the semantic categories of verbs that are attested later as unaccusatives, for example *auditi essent* 'were hearing' or *temptati sunt* 'were testing' (both period XI). It is true that there are exceptions, e.g. *deventi sunt* 'they have arrived', *sit exita* 'may have left', *fuguti sunt* 'they have fled' (all period XI), but these do seem to be exceptions, rather than the norm. It is difficult to know what to make of this data, though more systematic analysis would be helpful. In particular, it would be useful to study Latin texts from later periods (where we know from Romance texts that the unaccusative class has arisen) to see if similar patterns are seen, or if there is a tendency for Romance unaccusatives

to be more consistently used with deponent-style periphrases. The former would suggest that, for whatever reason, writers do not have any particular tendency to class unaccusatives as deponents more than other verbs, and that therefore the apparent absence of this tendency in the texts studied by Flobert does not point to the absence of the unaccusative class in spoken language. The latter, on the other hand, might suggest that the unaccusative class did not arise until later. An early attestation of an unaccusative verb that was not deponent taking auxiliary BE in Romance is found in the Old French bilingual sermon on Jonah (c. 937–952) (transcribed in de Poerck 1955): *est venude* 'has come' (l. 6), suggesting that the changes were complete by this date. For the time being, these details must be put aside for future research.

4.4 Formal analysis

Let us assume at present that the changes which affected the deponents did result in a new unaccusative class more-or-less straight away, or at least prior to the grammaticalisation of the *habere* perfect in subsequent centuries (section 5 will present some arguments in favour of a late date for this, particularly with intransitives). In notational terms, we can say that all remaining [+R] forms are now true passives, and adopt the [±pass] notation instead. More substantively, we wish to say that there is a class of active verbs defined by the absence of an external argument which have periphrastic forms in the perfect. In defective goal terms, then, we wish to say something like the following: [+perf] Asp is not a defective goal for [−ext] v (i.e. in this case Asp's features are not a subset of those of v) and does not incorporate into it. In [−perf] contexts, Asp is however a defective goal for [−ext] v, suggesting [−ext] v ordinarily has all the features of Asp. Additionally, [+perf] Asp is (at this stage in history) a defective goal for [+ext] v, suggesting it does not have features which v always lacks. Given that unaccusative past participles take gender agreement, it does however seem likely that [+perf] Asp has a [Gender] feature, which there is however reason to believe is lacking on v and T (principally, as has been suggested, that this feature is the reason V+Voi+Asp does not incorporate into these heads in the passive perfect). One possible way of dealing with this is to posit a conditional feature [Gender:__ ← Ext:−ext] on [+perf] Asp.[9]

Note that, for this analysis to correctly capture the hypothetically distinct behaviour of passives and unaccusatives, it must be the case that passives are not [−ext], contrary to a common assumption. I refer to the reader to Collins (2005) for arguments that this is so, regardless of whether or not the external argument is expressed overtly.

It can be observed that unaccusatives in Romance do allow forms of the auxiliary derived from the present-tense *fu*-forms in the passé composé of unac-

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[9]Unlike the other appeals to conditional features, [Gender] is here dependent on the features of a higher, rather than a lower, head. This is not necessarily problematic, but it does raise questions regarding the precise mechanics of conditional feature valuation.

cusatives, e.g. French *elle fut arrivée* 'she had arrived', where *fut* is derived from *fuit*. This sort of pattern seems to be found from the earliest texts, e.g. *fud si alét* 'had gone' (*Alexis*, l. 103). However, it has been suggested that *fuit* was not used as an auxiliary with deponents in Latin, so clearly a change has occurred. Crucially, though, this is not the same change as affected the passives: *fut* with unaccusatives has pluperfect or past anterior meaning, but this is not so with passives. This parallels the distinction with *est*: perfect meaning with unaccusatives but not with passives. Passives and unaccusatives do still retain separate auxiliary uses, therefore. Note that the same pattern found with unaccusative *être* is also found with auxiliary *avoir*, and so is a part of the wider system. The changes that might have resulted in this system will be discussed in subsection 5.3.

To conclude: this section has presented evidence that deponents came to behave differently from passives prior to the loss of passive morphology, and proposed an analysis that relates this to the emergence of the unaccusative class. The following section will discuss other changes affecting the aspectual system, and their relation to those already discussed.

5   Diachronic developments III: the passé composé

5.1   Timescale of grammaticalisation of auxiliary HAVE

5.1.1   Introduction

The development of the Romance periphrastic perfect, called the passé composé in French, has been widely discussed in the literature, particularly as far as the periphrasis with auxiliaries derived from *habere* 'have' (French *avoir*) is concerned. A key question to be answered concerns the time at which the *habere* periphrasis grammaticalised with perfect meaning—specifically for present purposes, when this development took place relative to the changes affecting the passive. This is problematic because *habere* + past participle constructions appear even in very early texts—for example the writings of Plautus and Terence in the second century BC (Laurent 1999, p. 31). Whether these should, in fact, be analysed as periphrastic perfects remains open to debate. This is the focus of the discussion that immediately follows. Subsection 5.2 will then present a formal analysis of the changes as is relevant to present concerns, and subsection 5.3 will deal with some outstanding complications involving the passé anterieur.

5.1.2   Evidence from Latin

Adams (2013, ch. 14) argues at length that the *habere* periphrasis did not grammaticalise as a perfect in Latin, and indeed that the change had not even been completed in early Romance. I refer the reader to that discussion, which I consider for the most part convincing. The key point of Adams's argument is that all or nearly all *habere* + past participle constructions found in Latin texts strongly suggest or

are at least open to a reading other than the expression of perfect aspect (typi-
cally involving some sort of possession). Consider the following example from
Livy (Adams 2013, p. 618):

(63) *multo auro argentoque id **exornatum habebant***

habebant here is best translated 'kept': the sentence translates 'they kept this
decorated with much gold and silver', not 'they'd decorated this with gold and
silver'. The best candidates for a *habere* perfect occur with a certain class of verbs
denoting 'mental acquisition' (Benveniste 1962, p. 58) during the first century BC,
for example in Cicero (Adams 2013, p. 623):

(64) *... quae ex usu prodesse eis **comperta habemus***
'which we **have found out** from experience benefit those conditions'

A reading of 'possession' is difficult here. However, examples of this type are
not found later than this, making it a poor candidate for the source of the later
construction. Adams also stresses the 'absence of any hints' of this construction
in 'conventional sources of non-standard Latin' (p. 647), greatly weakening the
argument that it arose in such a non-standard variety during at an early period,
or that the Ciceronian construction continued its existence but was 'submerged'
in non-standard spoken varieties during this time.

Adams's view is opposed to that of a number of other scholars. Cennamo
(2008, pp. 118–119), for example, argues that the grammaticalised construction is
well attested from the sixth century AD. The examples cited, however, are open
to question:

(65) *qui **habebat** iam **factum** testamentum*
Cennamo's translation: 'who has already made a will'
Alternative translation: 'who has a will already made'

(66) *episcopum ... **inuitatum habes***
Cennamo's translation: 'you have invited the bishop'
Alternative translation: 'you have the bishop invited'

In neither of these cases is it necessarily the case that the construction should
be read with a perfect meaning.

Pinkster (1987) also argues for an earlier date of grammaticalisation, claiming
it is 'not very likely that the first undisputable example of a periphrastic perfect
should pop up more than 700 years after the time in which the [*habere* + past
participle] construction was already in full use'. This seems to me, however, to
involve an unwarranted assumption about the timescale of grammaticalisation—
I am not aware of any argument that rules out the process taking this long to
complete. The possibility rejected by Adams (2013), that the construction may

have arisen, died out, and then reappeared some time later, remains a possibility—but this probably would not affect any analysis of the later change.

Adams (2013, pp. 645–646) also mentions another argument for the grammaticalisation of the periphrasis, namely the absence of agreement on the participle. The example cited is from the *Compositiones Lucenses* (sixth century):

(67) *quod uos legitis, nos omnia **probatum habemus***
        'what you read, we have tested all of it' or 'what you read, we have, [it is] all tested

The participle *probatum* 'tested' (neuter singular) here apparently does not show agreement with the neuter plural *omnia* 'all'; if it did, we would expect the form *probata*. Adams argues, however, that neuter singular agreement with *omnia* is not unusual, and is found also in constructions such as *omnia quod* 'all which'. Additionally, object agreement is still found on participles employing reflexes of *habere* today in some Romance varieties—including varieties of Italian (Kayne 1989, p. 95):

(68) *Maria ha vist**e** le ragazze*
        'Mary has seen(-**3pl**) the girls'

Example (67) above probably has an Italian source, suggesting that even if it did represent a grammaticalised *habere* periphrasis the absence of agreement did not become established. Adams cites only one other case of apparent lack of agreement on a participle with *habere*, which he claims is 'almost identical' in nature. It can be concluded, therefore, that the evidence of this type is not convincing.

It is worth noting the extreme rarity, if not complete absence, of candidates for *habere* perfects in the Latin texts considered in the previous subsection. There do not seem to be any examples in the Vulgate text of John, and Drinka (2007, p. 116) finds only 17 examples of *habere* + past participle in the entire Vulgate New Testament, 16 of which are calqued directly from the Greek text—and where HAVE seems to retain its possessive meaning (pp. 111, 116). The construction is similarly lacking in the other Johannine manuscripts, in the *Itinerarium Egeriae* (Winters 1984, p. 453) and also in Dhuoda. Dhuoda in fact uses at least one clear example of a *habere* + past participle construction which cannot be read as a perfect:

(69) *diligas deum sicut supra **habes conscriptum*** (III 2 16)
        'love God, as you have (=possess) written above'

The perfect reading 'you've written above' is not here possible as it is Dhuoda herself, not her son whom she is addressing, who has performed the act of writing. This does not preclude the idea that the periphrastic perfect had grammaticalised (in speech)—'the advice you have written above' where 'have' possesses a possessive meaning is still possible in English, where the *have* perfect is fully

grammaticalised. However, the absence of any candidates for such a construction in the text may be significant.

Note that in all of these texts the synthetic perfect construction is found abundantly. Whilst it is possible for synthetic and periphrastic perfects to co-exist alongside one another (this is the case to some degree in Old French, as the examples to be discussed shortly will show) it would perhaps seem curious for a fully grammaticalised construction to be totally absent even as forms expressing the same function are used frequently. Note, however, that the absence of periphrastic perfects could simply be an artefact of the divide between spoken and written language (a similar distinction is found between the passé simple and the passé composé in present-day French). It would not be reasonable to claim that the periphrastic construction was present in spoken language without further evidence, however.

5.1.3 Comparative evidence

One piece of non-textual evidence that might be used to argue in favour of a relatively early date for the grammaticalisation of the passé composé is the comparative data: this construction is found across Romance. One could claim on the basis of this that the construction must have grammaticalised before the Romance vernaculars 'split' into separate languages. The fact that similar constructions are also found outside Romance (in Basque, Germanic, Greek, Albanian, Czech), however, and that this does not appear to be due to shared inheritance (Haspelmath, 1998, pp. 274–275, 281), means that this argument is not convincing. If the construction is capable of being transferred between language families, then it would not be surprising if it diffused between Romance varieties existing in a dialect continuum. This is especially likely if these varieties inherited the construction at an earlier stage of grammaticalisation (likely with causative/resultative *habere*— Roberts 2014, §4). The possibility of shared drift within Romance should also be held in mind—i.e. the nature of the common inheritance (with existing BE perfect and non-perfect HAVE periphrasis) may have been such that all languages innovated the new form 'independently'.

5.1.4 Evidence from Romance texts

There are no instances of the passé composé in the Strasbourg Oaths, although it should be remembered that the French text is short and almost entirely in the present and future tenses, with the exception of the form *jurat* (although this could be interpreted as a present tense, it is probably in fact from the Latin perfect *iuravit* 'he swore': evidence for this comes from the German version of the text— Ayres-Bennett 1996, p. 29). There are also no instances of HAVE periphrasis in the *Sequence of St. Eulalia*, although, as mentioned above, the passé composé with BE does occur in *furet morte* 'she died' (l. 18). *Eulalia* contains several examples of forms derived from Latin perfects or pluperfects, though apparently with no

meaning distinction between the two (Ayres-Bennett 1996, p. 38), e.g. *fut* 'she was' (l. 1), *auret* 'she had' (l. 2), *voldrent* 'they wanted' (l. 4), etc. Hence, the absence of HAVE perfects cannot be attributed to the absence of environments where this construction might be expected in the later language. It is still possible, however, that the text is simply conservative relative to speech in this regard: compare conservative spellings such as the use of final *-a* in *buona pulcella* 'beautiful girl' (l. 1), which—on the basis of the spelling *-e* in *manatce* (l. 8) 'threats' and elsewhere— probably stands for a sound already pronounced [ə] and not with its older value of [a] (Ayres-Bennett 1996, p. 35). Again, however, we would not wish to claim that grammaticalised auxiliary HAVE was definitely present in speech without further evidence.

The tenth-century bilingual sermon on Jonah does contain evidence for a periphrastic plus-que-parfait with HAVE, with the Latin pluperfect *laboraveret* 'they had worked' being glossed into French as *habebat laboret*, suggesting the two are equivalent (Ayres-Bennett 1996, p. 45). Further, there is a good deal of evidence for the passé composé in *The Life of Saint Alexis*; the passé composé and related periphrastic constructions occur around 80 times in the poem's 625 lines, with both *estre* and *avoir*, e.g.:

(70) *tut **est müez**, **perdut ad** sa colur* (l. 4)
       'everything **has changed**; it **has lost** its colour'

The passé simple, though, is more frequent, with 50 occurrences in the first 80 lines alone.

Possible evidence that the passé composé with *avoir* has not fully grammaticalised at the time of *Alexis* comes from analysing the use of auxiliary *avoir* with intransitives. For one thing, this construction is comparatively rare: the passé composé in *Alexis* is found about as many times with intransitive as with transitive verbs; however, only about a quarter of the intransitive constructions use *avoir* (as opposed to *estre*). Of the nine or so instances with *avoir*, four involve an argument or oblique marked in the genitive (prepositional phrases with *de* 'of', or pronominal *en* 'of it') or dative (preposition phrases with *a* 'to'), and four of the remaining have a locative oblique (a preposition phrase with *a* 'to', or pronominal *i* 'there' or *ou* 'where'). For example:

(71) *que d'els ai<e>t mercit* (l. 185)
       'that he would have pity on them'

(72) *ai a lui conversét* (l. 341)
       'I have talked to him'

(73) *ou as geüd* (l. 487)
       'where you lay'

Only one example lacks an argument or oblique of this type:

(74) *ki ad pechét bien s'en pot recorder* (l. 546)
      'the one who has sinned could well remember ...'

By contrast, the majority of intransitive verbs in the passé simple appear to lack any sort of dative, genitive or locative oblique or argument (though many do take VP complements), especially once those which would take *estre* as an auxiliary in the passé composé are discounted. About half of passé composé constructions with *estre* also lack such arguments/obliques. This may be taken to suggest that the passé composé with *avoir* had not fully grammaticalised as a possibility with any (unergative) intransitive (as is the case in modern French), but was only possible with those which possessed a second argument or an oblique closely resembling one—*a* can mark both datives and locatives. That this result may just be due to the nature of the (rather small) sample, however, should not be forgotten.

(The outstanding case of *ad pechét* remains. There is a certain possibility that this is an instance of nominal *pechét* 'sin' , and the correct translation is 'the one who has sin ...' Note also that Latin *pecco*, from which *pecher* derives, can be transitive, meaning 'offend'.)

Adams (2013, p. 647) cites as evidence for the late grammaticalisation of *habere* the Old French grammar of Buridant (2000). Buridant writes (p. 376) that sentences of the form auxiliary-object-participle 'can still be felt as a predicate in relation with the verb *avoir* having its full semantic force'[10].One example cited is from the *Song of Roland* (early twelfth century):

(75) *vus li **avez** tuz ses castelz **toluz***
      'you have all his castles captured'

Adams uses this as evidence that the construction had still not fully grammaticalised in Old French. This is perhaps not wholly convincing: certainly the construction could be used as a grammaticalised perfect, and Buridant refers only to one particular word order where the older meaning may be retained—it is not clear that the situation is any different from modern English, where something similar applies, and the *have* perfect is certainly fully grammaticalised. In *Alexis*, only a very small number of the occurring *avoir* + past participle constructions are open to this sort of analysis:

(76) *quant sa raisun li **ad** tute **mustrethe*** (l. 71)
      'when he had demonstrated all his arguments', 'when he had all his arguments demonstrated'

(77) ***des- at** li emfes sa tendra carn -**mudede*** (l. 116)
      'the child had his tender flesh changed'

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[10]'peut encore être senti comme un prédicat du régime avec un verbe *avoir* ayant son sémantisme plein'

(78) *trente quatre ans **ad** si sun cors **penét*** (l. 116)

'for thirty-four years he thus tortured his body', 'for thirty-four years he thus had his body tortured'

The majority of examples, however, cannot be analysed so.

Other evidence for late grammaticalisation of the passé composé may come from Old Spanish. 2002, p. 166 suggests that there was a time in the history of Spanish when intransitives could not occur with auxiliary *haber* 'have', but instead were all associated with auxiliary *ser* 'be'. Whilst this is not, in fact, supported by the sources Penny cites (England 1982, Poutain 1985), it does seem that the use of intransitive *ser* was at one stage much more common—*Mio Cid* (dating to around 1200) contains only 1 instance of auxiliary *haber* for 34 of auxiliary *ser* with intransitives (Poutain 1985, p. 342). This also suggests a late date for the full grammaticalisation of the *habere* periphrasis, with it taking some time to spread fully to intransitives.

Regardless of the state of affairs in Old French or Old Spanish, we have seen that there is no convincing reason to believe on the basis of any Latin texts that the *habere* periphrasis had necessarily fully grammaticalised prior to the emergence of Romance. As the previous section showed, however, there is evidence even from Latin texts for the loss of passive morphology. Though some uncertainty regarding the precise date of emergence of the grammaticalisation as a perfect marker of auxiliary HAVE remains, we can nevertheless conclude with some confidence that this development likely occurred later than the development of the fully analytic passive system.

5.2 Formal analysis

Regarding the formal analysis of this change, recall the analysis presented for unaccusatives. Under the conditional features analysis, it was suggested that [+perf] Asp developed a feature [Gender:__ ← Ext:−ext]. The grammaticalisation of auxiliary HAVE can be seen as a generalisation of this whereby the conditioning environment was lost and [Gender:__] became a feature of [+perf] Asp heads more generally. (Though, under the assumptions made regarding the passé simple, there were also [+perf] Asp heads which lacked [Gender:__] and were involved in synthetic constructions. At some point these came to be used with unaccusatives as well, hence constructions like *il mourut* 'he died'.) The HAVE periphrasis was simultaneously reanalysed so that *habere*/*avoir* became the spell-out of [+ext] T+v just as *esse*/*estre* was the spell-out of [−ext] T+v (*estre* is also the spell-out where the auxiliary contains Asp, i.e. in passives). This is essentially a formalisation of the suggestion of Ledgeway (2012, p. 317) that the new construction with HAVE was by analogy to that with BE. It can also be seen to follow from learners' preference for less marked features if conditional features are assumed to be marked.

There may have been intermediate stages to this change: for example, auxiliary HAVE may have grammaticalised with transitives before intransitives. It is not currently possible to demonstrate this with certainty, but in any case these possible intermediate stages could be seen as a gradual broadening of the environments in which [Gender] is manifest on Asp, captured in terms of conditional features.

5.3   The passé anterieur

One complication is the existence of the passé anterieur, formed with the auxiliary in the passé simple. This construction is found a number of times in *Alexis*, all apparently with pluperfect meaning. This occurs with both *estre* (79), as mentioned in subsection 4.4, and *avoir* (80):

(79) *fud ... alét* 'had gone' (l. 103)

(80) *il out espusede* 'he had married' (l. 467)

This judgement is, however, complicated by the fact that pluperfect meaning is also found with present tense auxiliaries, e.g. *est alüéz* 'had gone' (l. 545) Let us assume that this is an artefact of Old French 'tense switching' and that the 'core' meaning of this construction is pluperfect, as it is in the modern language (where it is however restricted in usage). This is in fact the predominant way of forming a construction with pluperfect meaning: the plus-que-parfait (with the imperfect of the auxiliary) occurs only once—*t'aveie retunude* 'I had kept for you' (l. 407)—though recall also the presence of such a form in the sermon on Jonah.

The primary function of the auxiliary in the passé anterieur construction seems to be to bear tense marking, i.e. to mark the event as occurring in the past, whilst the aspectual (perfect) element is carried on the participle. At least under the assumption here that the passé simple is marked [+perf], we might claim that this is an (optional) morphological manifestation of the [Asp:+perf] feature present on T through Agree.[11] However, we must also posit that T is [+past] (which the analysis of the passé simple as a present perfect fails to do). There is, in fact, reason to believe that the passé simple forms may be either [±past] with no difference in morphological manifestation. Firstly, recall the merger of the morphological perfect and pluperfect (i.e. present and past perfects) observed in *Eulalia* (subsection 5.1.4), where pluperfect forms are used with perfect meaning. This suggests that at some point the [±past] distinction on [+perf] synthetic forms ceased to correspond to a morphological distinction: both *fut* (originally perfect) and *furet* (originally pluperfect) could be either [+past] or [−past]. Hence, *Eulalia* has *furet morte* 'she died' with [−past, +perf] interpretation on the scheme

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[11]Describing the passé simple as [+punctual] (instead of [+perf]) after Harris (1978) will not help here: the passé anterieur need not be [+punctual].

adopted here. Subsequently, the old synthetic pluperfect ceased to be used entirely, but—we can posit—synthetic [+perf] forms could still be either [±past]. With the passé simple largely restricted to punctual usage, this is not always easy to see, but there is some evidence for it. Occasionally the passé simple is used to denote actions anterior to those described by another past tense form (Grevisse and Goosse 2011, §885):

(81) *cette femme à l'agonie … témoignait d'une grandeur que, devant la rampe, elle n'**atteignit** jamais* (Grevisse and Goosse 2011, §885, quoting Camus)
'this woman in her agony … witnessed a grandeur which, before the theatre lights, she never **had reached**.'

(82) *lur dist cum s'en **fuït** par mer* (*Alexis*, l. 381)
'it told them how he **had fled** by sea'

Here, then, the passé simple can be interpreted as [+past, +perf], or broadly 'pluperfect' in meaning. Harris (1978, p. 159fn.28) also claims that the passé anterieur can sometimes be used with passé simple function: in these cases, we might analyse the auxiliary as marked [−past], in spite of the morphological syncretism with the [+past] forms.

To summarise: this section has presented evidence that the grammaticalisation of the passé composé with *avoir* took place later than the other changes to the verbal system discussed, and presented an analysis which incorporates this change into the wider changes.

6   Conclusion

In this thesis, I have considered certain core elements of the development of the verbal system of Classical Latin into that of Old French. In section 2 I presented as a starting point a formal analysis of the relevant subsystems of Latin and French, drawing principally on the approach to functional structure of Cinque (1999) and the defective goals analysis of incorporation of Roberts (2010). I also introduced the concept of 'conditional feature' [F ← G] as part of my analysis, and presented evidence for this type of feature from other languages. In sections 3, 4 and 5 I discussed the changes to the verbal system, considering changes involving passives, deponents/unaccusatives and the passé composé. Drawing on textual data and the works of other authors, I offered both a formal analysis of these changes (based on that argued for in section 2) and an approximate chronology. These findings are summarised in table 15.

Although the Romance data for this analysis is predominantly taken from French, most of the findings are likely applicable to the other Romance languages, which show similar patterns of development in respect to the elements of the verbal system considered. Throughout, various simplifying assumptions, connected

Classical Latin	
[Voice:+R, V:__]	[Asp:+perf, Voice:__, V:__, Gender:__ ← Voice:+R]
[Voice:−R, V:__]	[Asp:−perf, Voice:__, V:__]
Classical Latin−7th cent.	*2nd−6th cents.*
Various changes in passives	Deponents break off into class separate from passives—unaccusatives?
.	
.	BE perfect:
.	[Asp:+perf, Voice:__, V:__, Gender:__ ← Voice:+R, **Gender:__ ← Ext:−ext**]
culminating in:	
7th/8th cent.	
Loss of synthetic passive morphology	
[Voice:+pass, V:__, **Gender:__**]	[Asp:+perf, Voice:__, V:__, **Gender:__ ← Ext:−ext**]
Later	
Loss of morphological [±past] distinction on [+perf] T	Grammaticalisation of HAVE perfect:
	[Asp:+perf, Voice:__, V, Gender:__]
	[+ext] ([−pass]) v: HAVE
	[−ext] or [+pass] v: BE

Table 15: Summary of proposed changes

issues that have been set aside at present, and other opportunities for further research have been highlighted. Thus, this thesis has not only produced interesting new insights into the development of the Romance languages, it has also opened up avenues for subsequent work into related matters.

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