Argument Structure of Participial Clauses: 
The Unaccusative Phase

Asier Alcázar and Mario Saltarelli
University of Missouri-Columbia and University of Southern California

1. The Problem

It is a well-known fact that Past Participle Clauses (PCs for short) serve as a diagnostic to discriminate between two types of intransitive verbs. The Unaccusative Hypothesis (Perlmutter 1978a) claims that intransitives are not a unitary class and that, there are, in effect, two types of intransitive verbs, as listed in (1) and (2). Unergatives are intransitives with a subject argument (cough, run, speak…). On the other hand, unaccusatives are also intransitive verbs but their subject argument is derived from the object position (arrive, go, stay…).

(1)  Unergatives:  intransitives with a subject argument
(2)  Unaccusatives:  intransitives with a derived subject (initially an object)

Among the various diagnostics distinguishing between these two types of intransitives we find PCs. PCs ban unergatives, as is shown for several predicates in (3: dine, react, reply), yet not the unaccusatives in (4: fall, flee, leave). This unusual property has made PCs a long established diagnostic for the Unaccusative Hypothesis (Perlmutter 1978b, Alexiadou, Anagnostopoulou and Everaert 2004). Note that a related construction, the gerundival, does not discriminate against unergatives, as seen in the full English glosses (e.g., The Fabians having reacted, ...).

(3)  *Reagit-i/Rispost-i/Cenat-i  i  Fabiani, scoppiarono gli applauso
     reacted/replied/dined-M.PL the Fabians burst,3PL the applause
     ‘The Fabians [having] reacted/replied/dined, applause broke out’

(4)  Cadut-i/Partit-i/Fuggit-i  i  Fabiani, scoppiarono gli applauso
     fallen/left/fled-M.PL the Fabians burst,3PL the applause
     ‘The Fabians [having] fallen/left/fled, applause broke out’

(Rosen 1983: 48-9; exs. 30-32)

Notwithstanding the prominence of PCs in the unaccusative literature (Levin & Rappaport 1995, Sorace 2000), little attention has been paid to their structural analysis. Why should PCs ban unergatives? Kayne (1989) proposes that absolutes are instances of V-to-C movement on a par with Rizzi’s (1982) analysis of Romance gerundivals—both absolutes and gerundivals are verb initial. But Kayne does not indicate in what way this analysis would elucidate the ban on unergative predicates, since gerundivals do not show this restriction. Belletti (1990, 1992) pursues a similar analysis for unaccusatives, where C is involved in exceptional nominative case marking (Tense is not projected).

For Belletti, transitives do not require a nominative case assigner, since they assign accusative case to their internal argument directly, and consequently do not need C. Unergatives are ruled out due to Case Filter violations in this analysis: either unergatives assign accusative but there is no argument to discharge this case (Belletti adopts a transitive configuration for unergatives, say a la Hale & Keyser 1993), or unergatives have C as a case assigner, but the argument that is realized, the external, is demoted to a by-phrase.
1.1 Proposal

In this paper we propose that Romance PCs are VP structures, without vP, TP or CP (contra Belletti 1990, 1992). Our analysis is based on the standard assumption that the subject argument of unergative predicates is external and hence introduced by the functional head v (Kratzer 1996, Chomsky 1995, 2001). We extend this analysis to participial relatives, which present similar morphosyntactic properties and the opposite word order: verb final. Capitalizing on a conceptually necessary mechanism, merge, we account for these similarities by having participial structures share the same numeration but different probes, with the consequence that absolutes are headed by the verb and participial relatives by the noun. This same idea facilitates an account of the referential properties of participial constructions, which resist c-command and movement accounts.

Beyond Romance, we identify the absolute construction and the participial relative in Basque. Basque participial constructions accept unergative predicates, contrary to the expectations of the diagnostic. If Basque participial structures include v, as the additional grammaticality of causatives and external argument realization seem to suggest, these facts are reconciled and the instrumental role of Romance PCs in the UH is derived. Despite the difference in syntactic constituency and canonical word order, Basque participial constructions present the same word order asymmetry as in Romance, vindicating the idea that participial structures exhibit different heads, verbal and nominal.

1.2 Outline of the paper

The outline of the paper is as follows. Section 2 introduces the UH in the framework of Government & Binding and Minimalism. Section 3 presents arguments for PCs to be VP structures only. Section 4 extends this analysis of adverbial PCs to adnominal PCs or reduced relatives. Section 5 proposes an analysis to account for the divergent word order of absolutes and participial relatives. Section 6 dwells on Basque participial constructions. Finally, section 7 presents the conclusions of the paper.

2. The UH in Government & Binding and in Minimalism

This section presents a succinct overview of the Unaccusative Hypothesis in Generative Grammar to serve as a general background to the paper. In Government & Binding, the Unaccusative Hypothesis is formalized as a difference in the argument projection of monadic predicates in Deep-Structure (Burzio 1986). Unaccusatives have a VP internal argument (5a). In contrast, the argument of unergatives is external to the VP (5b).1

(5) a. Unaccusative [v, V NP]  b. Unergative [v, NP Inf]

Under Burzio’s Generalization2, unaccusative verbs theta-mark their object but fail to assign case. As a result, the NP remains caseless in Deep-Structure. To avoid a visibility violation (Chomsky 1980, Vergnaud & Rouveret 1980), the NP moves to the Spec-Inf in Surface-Structure, where it receives nominative case.

On the other hand, in Minimalism the previous formal basis of the UH are redefined. The external argument is introduced by a functional projection, v or voice (Kratzer 1996, Chomsky 1995). And the levels of representation Deep-Structure and Surface-Structure are reduced to a single one. The asymmetry in intransitive predicates proposed by the UH emerges in Minimalism from the presence of particular heads (v, V) and features [Case] in the numeration. Unaccusatives are VPs (6a) and unergatives vPs (6b). This is the formalization of the UH that we adopt in this paper.

1 Alternatively, with the VP Internal Subject Hypothesis (Kuroda 1988), the argument of the unergative verb is internal to the VP in Deep-Structure: [v, DP VP]. The unergative verb theta-marks its argument in Deep-Structure. This argument then moves to Spec-Inf to receive nominative case in Surface-Structure.

In the shift to derivation by phase (Chomsky 2001), CP and vP are sentence phases that may trigger transfer to the interfaces (Logical Form and Phonetic Form). VP has also been argued to be a phase (Legate 2003, to appear, and references therein; the inheritance model of Chomsky 2005). In our analysis we assume that Romance absolutes and participial relatives are VP phases. The arguments in support of this analysis are discussed in the sections to follow.

3. Arguments for PC = VP phase

In this section we argue that PCs are only VPs. It is noteworthy that current explorations of Phase Theory provide a framework to accommodate for subsentential structures such as absolutes, as noted in the above references. Indeed, López (2001) and Martín (2005) have claimed that Romance absolutes are VP phases. We have strongly argued for this position on the grounds of historical data from Old Italian and Case Theory (Alcázar & Saltarelli 2006). In this paper we provide further evidence for the VP analysis and extend it to participial relatives and the Spanish control structure have + participle (Latin Habeo litteras scriptas ‘I have letters written’ cf. Posner 1996: 258; ex. 64).

Our first argument is that PCs observe the canonical word order in the language. For example, PCs in Spanish and Italian have the participle first, followed by its object (see an example for Italian in 7).

(7) **Conosciuta** Maria, Gianni ha subito cambiato il suo stile di vita

known(FEM-SG) Maria Gianni has immediately changed his lifestyle

‘[Having] known Maria, Gianni immediately changed his lifestyle.’

(Belletti 1992: 21-2, ex. 1)

As a matter of fact, PCs disallow preverbal unaccusative subjects (this is shown in 8 for Italian). In Italian finite clauses, the subject of unaccusatives may be preverbal or postverbal in. This is our second argument.

(8) **Arrivata** Maria, Gianni tirò un sospiro di sollievo

arrived(FEM-SG) Maria Gianni exhaled a sigh of relief

‘Maria [having] arrived, Gianni was relieved.’

(Belletti 1992: 21-2, ex. 1)

The third argument is that PCs do not allow for an external argument to be expressed unless this argument is demoted to a by-phrase. In (9) we can see a minimal pair for Spanish. The subject is ungrammatical in (9a), unless we make a pause or introduce a comma, in which case el ejército americano is rightfully interpreted as a constituent of the main clause. Instead we are forced to use a by-phrase in PCs, as shown in (9b). In contrast, the gerundival construction accepts external arguments (10).

(9) a. *Detectad-os los insurgentes el ejército americano, ...
detected-M.PL the insurgents the army American

‘The US army [having] detected the insurgents, …’

b. **Detectad-os los insurgentes por el ejército americano, ...
detected-M.PL the insurgents by the army American

‘The troops [having being] detected by the US army, …’

(10) Habiendo detectado a los insurgentes el ejército americano, ...

having detected-M.PL ACC the insurgents the army American

‘The troops [having being] detected by the US army, …’
Another interesting fact of PCs, and our fourth argument, is that they do not allow sentential negation. This construction is in fact used by Zanuttini, together with imperatives, as empirical support for her hypothesis that if there is tense, then there is sentential negation (1996: 181). Zanuttini claims that sentential negation is a head that selects the tense phrase as its complement. Consequently, if there is no tense, there is no suitable complement for sentential negation. Examples (11) and (12) illustrate this for Italian.

(11) *Non è arrivata in tempo, Maria non ha più trovato posto a sedere
NEG arrived in time Maria has NEG more found place to sit
‘Not having arrived in time, Mary couldn’t find a place to sit’

(12) *Non ha passato quell’esame, Maria ha avuto molti problemi
NEG passed the exam Maria has had many problems
‘Not having passed that exam, Maria then had many problems’

(Zanuttini 1996: 191; exs. 38-9)

Our fifth argument is that PCs have no tense. If we assume that an auxiliary occupies this position, we need to conclude that there is no T node in PCs (13). Again, by comparison with a closely related structure, namely the gerundival in (15), which does allow auxiliaries, we see in (14) that auxiliaries are not possible in PCs. These two facts were thus taken by Zanuttini to indicate that both tense and sentential negation are absent in absolutes.

(13) Vist-a María, Juan sonrió
seen-F.SG Maria Juan smiled
‘[Having] seen María, Juan smiled.’

(14) (*Habiendo) vist-a María, Juan sonrió
having seen-F.SG María Juan smiled
‘[having] seen María, Juan smiled.’

(15) Habiendo visto a María, Juan sonrió
having seen acc María Juan smiled
‘Having seen María, Juan smiled.’

The sixth argument concerns the absence of a complementizer phrase in PCs. This is an important point at stake because the complementizer phrase has been proposed to exist in PCs for case theoretic reasons. Belletti proposes that unaccusative PCs have a Complementizer that exceptionally assigns nominative case to the argument of the unaccusative participle when the verb moves to C. In effect, Belletti takes the ungrammaticality of the unergative PC as a possible sign that unergatives may lack C (for this particular construction).

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3 A reviewer rightly notes that negation is sometimes possible in Spanish (i).

(i) No encontró las pruebas, el fiscal retiró el caso.
NEG found-FEM.SG the proofs the prosecutor gave up the case
‘In the absence of evidence, the prosecutor gave up the case.’

In contrast to Belletti and Zanuttini’s data for Italian, de Miguel (1992) claims that negation is generally possible in Spanish absolutes. It should be noted, however, that absolutes in other languages accept negation without reservations (Old Italian, Basque; see Alcázar and Saltarelli 2006a)—other restrictions are lifted too (e.g., acceptance of unergative predicates). From this cross-linguistic perspective, the resistance of Modern Romance absolutes to the use of negation should give rise to the suspicion that said negation may be adverbial, rather than sentential.
Obligatory movement to C may be more easily defensible on other grounds, such as checking off a feature denoting illocutionary force in imperatives (Rivero & Terzi 1995), which are also verb initial in Romance, and more generally, for example, to check off a wh-feature in wh-questions. However, it is not clear why unaccusatives [+CP] and transitives [-CP] should divide in this way. We take sides with de Miguel instead, who insists on the impossibility for PCs to host a connective, as the following examples in (16) illustrate. The PC cannot be preceded by connectives expressing concession, condition, temporal precedence or cause. This is illustrated in (16a) for aunque (although), (16b) for si (if), (16c) for cuando (when) and (16d) for puesto que (given that). Absolutes can take on all these meanings by themselves. In fact, semantic variability is a characteristic property of absolutes (Stump 1985), which we believe arises from the absence of C.

(16) a. (*Aunque) remodelada por completo la casa,
    Although remodeled for complete the house
    ‘(Although) the house [was] remodeled completely,
    it continued awaking the sad memories of their owners.

b. (*Si) remodelada la casa, podria venders más fácilmente
   if remodeled the house, could sell.REFL more easily
   ‘(If) the house [were] remodeled, it would sell easily.’

c. (*Cuando) remodelada la casa, la pondremos inmediatamente en venta
   when remodeled the house it put immediately on sale
   ‘(When) the house [were] remodeled, we would immediately put it on sale.’

d. (*Puesto que) remodelada la casa, no había razón para trasladarse a la ciudad
   given that remodeled the house, NEG had reason for moving to the city
   ‘(Given that) the house [was] rem., there was no reason to move to the city.’

(de Miguel 1992:66, ex. 7)

The above paradigm reinforces the conclusion that absolute PCs have no higher phases. Having said that, it is also possible to assume that the absence of que responds to obligatory movement of the verb to C—assuming this projection exists in absolutes and that it is empty. This approach needs to answer the questions posited above. Additionally, such an analysis carries along an implicit assumption about the computational system: that it may optionally skip the projection of syntactic nodes otherwise available in the language (Neg, T, v). In contrast, a phase is defined by halting the structure building process and sending the current syntactic object to the interfaces (Chomsky 2001). If VP is a phase, we do not need to make further claims about the computational system. For these reasons, if we need to base the unacceptability of unergatives on the presence or absence of a phrase, it may be sufficient to focus on the absence of vP.

In view of the above arguments, we conclude, under minimalist assumptions, that there is no positive morphological evidence for the higher phase CP or TP in Romance PCs.

4. Extending the VP Phase Hypothesis: Adnominal PCs

Thus far, we have seen that there is reason to believe that PCs are undersized clauses, possibly consisting of a VP only. In this section we are going to look at the adnominal use of PCs, where PCs function effectively as reduced relatives, to see if this construction is also amenable to a VP analysis.

4 A reviewer calls to our attention that absolutes with aunque are good for him/her and the speakers he/she consulted. At the same time, all other connectives are ungrammatical. Our own judgments, one of us speaks Spanish natively, and the judgments of those we consulted, fall in line with that reported by de Miguel (1992). The variety we studied is Castilian, with speakers from the areas of Madrid, Toledo and Bilbao. Interestingly, Belletti (1990) reports that the Italian counterparts anche and benchè are also good.
Revisiting the arguments we made in the previous sections, the first thing to note is that adnominal PCs have the opposite word order than adverbial PCs (we use the terms adnominal PC/participial relative and adverbial PC/absolute indistinctively in this paper). This is shown for the same participle in (17) for the adverbial, where the participle comes first, and in (18) for the adnominal, where the participle follows its logical object.

(17)  
Pintad-a la casa, Juan se fue  
painted-F.SG the house  Juan refl left  
‘[Having] painted the house, Juan left.’

(18)  
Juan se fue a la casa pintad-a  
Juan refl left to the house painted-F.SG  
‘Juan went to the painted house.’

In fact, this reversed word order is also true of unaccusatives. Before we saw that the subject of unaccusatives is exclusively postverbal in adverbial PCs (our second argument). In adnominal PCs, this argument is exclusively preverbal. In example (19) for Spanish, las tropas has to precede llegadas or else the sentence is ungrammatical.

(19)  
Hemos localizado las tropas llegad-as a Baghdad  
we.have located the troops arrived.F.PL to Baghdad  
‘We have located the troops [that] arrived in Baghdad.’

vs. *Hemos localizado llegad-as las tropas a Baghdad

Despite the difference in word order and grammatical function, adverbial and adnominal PCs do share many things in common. Paramount among these is the fact that adnominal PCs also disallow unergative predicates, while accepting unaccusatives and transitives. This is shown in the examples (20) through (22), where the only difference lies in the participle used in the relative. In (20) and (21) we have a transitive and an unaccusative predicate, respectively, both sharing the property that they have an internal argument. In contrast, in example (22), the participle of an unergative verb is not felicitous, even though the position of this argument is actually preverbal.

(20)  
Hemos localizado las tropas detectad-as en Baghdad  
we.have located the troops detected.F.PL en Baghdad  
‘We have located the troops [that were] detected in Baghdad.’

(21)  
Hemos localizado las tropas llegad-as a Baghdad  
we.have located the troops arrived.F.PL to Baghdad  
‘We have located the troops [that] arrived in Baghdad.’

(22)  
*Hemos localizado las tropas patrullad-as por Baghdad  
we.have located the troops patrolled.F.PL por Baghdad  
‘We have located the troops [that] patrolled in Baghdad.’

In (23), we see that adnominals also disallow the realization of the external argument, which can only be expressed as a by-phrase. This was our third argument.

(23)a.  
*Los insurgentes detectad-os el ejército americano ...  
the insurgents detected-M.PL the army American  
*‘The insurgents [that were] detected the US army’

b.  
Los insurgentes detectad-os por el ejército americano ...  
the insurgents detected-M.PL by the army American  
‘The insurgents [that were] detected by the US army, …’
Our fourth argument concerns sentential negation. If and when adnominals accept negation\textsuperscript{5}, it seems to be exclusive, as in constituent negation, as seen in (24).

\begin{equation}
\text{(24) Los insurgentes no detectados por el ejército americano ...}
\end{equation}

the insurgents NEG detected-M.PL by the army American

‘The troops [that were] not detected by the US army, …’

In (25) we note that auxiliaries cannot be employed with adnominal PCs, revisiting our fifth argument. In this case, there is no related construction to speak about for comparison, since adnominals do not have a gerundival counterpart that allowed this possibility (Basque does). It is sufficient to show that introducing the auxiliaries would result in ungrammaticality.

\begin{equation}
\text{(25) Los insurgentes (*habiendo sido) detectados fueron arrestados}
\end{equation}

the insurgents having been detected-M.PL were arrested

‘The insurgents [that were] detected by the US army, …’

These two facts are in agreement with Zanuttini’s Hypothesis, as there is neither tense nor sentential negation in these constructions either.

Finally, it is impossible to use connectives with adnominal PCs (26).

\begin{enumerate}
\item \text{Los insurgentes [ (*aunque) detectados ] fueron arrestados}
\end{enumerate}

the insurgents although detected-M.PL were arrested

‘The insurgents [that were] (*although) detected were arrested’

\item \text{Los insurgentes [ (*si) detectados ] fueron arrestados}
\end{enumerate}

the insurgents if detected-M.PL were arrested

‘The insurgents [that were] (*if) detected were arrested’

\item \text{Los insurgentes [ (*cuando) detectados ] fueron arrestados}
\end{enumerate}

the insurgents when detected-M.PL were arrested

‘The insurgents [that were] (*when) detected were arrested’

\item \text{los insurgentes [ (*puesto que) detectados ] fueron arrestados}
\end{enumerate}

the insurgents given that detected-M.PL were arrested

‘The insurgents [that were] (*given that) detected were arrested’

We conclude under minimalist assumptions that there is no evidence for a CP/TP/vP projection in adnominal PCs either. It seems then fitting to adopt a VP analysis of these structures as well.

5. Deriving the VP phase structure of PC

The strong parallelism between adverbial and adnominal PCs suggests a uniform derivation. Let us assume that PC phases are derived from the same numeration \{las tropas, llegadas\} (the troops, arrived). Merge takes two syntactic objects A and B and forms a new object: \[g[ A, B]\]. The value of \[g\] is either A or B. Accordingly, \[g \[ llegadas, las tropas\]\] derives the narrow syntax of adverbials: \textit{the troops [having] arrived}. Correspondingly, \[g \[ las tropas, llegadas\]\] is the derivation when \[g\] is the nominal probe \textit{A: the troops [that] arrived}.

Instead of introducing a novel or ad hoc mechanism to derive the narrow syntax of participial structures, we have taken advantage of the two logical outcomes that every merge operation provides. These two logical outcomes can be put to further use to address a research question that concerns the referential dependency, or absence of it, between the absolute and the main clause.

\textsuperscript{5} Similarly, Siloni notes that neither “standard negation \textit{lo}” nor “present tense special negation \textit{eyn} (which agrees with the subject preceding it)” can be used in Hebrew participial relatives (1995: 450, ex. 8a-d).
5.1 Referential properties of PCs

Consider a unique type of absolute construction found in Modern Italian (27), in addition to the general type that is found in Romance (28).

(27) a. Assassinato_{ij} il padre, il figlio_{i} ascese al trono
    assassinated the father-NOM, the son ascended to the throne
    ‘Father [having been] killed_{ij}, the son, ascended to the throne.’

    b. Assassinato^{lo} assassinated.him

(28) a. Assassinato_{i/*} il padre, il figlio_{i} ascese al trono
    assassinated the father-ACC, the son ascended to the throne
    ‘[Having] killed_{i/*} (his own) father, the son, ascended to the throne’

    b. Assassinatolo assassinated.him

(Alcázar and Saltarelli 2006a)

The example in (27a) illustrates the case syncretism and free interpretation of absolutes that is generally seen in Romance (note the ungrammaticality of the accusative clitic in 27b). Example (28) illustrates a situation unique to Italian, which exhibits the following properties: (i) the case of the internal argument is accusative, (ii) the predicate must be transitive (it does not occur with unaccusatives), and (iii) the subject of the main clause controls the reference of the subject of the absolute. This second type of absolute is the one Belletti considered in her seminal work (1990, 1992).

To account for this unique type, the subject argument must be the same across both structures. However, the subject is not in a position to c-command into the absolute, a sentential adjunct. Alternatively, the subject argument could have moved out of the adjunct and into the main clause, if we try to reduce obligatory control as an instance of movement (Hornstein 2001). Yet movement in this context would be a leap of faith, since we are moving out of an adjunct. Still, technical difficulties of implementation aside, the referential dependency holds from the main clause to the absolute.

To overcome this technical challenge without introducing an ad hoc mechanism, we may assume that merge can regulate sharing an argument across two trees, if and when one of the trees is the VP phase of a transitive verb (the external argument position open). In effect, the two logical possibilities ensue: either the subject argument is shared (label is A), resulting in obligatory subject control from the main clause, or the subject is not shared (label is B), and the interpretation of the subject of the absolutes is free.

As an added benefit, the directionality of control is captured as well: from the main clause, which realizes a full argument structure, to the absolute, which only realizes the internal argument. This configuration is available to transitives only, because transitives still have their predicate argument structure open in the context of an absolute construction. Understandably, this type of control relation is restricted to a configuration where one of the trees does not realize the full argument structure of the verb. More generally, the ability to share an external argument should not be a matter of great concern; after all, external arguments are currently being analyzed as independent of the verbal projection proper (e.g. Pylkkanen 2002, LI monograph to appear; Marantz 1984, Kratzer 1996).

So far, we have applied merge in two scenarios: first to articulate the word order difference between absolutes and participial relatives based on what the probe and goal are in the numeration; and, second, to arbitrate the referential properties of absolutes. These two domains, word order and construal, combine in interesting ways in the have + participle construction in Spanish (29; see Green 1988: 102).

(29) a. Juan_{i} tiene la carta escrita_{i/*k}
    Juan has the letter written
    ‘Juan has the letter written by himself/the letter that was written’

    b. Juan_{i} tiene escrita_{i/*k} la carta
    Juan has written the letter
    ‘Juan has the letter written by himself/*the letter that was written’
When *have* is adjacent to the participle (31b), the subject of the participle is obligatorily controlled by the subject of the main clause (or construed with it, if the participle incorporates into the main verb). In the opposite word order (31a), the subject of the participle is free. As in the *accusative + control* absolute of Italian above (30), the *have + participle* construction is restricted to transitives and shows obligatory control. Like the word order asymmetry we observed between absolutes and participial relatives, two word orders are possible, one being free, and the other being controlled. When the word order is that of the adnominal (N V), the noun is the head and control cannot be constructed syntactically. This may be the reason why the subject of a transitive participle is always free in an adnominal. For example, in *Juan vió la casa pintada* (Juan saw the house [that was] painted), Juan may be the person who painted the house but, of course, it need not be Juan, for the house may have been painted by someone else.

6. The image in the mirror: Basque PCs

If this characterization of PC is correct, namely that they are headed by the verb or by the noun, we would predict that SOV languages should behave differently from SVO languages. Specifically, in an SOV language the canonical word order is verb final. Consequently, we would predict that adverbial PC clauses will be verb final in an SOV language: adverbial = OV. If adnominal PCs represent the other logical alternative to the merger of the probe with the goal, then in an SOV language the order of adnominal PCs should be the reverse of the canonical word order too: adnominal = VO. The prediction then is that adverbial PCs are canonical and adnominal PCs non-canonical regardless of the word order of the language. We have tested this prediction with Basque, an SOV language with adnominal and adverbial PCs, and this is what we have found.

The Basque absolute construction is based on a perfective participle inflected with partitive case or a conjunction and it is verb final (Alcázar 2006), as seen in (30).

(30) Maria ezagutu-ta, Gianni asko aldatu zen
     Maria known-and, Gianni much changed was
     ‘[Having] known Maria, Gianni radically changed his lifestyle.’
     *Ezagutu-ta Maria

This is also true of unaccusative PCs in (31). The argument of the unaccusative participle has to precede the verb, even though in Basque it is generally possible for this argument to appear postverbally. The examples in (30) and (31) contrast with what we have seen for Romance, where unaccusatives have postverbal arguments in the adverbial use of PCs.

(31) Maria hel-du-ta, Gianni lasaitu zen
     Maria arrive-per-and Gianni relaxed was
     ‘Maria [having] arrived, Gianni was relieved.’
     vs. *heldu-ta Maria

Concerning the adnominal use of PCs, Basque presents the mirror image of the adverbial, that is to say, the object follows the participle in this case, as seen in (32). The morphology of the adnominal PC is the same as the adverbial PC with the addition of genitive marker –*ko*.

(32) Baghdad-en detektatu-ta-ko trop-ak aurkitu ditugu
     Baghdad-in detected-AND-GEN troop-ABS located aux(we.have.them)
     ‘We have located the troops [that were] detected in Baghdad.’
     vs. Baghdad-en trop-ak detektatu-ta-ko

Unaccusatives also present this word order too, as seen in (33).
To summarize: Basque presents the same parallelism observed in (20-21) for Romance, only reversed. These are the predictions of the analysis presented in section 5. For clarity and ease of comparison, a minimal pair of adverbial and adnominal PC is given for the same predicate in (34) and (35). The table in (36) schematizes the word order patterns seen in the data presented in the paper.

| (34) | Etxe-a pintatu-ta, Juan joan zen house-ABS painted-and Juan gone was ‘Having painted the house, Juan left.’ |
| (35) | Juan pintatu-ta-ko etxe-ra joan zen Juan painted-and-gen house-to gone was ‘Juan went to the painted house.’ |

<table>
<thead>
<tr>
<th>(36) Table 1: Attested Linear Order of PCs</th>
<th>Adverbial</th>
<th>Adnominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basque (Head Final)</td>
<td>[ N V ]</td>
<td>[ N V ]</td>
</tr>
<tr>
<td>Spanish, Italian (Head Initial)</td>
<td>[ V N ]</td>
<td>[ N V ]</td>
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6.1 Basque PCs as a failed diagnostic of unaccusativity

A distinguishing characteristic of Basque PCs is that they are mute as a test for unaccusativity. Both adverbial and adnominal PCs accept unergative predicates, as seen in (37) and (38).

| (37) | Gianni-k deitu-ta, Maria joa-n zen Gianni-ERG.SG called-and Maria.ABS.SG go-PER be.3SG ‘Gianni [having] called, Maria left’ |
| (38) | Gianni-k deitu-ta-ko pertsona hemen dago Gianni-ERG.SG call-and-GEN person.ABS.SG here is ‘The person [that] Gianni called is here’ |

This characteristic is reminiscent of Medieval and Renaissance Italian absolute constructions (Egerland 1996, Alcázar & Saltarelli 2006), which, like Basque, also accept external arguments. The subject can be shifted from the main sentence to the absolute in the transitive example (39). In either position, the case of the external argument is ergative (e.g., 38). Example (39) shows an external argument marked ergative.

| (39) | Gianni-k Maria ezagu-tu-ta, asko alda-tu zen Gianni-ERG.SG Maria.ABS.SG know-PER-CON much change-PER be.3SG ‘Gianni [having] known Maria, he immediately changed his lifestyle.’ |

In addition, Basque presents confirmatory evidence of the presence of v in the form of light verb unergatives (40: Levin 1983, Laka 1990, Hale and Keyser 1993) and causatives (41: Hualde and Ortiz de Urbina 2003).

| (40) | Gianni-k dei egi-n-da, Maria joa-n zen Gianni-ERG.SG call do-PER-and Maria.ABS.SG go-PER be.3SG ‘Gianni [having] called, Maria left’ |

6 From http://blog.gmane.org/gmane.culture.language.basque.eibartarrak/day=20030306.
As advanced in the introduction, if Basque PCs have v, and Romance PCs do not have v, the outcome of these constructions as a diagnostic is predictable.

7. Conclusion

Extended evidence from PCs redefines the UH as a lower VP (VO) phase. The reassessment predicts the ungrammaticality of unergatives as PCs, as they imply a higher vP phase, merging VP(V) with v’. While the diagnostic role of PCs for unaccusativity is language-dependent (Modern Romance vs. Basque/Old Italian), VP-only structures universally reject unergatives. In line with minimalist goals and assumptions, we have proposed that PC syntax derives from the same numeration, increasing the empirical coverage of the analysis from adverbial PCs to adnominal PCs and the have + participle construction. Merge may suffice to account for the narrow syntax and referential properties of PCs.

References


