Anticausative derivations (and other valency alternations) in French

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Abstract

It is proposed to derive the two distinct French anticausative constructions from the interplay of two functional heads, Voice and v, where non-active Voice dominates the morpheme se, and v is the verbal head introducing a dynamic subevent and assigning the Agent role. The middle anticausative derivation (Le vase se casse ‘The vase breaks’) results from the insertion of se under non-active Voice, coupled with the absence of a vP projection. By contrast, the active anticausative derivation (Le vase casse ‘The vase breaks’) results from the use of active Voice with a v projection lacking a specifier. It is shown how these hypotheses account for the derivation of change of state verbs, verbs of movement, as well as the middle anticausative construction with a typically agentive verb, construire ‘to build’.

1. Introduction

Cross-linguistically, there are two major ways to construct an anticausative derivation. Some languages, like English, use an active derivation without morphological marking (The branch broke). Other languages use valency reducing morphology, often the middle voice morphology. In some languages, like French, the two constructions co-exist, as shown in (1).
(1) a. *La branche a cassé.* (active anticausative derivation)

   The branch **AUX** broke

b. *La branche s’est cassée.* (middle anticausative derivation)

   The branch **SE AUX** broke

   ‘The branch broke’

The morpheme *se* in (1b) derives middle constructions (where middle constructions include certain reflexive and reciprocal verbs, e.g. verbs of grooming or body care — *se raser* ‘to shave’ —, certain unaccusative verbs — *se passer* ‘to happen’ —, anticausative verbs — *se casser* ‘to break’ —, and dispositions or generic middles — *se lire avec plaisir* ‘to read with pleasure’; Kemmer 1993, 1994). The construction in (1a) will be referred to as the active anticausative derivation and the one in (1b) as the middle anticausative derivation.

The existence of these competing derivations in languages like French raises two fundamental questions: *How can one account for the two derivations? When is one construction preferred or required?* With respect to the second question, it has been observed, in the case of French, that the two constructions have different conditions of use which have been argued to follow from the following meaning differences (e.g. Dobrovie-Sorin 2006; Kayne 2009; Labelle 1992; Lagae 1990; Zribi-Hertz 1987):

– the active anticausative derivation asserts the autonomy of the process;

– the middle anticausative derivation focuses on the attainment of a result state for the verb’s argument.
In the present paper, we explore an answer to the first question. Our analysis builds on Doron’s work on the Hebrew Middle Voice (Doron 2003), and aims at a universal characterization of this type of valency alternation.

It is proposed that the two distinct anticausative derivations in (1) result from the interplay of two functional heads, Voice and v (Doron 2003; Alexiadou et al. 2006; Labelle 2008), where v is the higher head of a layered verb phrase vP-VP (Larson 1988; Hale and Keyser 2002). The hypothesis that a Voice head is crucially responsible for valency alternations is not new. However, since Kratzer (1996), Voice is generally associated with the ‘little’ v head. Here, we propose to dissociate the two heads, each one having a specific role in the derivation. In a nutshell, the hypothesis explored is that Voice determines the realization of the external argument, while v introduces a dynamic (or activity) subevent and assigns the Agent role to its specifier. To account for the active anticausative derivation, we assume that some verbal roots allow the merge of v in the active voice without an external argument. The middle anticausative derivation, on the other hand, involves non-active Voice and no vP projection. The non-active Voice head, spelled-out by se, blocks the merge of an external argument in the derivation.

We assume that, in the layered vP-VP structure, VP expresses a result-state subevent while v introduces a dynamic/activity subevent. In addition, we adopt the distributed morphology framework in which roots combine with syntactic features to derive words (Halle and Marantz 1993, 1994; Marantz 2005, among others). Embick (2009) proposes that verbal roots may in principle merge with v or with V, and he argues that this is what allows the verb to focus either on the process or on the result. Adopting this perspective, we propose that, in the middle anticausative derivation, the verbal root merges with the V head; it is then interpreted as specifying the final state, and this gives rise to an interpretation focusing on the attainment of a final state by the verb’s argument. In the active anticausative derivation, the root merges with v
instead of merging with V; it then modifies the dynamic/activity subevent. As a consequence, the construction focuses on the process rather than on the result state.

This proposal captures the meaning difference between the two constructions, while maintaining the hypothesis that the verb’s argument is an underlying object in both cases. It contrasts with the position defended in Labelle (1992), in which the semantic difference between the two constructions was captured by positing that the verb’s argument is projected in subject position in (1a) and in object position in (1b).

The basic clause structure we assume is explained in more detail in section 2. Section 3 presents our analysis of the two anticausative derivations in (1). Section 4 shows how the present proposal accounts for peculiarities of the two derivations. Finally, section 5 extends the analysis to verbs of movement, and section 6 shows that it applies to other verbs, in particular to a typically agentive verb, construire ‘to build’ in non-active Voice.

2. Active transitive clauses.

This section sets the stage by spelling out our assumptions regarding how active Voice is involved in the derivation of active transitive sentences. We follow Larson (1988) and subsequent work in assuming that accomplishment verbs are built out of two separate categories V and v. Moreover, we assume an additional functional category Voice separate from v (following Doron 2003; Alexiadou et al. 2006; Labelle 2008). The basic motivation for separating the two functional categories v and Voice is that they span independent dimensions. The v head introduces a dynamic subevent and assigns its thematic role to the external argument. Voice, which can be active or non-active, determines whether or not v's argument is merged in the derivation. Thus, whereas v determines the external thematic role, Voice determines whether the external argument is merged; in active voice, it is, in non-active voice, it is not. Non-active voice
is further subdivided into middle voice and passive voice. Here we do not discuss passive voice, and thus we use non-active as synonymous to middle.

An active accomplishment sentence with a change of state verb is derived as in (2), with vP dominating VoiceP, which dominates VP. The lower VP expresses a change subevent, and the higher vP a process subevent. In (2), the root merges with V. Thus, it modifies the result state, and v’s argument is a Cause. The final clause is derived by raising the verb to T passing through the intermediate heads.

(2)  *Pierre cassa la branche.* ‘Pierre broke the branch.’

Following Embick (2009), in a vP-VP structure, the root may merge with v instead of merging with V. In that case, it modifies the process, and v’s argument is an Agent.
With this framework in mind, let us proceed with the description of the two anticausative derivations that are the focus of this paper.

3. **Anticausative derivations**

In this section, we show how the framework adopted derives the two anticausative derivations of (1). We will first present the middle anticausative derivation and then turn to the active anticausative derivation.

3.1. **Middle anticausative derivation**

Middle morphology derives constructions characterized by the fact that an external argument is not merged in the derivation. Middle voice is realized by *se* in French.¹

Consider the middle anticausative derivation illustrated in (4). *Se* is viewed as the realisation of the [–Active] value of the Voice head. The consequence of having a [–Active] Voice head is that it blocks the merge of an external argument. In addition, *v* is not merged, and therefore no Agent role is assigned.²
(4) *La branche se cassa.* ‘The branch broke.’

\[
\begin{array}{c}
\text{VoiceP} \\
\text{Voice}_{\text{act}} \\
\text{VP} \\
\text{DP} \\
\text{V}
\end{array}
\]

In this construction, the root can only merge with \( V \) and modify the result state, since there is no \( v \) in the derivation. Therefore, the semantic consequence of using non-active Voice without a vP layer is a sentence which focuses on the attainment of a result state for the verb’s argument.

3.2. Active anticausative derivation

The active anticausative derivation is illustrated in (5). We assume that, with a restricted number of verbs, \( v \) may merge without requiring an external argument in its specifier. This is possible because \( v \) introduces a dynamic subevent. With many verbal roots, the dynamic subevent implies an Agent. But some roots allow a dynamic subevent without an additional participant. In that case, \( v \) does not assign the Agent role. Because there is a dynamic subevent, but no external Agent, the verb’s argument is interpreted as undergoing the process autonomously.

(5) *La branche cassa.* ‘The branch broke’

\[
\begin{array}{c}
\text{vP} \\
v \\
\text{VoiceP} \\
\text{Voice}_{\text{act}} \\
\text{VP} \\
\text{DP} \\
\text{V}
\end{array}
\]
One difference between the derivations in (4) and (5) is in the function of the root √cass(e). While in (4), the root must modify V since there is no v, in (5), the root could in principle modify either v or V. We assume that it actually modifies v. This follows from the requirement that each subevent be lexicalized in the structure (e.g. Rappaport Hovav and Levin, 2010). In (5), the stative subevent is lexicalized by the argument la branche ‘the branch’, whereas the eventive argument is not lexicalized by an argument, and thus must be lexicalized by the root. The consequence of having the root modify v is that the verb focuses on the process subevent rather than on the result.

In the following section, we show how the present proposal accounts for the distinct properties of the two anticausative derivation.

4. Properties of the two derivations

In the present account, the tests in Labelle (1992) should be reinterpreted as distinguishing verbs with a dynamic subevent from verbs which only denote the attainment of a result state. The latter require non-active Voice to prevent the projection of the external argument. Hence the following properties distinguishing the two anticausative derivations find a natural account in the present framework.

Subject properties. The middle anticausative derivation is observed when the sentence focuses on the attainment of a result-state by the verb’s argument, without asserting that this argument actively undergoes a process; it is attested when properties of the entity in subject position are such that this entity does not undergo an internally-caused change (Bernard 1971; Burston 1979; Rothemberg 1974; Forest 1988). By contrast, the active derivation is observed when the subject undergoes an internally-caused action:
The contrast follows directly from our analysis. The active anticausative derivation describes a dynamic process because it contains a vP layer with the v head modified by the root. This is compatible with entities presented as undergoing this dynamic process. In contrast, the middle anticausative derivation expresses the result-state subevent and it does not imply a dynamic process. Thus it is compatible with entities that reach a final state without actively undergoing a process leading to the final state.

**Compatibility with mettre quelque chose à ‘to put something on/up to’**. The expression mettre quelque chose à describes the fact of creating the appropriate conditions for an autonomous process to take place (Zribi-Hertz 1987). Therefore it implies an internally-caused process. Accordingly, it is compatible with the active construction, but not with the middle one.

(6)  

a. *Il vit le mouchoir se rougir soudain.  

He saw the handkerchief SE redden suddenly  

b. *Il vit le mouchoir rougir soudain.  

‘He saw the handkerchief become suddenly red.’

(7)  

a. Jeanne rougit.  

Jeanne reddens  

b. *Jeanne se rougit.  

‘Jeanne blushes.’

(8)  

a. Le cuisinier a mis le sucre à caraméliser.
The cook put the sugar on to caramelize

b. *Le cuisinier a mis le sucre à se caraméliser.

The cook put the sugar on to SE caramelize

‘The cook put the sugar on to caramelize.’

**Perfective complements.** Interestingly, perfective complements license a middle derivation. A verb like *muer* ‘to moult’ describes a dynamic process. Without complement, it is used with the active construction:

(9) a. *La chenille a mué.*

The caterpillar AUX moulted

b. *La chenille s’est muée.*

The caterpillar SE AUX moulted

‘The caterpillar moulted.’

However, if we add a complement describing the final state, the middle becomes possible (Labelle 1992: 399; Zribi-Hertz, 1986: 334):

(10) a. *La chenille a mué en un papillon aux couleurs châtoyantes.*

The caterpillar AUX moulted into a butterfly with colours shining

b. *La chenille s’est muée en un papillon aux couleurs châtoyantes.*

The caterpillar SE AUX moulted into a butterfly with colours shining

‘The caterpillar turned into a butterfly with shining colours.’
In the middle construction, VP expresses a change subevent, and it contains a PP describing the result state. Since non-active Voice prevents the merge of an external argument, only the VP expressed:

\[(11) \quad \text{VoiceP} \quad \text{se} \quad \text{DP} \quad \text{V} \quad \text{PP} \quad \text{V} \quad \text{en un monstre à cinq têtes} \]

In (11) the PP is a complement of V, which is modified by the root. In this perspective, the impossibility of (10a), with Active Voice, follows from the fact that in the active structure the root modifies v, focusing on the process subevent; hence the result-state subevent is de-emphasized (or inactive), and this is incompatible with modifying it with a PP describing the final state.

5. **Verbs of movement**

The active and middle anticausative derivations are observed not only with verbs of change of state, but also with some transitive verbs of movement that may describe an unintentional action. When the two derivations are possible, the meaning contrast between the two constructions obtains. This shows that the anticausative derivations are not limited to verbs of change of state. We illustrate here with two verbs, *glisser* ‘slide’ and *rouler* ‘roll’, where the verbal root expresses a manner of movement.

In the transitive construction, the subject is an Agent that controls what happens to the object.
The active anticausative derivation is possible with an animate or inanimate subject. It describes a dynamic event affecting the verb’s argument. The dynamic event interpretation follows from the presence of the v head in the derivation.

(13) a. \textit{La lettre a glissé (sous la porte).}

The letter \textsc{aux} slide (under the door)

‘The letter slid (under the door)’

b. \textit{Pierre a glissé sur la glace (et est tombé).}

Pierre \textsc{aux} slide on the ice (and \textsc{aux} fell)

‘Pierre slid on the ice (and fell)’

c. \textit{Pierre/le billot a roulé jusqu’en bas de la côte.}

Pierre/the log \textsc{aux} rolled to the bottom of the slope

‘Pierre/the log rolled to the bottom of the slope’
By contrast, the middle anticausative derivation describes what happens to the verb’s argument without implying a dynamic process (the construction is not attested with rouler as far as we can tell). This result-state interpretation is due to the presence of non-active Voice merged above the VP layer.

(14) a.  *Une erreur s’est glissée (dans le texte).*

A mistake SE AUX slide (in the text)

‘A mistake has slipped into the text.’

b.  [[[VoiceP [Voice-act se] [VP [DP une erreur][v glisse]]]]]

Thus, the two anticausative derivations apply not only to verbs of change of state denoting an internal change in an entity, like break, but also to verbs of movement where the final state is defined in terms of location or configuration, provided the roots are compatible with the interpretations of the constructions.

6. **A verb of creation, build**

In the previous section, the semantic effects of the two anticausative derivations were shown with verbs of movement. Here, it is shown that the analysis applies to other verbs. We illustrate the case with a verb from a distinct lexical class, construire ‘to build’. Under traditional approaches, this verb should not enter an anticausative derivation because we expect an Agent to be required for the process to be possible. Indeed, the active anticausative derivation is excluded, showing that when this verb is in the active voice, v requires its argument:
However, the middle construction is possible. It may be surprising, from the point of view of an English speaker, that the middle anticausative reading is attested with this verb. This is a reading in which the verb’s argument is viewed as undergoing a change, a development, without any Agent or Cause implicit in the clause. Notice how in (16c), the author explicitly denies the participation of an Agent. (The examples discussed in this section have all been found on the internet; but they have sometimes been simplified.)

(16) a. Comment se construisent les galaxies. (title of a magazine article)

How \textit{se} construct the galaxies

‘How galaxies develop’ (se-construct)

b. Les inégalités se construisent dès l’école primaire. (video title)

The inequalities\textit{se} construct from the school primary

‘Inequalities develop starting from primary school.’

c. Mes romans se construisent, en effet, ce n’est pas moi qui les fait.

My novels \textit{se} construct, indeed, it \textit{NEG} is not me that them make

‘My novels develop, indeed, I do not make them.’ (the text continues with: I help them to come out, I am a midwife, but they have a life of their own.)

The interpretation of the sentences in (16) is that there is some construction going on in the verb’s argument. No external argument is involved. At the same time, the verb’s argument is not
viewed as actively participating in a dynamic process, but rather as undergoing a change. We assume that this is possible because non-active Voice prevents the projection of the external argument, and allows v not to be merged in the sentence.

\[(17) \quad \ldots \left[\text{Voice}_p \left[\text{Voice}_{\text{act}} \, \text{se}\right] \left[\text{VP} \left[\text{DP} \, \text{les galaxies}\right]\left[\text{V} \, \text{construisent}\right]\right]\right]\]

This anticausative interpretation is quite frequent with this verb. In many cases, the interpretation of se-construire may fluctuate between a true anticausative interpretation, and an interpretation in which an implicit agent is implied. This implication arises for some speakers in some sentences and not in others, sometimes just optionally:

\[(18) \quad \text{Peu à peu des chalets se construisent, le domaine skiable prend forme et le tourisme redonne vie au village.} \]

‘Little by little chalets are constructed, the ski resort takes shape, and tourism brings the village back to life.’

(people build chalets; but also: a development is taking form: focus on the result)

\[(19) \quad \text{Comment se construisent les problèmes de santé publique.} \quad (\text{book title})\]

‘How public health problems develop’.

(autonomous development; or as a result of the action of implicit actors)

\[(20) \quad \text{Les villes se construisent sur des compromis.} \quad (\text{LE MONDE} \mid 14.05.09)\]

The cities construct on DET compromises
‘Cities develop on compromises’
(cities develop as a result of compromises; one builds cities by making compromises)

(21) *Les infrastructures télécoms de demain se construisent aujourd'hui.*
The infrastructures telecom of tomorrow se construct today
‘Tomorrow’s telecommunication infrastructures are taking shape today’
(tomorrow’s telecommunication infrastructures are taking shape today; (we) are building today tomorrow’s telecommunication infrastructures)

We believe that the sentences in (18)-(21) are not structurally ambiguous. An agent is inferred because of knowledge of the world and of the meaning of the root, but it is not present in the derivation. The present framework allows, however, for an alternative derivation in which an implicit agent is generated as an adjunct to a v head merged above Voice (this would be similar to a by-phrase adjunct). Since the proper analysis of implicit agents is not directly relevant to the point made in the present paper, we leave the choice between the two analyses to another occasion.

7. **Conclusion**

It was proposed that the two anticausative derivations of French follow from the interplay of two functional heads, Voice and v. The two heads play a distinct role in the derivation. ‘Little’ v assigns the Agent role to a DP in its specifier. Active Voice allows the projection of the external argument in Spec,vP. A restricted number of verbal roots may surface in the Active Voice without external argument; these verbs describe a dynamic event involving the verb’s internal argument. This is the active anticausative derivation. Non-active Voice prevents the merging of the external argument, and yields the middle anticausative derivation.
It was shown that this framework accounts not only for traditional facts regarding causative change of state verbs, but also for verbs of movement, as well as for the verb of creation construire ‘construct’. The possibility of using the anticausative derivation with a verb of creation like construire has not previously been noticed.

1 The idea that se is a Voice head has been proposed in some form or another by a number of previous authors. For example, Juarrós-Daussà (2000) generates Spanish se as the head of the functional projection introducing the external argument, Folli and Harley (2005) treat Italian si as the head of vP, and Labelle (2008) proposes that se is a Voice head in agentive reflexives, although the analysis in Labelle (2008) differs in some respects from the one presented here. Doron and Rappaport-Hovav (2009) suggest a similar analysis for a subclass of reflexive verbs.

2 We do not consider here possible derivations within the lower VP such as the ones discussed in Hale and Kayser (2002). These authors propose, for example, that a verb like rougir ‘redden’ in (i) has a derivation where the root roug(e) starts up under an adjectival head complement of V and incorporates into (conflate with) the V head:

(i) a. Le mouchoir se rougit.
   The handkerchief SE reddens
   ‘The handkerchief reddens’ (becomes red)

b. [VoiceP [Voiceₐct se] [VP [DP le mouchoir] [V [V roug-it] [A roug-]]]]

Since this part of the derivation does not influence the interplay between Voice and v, we do not consider it further. It should be clear that it is compatible with the present perspective.

3 The merge of v above non-active Voice is independently required to account for agentive reflexives like Pierre se rase ‘Pierre shaves’. As shown in (i), in this sentence, Pierre is generated in Spec,VP. Non-active voice is realized by se and it prevents the merge of an external argument; however it does not prevent the merge of v, nor does it prevent an internal argument to move to Spec,vP which is empty. Thus, Pierre moves to Spec,vP where it receives the Agent role from v.

(i) [vP Pierreₐct [v √ras- v [VoiceP se [VP Pierre [V ]]]]]
8. References


