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Thematic indirect objects in French[1]

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ABSTRACT

We present a descriptive generalisation according to which a verbal or an event argument is merged as an indirect object (IO) when the direct object (DO) position is occupied. Our goal is to formalise this generalisation and to show how current syntactic theory provides the necessary tools to support it. Specifically, the converging consensus that all so-called intransitive verbs have an internal nominal argument resolves previous exceptions to the generalisation and shows that the transitivity restriction on thematic IOs is structural.

1. INTRODUCTION

This paper offers an analysis of indirect objects introduced by the preposition *à* in French. On the basis of published and original empirical observations, we present a descriptive generalisation according to which a verbal argument is merged as an indirect object when the direct object position is occupied. Although some previous analyses have pointed directly or indirectly to the idea that indirect objects (IO) are structurally dependant on the presence of a direct object (DO), many cases have remained problematic; Herslund (1988), Melis (2004), and Van Peteghem (2006). Our goal is to formalise this generalisation, showing how current syntactic theory provides the necessary tools to support it and how our formalisation can account for the problematic cases identified in previous studies.

Section 2 defines the empirical coverage of our paper and shows how the descriptive generalisation can be derived without stipulation from the general properties of the grammar. In section 3, we present the theoretical framework needed to treat internal arguments and provide detailed analyses for thematic indirect objects. Section 4 concludes.

2. ON INDIRECT OBJECTS IN FRENCH

This section introduces French indirect objects headed by *à*. In 2.1 we offer a preliminary description of indirect objects; 2.2 discusses previous accounts of

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the dependency of the IO on an accompanying DO; and 2.3 introduces the generalisation.

2.1 Preliminary description of indirect objects

2.1.1 Indirect objects vs circumstantials

We understand the indirect object in French to be a subset of all DPs introduced by the preposition *à*. This set includes *thematic*, or verbal arguments (1), and *non-thematic*, or event arguments (2), but excludes circumstantials (3).[2] In this paper, we deal exclusively with verbal arguments; cf. Roberge and Troberg (in preparation) for a complete treatment of event arguments.

(1) a. Jean a offert des fleurs *à Marie.*
    b. Les invités vont bientôt arriver *à la maison*.
    c. Jean appartient *à une équipe de foot*.
(2) a. Je *lui* ai lavé la/sa voiture. (Hoekstra, 1995: 127)
    b. Un type comme ça, il *te* tue son père sans hésiter. (Jones, 1996: 300)
(3) a. J'ai chanté *à Montréal* la semaine passé.
    b. Paul prend toujours son goûter *à 16h*.

Various tests distinguish IOs from circumstantials. (4) and (5) show that while the circumstantial complement *à Montréal* can be separated from the verb *chanter*, verbal arguments such as *à Marie, à la maison*, and *à une équipe de foot*, cannot.

(4) a. Chanter *à Montréal,* c'est ce que j'ai fait.
    b. Chanter, c'est ce que j'ai fait *à Montréal*.
    c. J'ai chanté *à Montréal* la semaine passé et Jean en a fait autant *à Toronto*.
    d. – Qu'est-ce que Jean a fait *à Montréal*? – Il a chanté.
(5) a. *Offrir des fleurs, c'est ce que Jean a fait *à Marie*.
    b. *Arriver, c'est ce que les invités ont fait *à la maison*.
    c. *Jean appartient *à une équipe de hockey* et Marc en fait autant *à une équipe de foot*.
    d. *– Qu'est-ce que Jean a fait *à Marie*? – Il a offert des fleurs.

These diagnostics indicate selectional and structural relations that hold between the IO and the VP and which are absent for circumstantials.

2.1.2 Category

Since at least Seelbach (1970) and Vergnaud (1974), there has been much debate about the difference between dative *à*-DPs (6), commutable with the pronouns *lui, leur* on the one hand and locative and neuters (7a,b) on the other, which commute with *y, là, à lui/cela*.

[2] Following Leclère (1978) and Barnes (1985), the terms *lexical* and *non-lexical* have been used in the literature to describe the distinction between verbal and event IOs. We choose to use *thematic* vs *non-thematic* in order to avoid confusion with other meanings of the word *lexical*.

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(6) a. Jean *lui* a offert des fleurs, *à Marie*.
b. Marc *leur* parle, *aux invités*.

(7) a. Les invités vont bientôt *y* arriver, *à la maison*.
b. Jean pense *à elle, à sa mère*.

Jaeggli (1982), among others, argues that the difference is structural. Dative *à*, he claims, should be treated as an inflectional case-marker, not the head of a prepositional phrase, while locative and neuter *à* is better analysed as a preposition. Recent analyses, however, argue convincingly that dative *à* is indeed a preposition and that all thematic IOs in French are in fact PPs; cf. Herslund (1988), Tremblay (1999). The main arguments are summarised below.

Vergnaud's (1974) coordination structures are often cited in order to show the apparent similarity between dative IOs and simple DPs. Example (8a) shows that a coordinated structure containing two PPs cannot serve as the antecedent of a relative pronoun, whereas two coordinated dative *à*-DPs (8b) and two simple DPs (8c) can.

(8) a. *Il a compté *sur l'homme* et *sur la femme* qui se sont rencontrés hier.
b. Il a parlé *à l'homme* et *à la femme* qui se sont rencontrés hier.
c. Il a vu *l'homme* et *la femme* qui se sont rencontrés hier.

Furthermore, the preposition *sur* in (9a) and the *à* heading the neuter and locative IOs in (9b,c) need not be repeated in the second conjunct of two coordinated DPs, while the dative *à* must be repeated in a similar context (9d) examples from Vergnaud (1974) and Jaeggli (1982).

(9) a. Ils se sont assis *sur* la table et les chaises.
b. Tu penses *à* Paul et la directrice.
c. Tu vas aller *à* Rio de Janeiro et Buenos Aires.
d. Ils ont parlé *à* Marie et *le/*au directeur.

Herslund (1988: 317) notes however, that the contexts in (9) illustrate less the DP status of the dative IO and more the general restriction on *à* in coordination structures; it must be repeated when the two complements are considered separately but needn't be if the two DPs form in some sense a natural group that is the single goal or recipient of one event:

(10) Tu as envoyé cette lettre *à* Paul et Marianne? (Herslund, 1988: 317)

Clearly *à* can coordinate two DP complements just as any other preposition can. Moreover, (9b) and (9d) are not minimal pairs. The second conjunct in (9b) is feminine; *à* is not required to elide with the determiner and can thus coordinate the two DPs. On the other hand, the second conjunct is masculine in (9d) and requires the elided *au* form. Interestingly, (9b) would be just as ungrammatical if its second conjunct were masculine: **Tu penses à Paul et le directeur*. Conversely, when *la directrice* is used in (9d), speakers find the sentence just as acceptable as (9b): *Ils ont parlé à Marie et la directrice*. Locatives are also restricted to coordinated elements that are neither headed by *le* nor *les*: **Tu vas aller à Rio de Janeiro et les îles Caïmans*. The differences in (9) can therefore be attributed to the fact that *à*

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is phonologically weak; it can only coordinate DPs whose determines does not elide with the preposition *à*. In other words, the examples in (9) show no evidence of a categorial difference between dative *à* and the *à* corresponding to neuter and locative IOs.

With respect to the similar behaviour of dative IOs and accusative DPs in (8), this can be better understood in light of the fact that both are selected and coordinated under one VP while PPs headed by more lexical prepositions like *sur* are circumstantials. That is to say that they are adjuncts, lexicalised or otherwise, positioned outside of the VP. The coordinated internal arguments in (8b,c) denote the unified object of one event of speaking or seeing. On the other hand, two circumstantial complements coordinated as PPs are not restricted to denoting a single event; (8a) can refer to two separate events of counting on someone. A relative pronoun can clearly only refer to two or more participants if they are internal arguments, coordinated as a group under a single event. Again, the examples in (8) do not provide any evidence for the DP status of dative IOs.

Jaeggli (1982) also presents a set of examples from Perlmutter (1972) in order to show that quantifiers cannot be floated from prepositional phrases and neuter *à*-DPs in which the object of the preposition has been relativised (11a,b). This is claimed to contrast with dative *à*-DPs and simple DP complements (11c,d).

(11) a. *Ces femmes, avec qui j'ai parlé avec toutes, ...
b. *Ces femmes, à qui j'ai pensé à toutes, ...
c. Ces femmes, à qui j'ai parlé à toutes, ...
d. Ces femmes, que j'ai toutes vues, ...

What Jaeggli doesn't mention, however, is that examples like (11c) are considered to be ungrammatical or rarely accepted in Kayne (1975: 105) where in fact, they are used to argue for dative *à* as a preposition in the syntax. Our informants confirm Kayne's analysis, finding (11c) to be just as ungrammatical as (11a,b). Moreover, although Herslund (1988) accepts the contrast between (11a,b) and (11c), he notes that there is also a clear difference between (11c) and (11d): quantifier raising is blocked when *toutes* is preceded by *à*:

(12) *Ces femmes, à qui j'ai *à toutes* parlé, ... (Herslund, 1988: 318)

If *à* were not a head, but an inflectional case-marker, then one would expect the quantifier in (11c) to be able to undergo the raising operation available to these kinds of quantifier phrases, but this is evidently not the case – presumably because [*à toutes* e] is a PP.

Finally, Herslund points out that datives obey the A/A principle. If datives were really DPs, we would expect the extraction of a PP from a dative *à*-DP phrase to yield a grammatical utterance, yet this is not so. While extraction is possible out of a direct object DP in (13), it is impossible out of the neuter PP in (14) and the dative in (15) (examples from Herslund, 1988: 46).

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(13) a. Claude a tué [DP la belle-mère *de Simone*]
b. *De qui* Claude a-t-il tué [DP la belle-mère *e*] ?
(14) a. Claude a pensé [PP à la belle-mère *de Simone*]
b. **De qui* Claude a-t-il pensé [PP à la belle-mère *e*] ?
(15) a. Claude a plu [PP à la belle-mère *de Simone*]
b. **De qui* Claude a-t-il plu [PP à la belle-mère *e*] ?

The ungrammaticality of (14) and (15) can naturally be attributed to the PP status of both the neuter and the dative arguments.

In sum, there is no clear evidence that dative *à* behaves any differently, structurally speaking, than locative or neuter *à,* or lexical prepositions for that matter. Apparent differences can be attributed to the weak phonological form of *à* and the fact that datives, like DOs, are merged within the VP. Our analysis therefore treats all IOs as PPs.

2.1.3 Typology of thematic indirect objects

This paper adopts in part the classification of dative complements in Melis (1996) by grouping verbs taking thematic IOs in terms of their valency (trivalent or bivalent). We then consider them further according to the verb's tendency to express a dynamic or stative event and further still by commonly held meanings.

IOs occurring with trivalent verbs fall into two main groups: dynamic verbs of transfer of possession, information or location (16a,b,c), and stative verbs of comparison (16d). Although epistemic dative constructions are sometimes treated as constructions containing non-thematic IOs, we include them here as well (16e).

(16) a. Bill a remis les clefs *au concierge.*
b. Bill a annoncé son départ *au conseil.*
c. Bill a conduit son père *à l'aéroport.*
d. Jean préfère les pâtes *au riz.*
e. Je *lui* croyais une maîtresse dans chaque port. (Ruwet, 1982: 172)

IOs occurring with bivalent verbs also fall into two groups. The first consists of dynamic predicates: verbs of interaction (17a,b), of reflection (17c), and change of location verbs (17d). The second consists of stative predicates: locative verbs (17e), relation verbs (17f), and psych verbs (17g).

(17) a. Marie parle *à Bill.*
b. Marie renonce *à sa famille.*
c. Marc pense *à Sophie.*
d. Jean est allé *à Montréal.*
e. Bill habite *à Paris.*
f. Bill ressemble *à son père.*
g. Bill plaît *à Marie.*

2.2 Previous accounts

This section discusses several previous proposals for a unified representation of indirect objects in French. They build on the intuition that there is a fundamental

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relationship between the indirect and the direct object, although the nature of this relationship varies from author to author and some IOs consistently resist a unified analysis.

2.2.1 *Trivalent verbs*

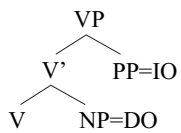
Trivalent verbs have been shown to capture, in the most transparent way, a special relation between the IO and the DO. IOs of trivalent verbs require the overt presence of a DO (18a, 19a), but the reverse is not necessarily true (18b, 19b).

(18) a. As-tu remis *(les clefs) *au concierge?*
b. As-tu remis les clefs (*au concierge*)?

(19) a. Il a annoncé *(son départ) *au conseil* mais personne ne lui prêtait attention.
b. Il a annoncé son départ (*au conseil*) mais personne ne lui prêtait attention.

Another way to see this, is to say that the IO is dependant on the presence of a DO. Herslund proposes the structure in (20) to illustrate this dependency for trivalent verbs denoting transfer of possession and communication (*donner, abandonner*, *communiquer*, etc.).

(20)



(simplified from Herslund, 1988: 34)

Here, the IO must merge with the constituent [$_{V'}$V NP] and appears to be dependent on the presence of a DO, while the DO merges with the verb independently of the IO.

Melis (2004: 168) also argues for a unified syntactic analysis of dative objects: 'il s'agit donc d'une forme que prend un nominal sous certaines conditions syntaxiques [. . .]'. Structurally, his claim is very much like Herslund's in (20) whereby the dative is in a hierarchical relationship with another nominal element and occupies a higher position in the structure. He further proposes that the IO forms a semantic relationship with this other nominal which itself is closely linked to the verb. An anonymous reviewer pointed out that semantic scope could be invoked to determine hierarchical relations. However, due to the general freedom in the relative ordering of DO and IO complements in French along with the binding and scope facts exemplified in Anagnostopoulou (2005: 100–101), initial hierarchical relations cannot be determined in this way.

Melis claims that this relation holds equally for stative trivalent verbs like *comparer* and *préférer* which establish a comparison between the DO and the IO. He argues that the DO is more closely linked to the verb, being the object of comparison, while the IO represents the general property under comparison. As the following example shows, the object of comparison (*le goût du secret*) is co-referential with the DO (21a) but not with the IO (21b).

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(21) a. Ils t'ont comparé *à Gudule* pour ton goût du secret.
b. *Ils t'ont comparé *à Gudule* pour son goût du secret. (Melis, 2004: 175)

These IOs also show the same strict dependency of the IO on the DO in the following (a) examples, but as the (b) examples show, the reverse is not necessarily true. The DO of *préférer* is able to appear without an IO, yet that of *comparer* cannot. The variability in the (b) examples indicates how the necessary presence of an IO is determined by the particular lexical semantics of the verb. In contrast, the dependency of the IO on the DO in the (a) examples is systematic and, as argued here, structural.

(22) a. Jean préfère *(les pâtes) *au riz*.
b. Jean préfère les pâtes (*au riz*).
(23) a. Ils comparent *(Gontran) *à Gonzague.*
b. Ils comparent Gontran *(*à Gonzague*).

Melis further points out that for trivalent verbs, there are few exceptions to the dependency of the IO on the DO, *écrire*, *donner* and *répondre* being the most common. He argues however, that the absence of an explicit DO nevertheless implies its presence as a null object. The stereotypical meaning of the null object is recovered from the context. In (24), it would be something like *une lettre* or *un message*.

(24) Le problème n'est toujours pas résolu, mais j'écrirai __ *au ministère*. (Melis, 2004: 172)

Epistemic dative IOs such as those occurring with verbs like *croire, trouver, imaginer,* etc. are also dependent on the presence of a DO, but unlike most trivalent verbs, the dependency that holds between the IO and the DO is mutual, as in (25b,c).

(25) a. Je *lui* croyais plus de talent. (Van Peteghem, 2006: 106)
b. *Je *lui* croyais.
c. *Je croyais plus de talent.

Van Peteghem (2006) suggests a standard small clause analysis for these constructions, in which the IO merges as the subject and the DP as the predicate of the relation.

2.2.2 *Bivalent verbs*

Melis shows that his claim also applies to stative bivalent verbs like *ressembler* since they too imply a hierarchical relationship, except here it is between the IO and the subject. Much like the trivalent verb *comparer*, the IO represents the general property under comparison, while the subject is the *object* of comparison. The following example shows that the object of comparison (*le goût du secret*) is co-referential with the subject (26a) but not with the IO (26b).

(26) a. Tu ressembles *à Gudule* par ton goût du secret.
b. *Tu ressembles *à Gudule* par son goût du secret. (Melis, 2004: 175)

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Melis's hypothesis is thus maintained in that the subject is closely linked to the predicate (like a DO would be) while the IO is simply a point of reference for the comparison.

Elaborating on the hypothesis put forward in Melis (2004), Van Peteghem aims to provide new evidence for her claim that all datives are structural cases assigned to the second internal argument: 'Dans la grande majorité des cas la présence du datif n'est [. . .] pas possible sans celle d'un autre argument interne dans le VP [. . .]' (Van Peteghem, 2006: 93). For instance, her treatment of verbs of happening, psych verbs and bivalent relational verbs draws on generativist analyses which argue that many non-agentive, non-causer subjects are not true external subjects, but are in fact underlying objects. Levin and Rappaport (1995) are cited for unaccusative verbs of happening (*advenir, apparaître, arriver*, etc.) and Belletti and Rizzi (1988) for psych verbs (*plaire, nuire*, etc.).

No satisfactory analysis, however, has been offered by Herslund, Melis or Van Peteghem for dynamic verbs of interaction and reflection such as *parler, résister* and *penser*. There are two main reasons for this. First, these verbs do not select an argument with which the IO is in a grammatical relation such as the implicit DO for *écrire* in (24). Second, the subjects of these verbs are agentive, external arguments, shown in (27), with which the IO has no semantic relation and therefore no parallel can be drawn with verbs like *ressembler arriver* and *plaire*.

(27) Pierre ment/cause/sourit/ intentionnellement *à son directeur*. (Melis, 2004: 175)

Herslund suggests that these are essentially unergative verbs, meaning that the IO is not selected by the verb and is thus not relevant to his general proposal. For Melis and Van Peteghem, they remain idiosyncratic cases, verbs that lexically assign their dative argument. In other words, these datives would not enter into a structural relation with a nominal element, but rather would merge directly with the verb.

Furthermore, since these three authors concentrate on dative arguments, IOs that have clearly locative functions, such as those in (17d,e), were not integrated into the analyses.

2.2.3 Summary

Table 1 summarises the IOs under investigation and provides a few examples of verbs with which they occur. The third column indicates if previous studies have established a dependency relation between the IO and either the DO or the subject.

Based on our review of the literature in this section, the general intuition is that indirect objects are structurally dependant on a direct object. This has remained an intuition for several reasons: first, although the studies outlined above show how this holds for many dative arguments, verbs of interaction and reflection seem to escape the generalisation; second, locative IOs have not been incorporated into the analyses; and third, although the notion of a structural relation is argued for in each case, there has been little in the way of what it might actually look like.

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Table 1

	Examples	dependency
Trivalent		
transfer	offrir, remettre, annoncer, écrire	√
location	conduire	√
relation	préférer, comparer	√
epistemic	trouver, croire, imaginer	√
Bivalent		
interaction	parler, mentir, sourire, résister, renoncer	x
reflection	penser	x
change of location	arriver, aller	x
locative	habiter, vivre	x
relation	appartenir, ressembler	√
psych	plaire, nuire	√

2.3 Generalisation

We would like to pursue the generalisation described in 2.2, as stated below:

(28) There is no thematic IO without a DO.

Let us examine the status of this generalisation. Ideally, it should remain a simple descriptive observation to be derived from more fundamental properties of grammars rather than a stipulation. To explore this reasoning, we start out from the assumption that the most basic operation in grammar is Merge as defined in Chomsky (1995). This operation is responsible for the recursive property of natural languages; Fitch, Hauser and Chomsky (2002). Any constituent can enter into an argumenthood relation with a head by merging to it in as much as this constituent satisfies the selectional properties of that head. Therefore, the structure in (29) represents the simplest possibility for an IO to associate with a V; here the IO is formed by Merge operations before itself merging with V.

(29)



However, the configuration in (29) somehow seems to be blocked in French as stated descriptively in (28). This possibility must therefore be excluded.

One way of interpreting the generalisation in (28) is to approach it from the point of view of the need for the internal argument represented by the IO to associate to V. If it were the sole argument of the verb we would expect it to merge directly with V and surface as a DP (a DO). Therefore, the realisation of the argument as a PP indicates that the association with V is not the result of a direct merge operation to V. This leaves two possibilities: the IO either merges to V as part of a larger structure, or there must already be an element in the complement position of the

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verb and the IO must get around this DO to establish its link to V. As a result, the DO and IO appear to be structurally linked.

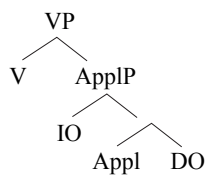
In what follows, we show that even when there is no explicit DO, there is nevertheless an underlying DO on which every IO is dependent. For thematic IOs, we attribute this constraint to a structural restriction in French imposed on the concatenation of nominal elements in the VP.

3 THE SYNTAX OF THEMATIC IOS

In light of the generalisation in (28) and the structure in (29) which we assume to be ruled out for French, there are five logical possibilities for the association of an IO in the VP. This section discusses the merits of each one.

The focus of much recent discussion concerning the syntax of indirect objects has been to characterise datives as non-core arguments, additional arguments that can be applied to events or individuals and which receive their case independently. This was first formalised in Marantz (1993) for datives of interest and later developed in Pylkkänen (2002) and Cuervo (2003) for both thematic and non-thematic datives. Pylkkänen and Cuervo argue that certain dative arguments are applied within the VP where they enter into a semantic relation with the DO. The dative is not selected by the verb and merges with the VP as in (30).

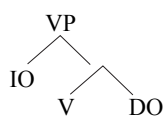
(30)



The low applicative phrase does not however apply in a straightforward way to trivalent constructions in French. This structure was originally proposed to account for double object and possessor dative constructions in languages like English, Finnish and Spanish, but French trivalent verbs do not show any convincing evidence of conforming to a double object construction. In fact, Oehrle's contexts appear to be the only test that leads Anagnostopoulou (2005: 101) to suggest that French may have a double object construction. Furthermore, the low applicative structure would only account for certain dative IOs in trivalent contexts. Even if it were shown that the configuration in (30) is a reasonable analysis of some dative arguments, we would still need a representation that can account for all other IOs in trivalent contexts. We will thus not pursue the structure in (30).

Another logical trivalent configuration would be in (31), proposed in Chomsky (1981) and, as we saw earlier in (20), in Herslund (1988).

(31)

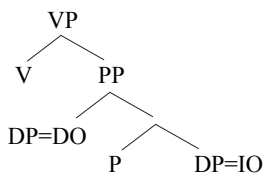


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Since the IO merges with the [V DO] constituent, the structure preserves the intuition that the basic selectional relation is held between the verb and the DO and that the IO is external to it. Nevertheless, there are some problems associated with (31). First, this construction does not seem to reflect the intuition that trivalent verbs select relations. For instance, *communiquer* describes two things, at once a relation (the IO receives information denoted by the DO), and the manner in which this relation is brought about. The structure in (31) would describe *communiquer* as primarily a creation verb (like *préparer un gâteau*), not a verb that selects a relation. The IO in Spec,VP would be interpreted as the subject-like recipient of the message, but only incidentally. Moreover, Hill and Roberge (2006) have argued independently that the Spec,VP position is related to the licensing of the DO, in which case the IO would not be able to merge in this position. We will not pursue this structure either.

IOs of trivalent verbs have also been represented as the complement of the preposition *à* which, with the DO in its specifier, establishes a relation between the two internal objects. This kind of structure has been proposed in Hale and Keyser (1993, 2002) for a number of different languages:

(32)

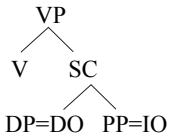


The configuration in (32) holds significant interest since it describes a verbal predicate that selects a relation as a complement. The relation is mediated by the preposition *à* and is brought about by an external subject and as such, the verb can be seen as a lexical causative. In such a relation, both the DP and the IO are equally necessary but because the prepositional head is semantically selected by the verb, it, along with its complement, can be understood implicitly, and under certain conditions can be realised as a null argument. The DO in the specifier position, however, has a different status. A null argument in this position should not be permitted since the DO is semantically selected neither by the verb nor by the preposition and would therefore remain unidentified. Moreover, as the logical subject of the relation, we expect its presence to be required. This describes precisely the dependency relation observed for French trivalent verbs. We note that (32) is reminiscent of the VP shell proposed in Larson (1988) and for the purposes of this paper, Larson's model could very well be adopted to represent French trivalent verbs. We have chosen the Hale and Keyser model as it illustrates in the most transparent way, in our minds, the idea that trivalent verbs select a relation in which the IO is included.

A fourth possibility is to represent the DO and the IO as the two elements that form a small clause (Williams, 1975):

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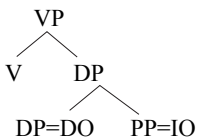
(33)



Small clauses in French associate an entity with a property. They are analogous to sentences predicated by the verbs BE or HAVE, except with a small clause, the predicate is a category other than a VP. Both elements are equally necessary in a small clause configuration. This structure has been suggested in Ruwet (1982), Jones (1996: 72–74) and Van Peteghem (2006: 106), among others, to represent epistemic dative constructions in French. We adopt their analysis.

Finally, a PP can be merged as an adjunct with the direct object, as in (34). This is a relation in which a PP (in our case an IO) modifies a DP (the DO). The merger of the two does not produce a new constituent label, but instead preserves the label of the DP.

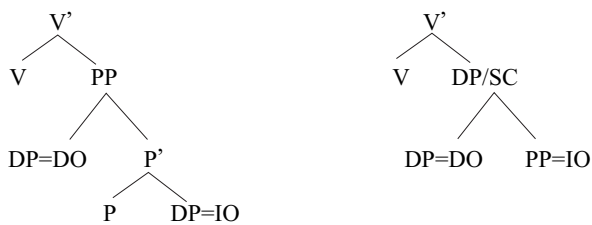
(34)



Note that in this configuration, the verb does not select a relation, but rather a simple DO. As such, the IO is strictly dependant on the DO while the inverse is not true. Although the structure in (34) may not appear to correspond to any of the verbs we have discussed so far, if one accepts the possibility that the DO is not phonologically realised, it is a good candidate to represent the problematic bivalent verbs of interaction and reflection.

Excluding the constructions in (30) and (31), we are left with two basic structures which correspond to the French facts. One structure links the two internal arguments asymmetrically, the other symmetrically.

(35) a. Asymmetrical b. Symmetrical



In (35a), the verb selects a relation and P serves to mediate this relation between the IO and the DO. The asymmetrical nature of this relation makes it interpretable at the interfaces; Kayne (1994), Di Sciullo (1999). In (35b), the verb can either select a relation (SC) in which the DO and the IO enter into a predication relation, or it can simply select a DP, in which case the IO modifies the DO. In

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section 3.2.3 it will be shown that the DP in (35b) systematically moves out of its merge position, be it to conflate with the verbal head or for case theoretic reasons. As a result, symmetry is broken; Moro (2000). Whether the PP is left or right adjoined thus becomes irrelevant.

3.1 Trivalent

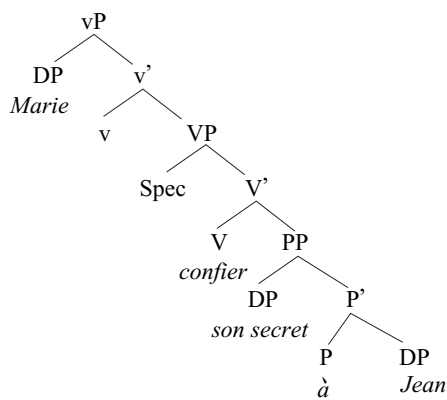
Trivalent verbs select a relation which is most often explicit, but for which, under the right conditions, the IO can be implicit. Verbs which occur in trivalent constructions often select for relations of (abstract) transfer of possession between the DO and the IO, while others select a relation of comparison, and still others one of association. The preposition *à* permits all such relations. A non-exhaustive list is given in (36) and some examples are provided in (37).

(36) abandonner, attribuer, adresser, apporter, allouer, confier, céder, conférer, destiner, donner, distribuer, infliger, lancer, léguer, envoyer, expédier, jeter, offrir, porter, prescrire, renvoyer, retourner, remettre, rendre, arracher, dissimuler, enlever, épargner, interdire, ôter, retirer, susciter, voler, annoncer, apprendre, commander, communiquer, confesser, demander, dire, jurer, montrer, prouver, rappeler, répondre, crier, chuchoter, murmurer, hurler, souffler, assimiler, comparer, confronter, opposer, préférer, subordonner, substituer, adjoindre, associer, jumeler, juxtaposer, unir, etc.

(37) a. Marie a confié son secret *à Jean*.
b. Il a attribué la solution *à un autre chercheur.*
c. J'ai lancé la balle *à Marie.*
d. Il a crié des injures *à son ennemi*.
e. Jean préfère les pâtes *au riz*.
f. Le média a tendance à associer le mouvement d'extrême-droite *au terrorisme*.

In such cases, the corresponding basic structure would be the one in (35a). Note that this result is in line with a minimal tree approach such as the one presented in Di Sciullo (2005), where a minimal tree is defined as containing exactly one head, one specifier, and one complement.

(38)



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It is important to mention that the list in (36) includes some verbs that are traditionally classified as unergatives (*crier*, *chuchoter*, *hurler*, *murmurer*, *souffler*). Trivalent constructions are only possible with unergative verbs whose semantics are compatible with one of abstract transfer of possession, i.e. verbs of manner of communication.

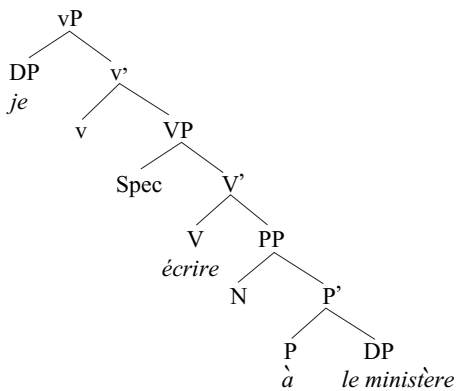
Since the verbs in (36) select a relation, the IO cannot appear without the DO, as predicted by the construction.

(39) a. *Marie a confié *à Jean*.
b. *Il a attribué *à un autre chercheur*.
c. *J'ai lancé *à Marie*.
d. *Il a crié *à son ennemi*.[3]
e. *Jean préfère *au riz*.
f. *Le média a tendance à associer *au terrorisme*.

As pointed out by an anonymous reviewer, transitive verbs such as *rédiger* can also appear in trivalent constructions. Since a transfer of possession relation is forced in these cases, all elements of the relation must be lexical as in (39) (i.e. **Je rédigerai au ministère*).

Finally, culturally specific cases such as (24) repeated below are only superficially problematic and do not constitute exceptions to (28) if we agree with Melis that they include a null object. Recent proposals by Cummins and Roberge (2005) to treat this null object as a null cognate object are fully compatible with this view. The structure in (35a) applies.

(40) Le problème n'est toujours pas résolu, mais j'écrirai __ *au ministère*. (Melis, 2004: 172)

(41)


[3] The sentence in (39d) is crucially different from numerous examples that can be found in which a 'heavy' DO is extraposed or with *discours rapporté*:
i. Le travailleur expérimenté **a crié à** l'apprenti de sortir en courant.
ii. Le plus grand **a crié à** son endroit: Que fais-tu ici, petit?

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3.1.1 Epistemic datives

Assuming a standard small clause analysis for epistemic dative constructions, the dative argument is considered here to be thematic within the small clause predicate. Epistemic verbs, or verbs of belief, select a predication relation in which the IO is the subject and the DO the predicate. Crucially, the meaning of the epistemic construction does not correspond to the trivalent structures in (35a), (38) and (41); epistemic verbs do not select a relation between two individuals, but rather introduce an associative relation between an individual and an abstract property. A non-exhaustive list is given below and some examples follow (all from Ruwet, 1982).

(42) accorder, assurer, concevoir, contester, croire, découvrir, décréter, deviner, imaginer, inventer, postuler, prédire, pressentir, prétendre, présumer, prévoir, proclamer, promettre, reconnaître, refuser, souhaiter, soupçonner, subodorer, supposer, trouver, voir, vouloir, etc.

(43) a. Je *lui* trouve beaucoup de charme.
b. Le médecin prévoit une issue fatale *à cette maladie*.
c. Je *lui* imagine de nobles qualités.

We do not, however, attribute a small clause analysis to all constructions that may appear to be of the epistemic dative type, as some verbs of belief can easily fade into transfer of possession constructions (*donner, attribuer*, etc.). For instance, in (44a) the verb *reconnaître* expresses a belief that is held about someone, while in (44b) it conveys an action on the part of the government. The sense is that the government has given the workers the right to strike.

(44) a. On *lui* reconnaît un grand respect pour les institutions établies.
b. Le gouvernement a reconnu le droit de grève *à ces ouvriers*. (Ruwet, 1982: 175)

Based on its meaning, the example in (44b) would seem to be derived from the trivalent structure described in (35a) and (38), rather than from a small clause predicate. One way of confirming such an analysis would be to suppress the IO from both examples. In the right context, (44b) should be acceptable with an implicit IO whereas the small clause should not allow it. This prediction is born out in (45), confirming that indeed epistemic dative constructions differ structurally from verbs of transfer and that one verb, depending on the context, may be compatible with one or the other construction.

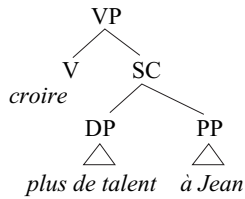
(45) a. On reconnaît un grand respect pour les institutions établies *(à ce vieux monsieur).
b. Le gouvernement reconnaît le droit de grève (aux ouvriers) depuis 30 ans.

Returning to the generalization in (28), it is confirmed in the case of epistemic dative constructions since the small clause predicts a mutual dependency between the IO and the DO, shown earlier in (25). Finally, the sentences in (43) and (44a) would be derived from the simplified construction below. Note that the subject

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of the small clause moves out of its base position for case checking requirements, breaking symmetry.

(46)



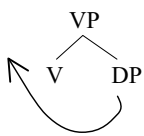
3.2 Bivalent

This section begins by discussing two influential ideas that posit the underlying presence of a direct object position for verbs which have been traditionally considered as intransitive: namely, unaccusative and unergative verbs. These developments provide us with the necessary theoretical tools in order to explain the generalisation in (28) since bivalent verbs that take IOs rarely show any obvious evidence of the presence of a DO.

3.2.1 A theory of direct objects

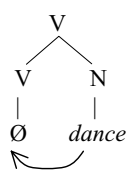
One of the most significant discoveries of the 1970s and early 1980s was Perlmutter's Unaccusativity Hypothesis (1978) which maintains that not all intransitive verbs are derived from the same underlying structure. His idea was that the subject of certain intransitive verbs is really an underlying object. This applied directly to French unaccusative verbs such as *aller, arriver, venir, monter*, etc. The hypothesis was later extended to psych verbs in Belletti and Rizzi (1988) and to internally caused change of state constructions in French, in Labelle (1992). Although the syntactic details can vary, there is a general consensus that certain non-agentive, non-causer subjects are initially merged as an internal argument before raising to the grammatical subject position:

(47)



The second major development was made by Hale and Keyser (1987) who advanced a proposal that unergative verbs like *danser, mentir* and *rire* were covertly transitive in languages like English, where a cognate object incorporates into a causative light verb (later called conflation).

(48)



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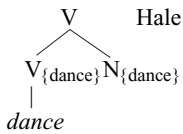
The representation in (48) was motivated in part by the large number of languages for which typical unergative verbs are underived and thus formed by an overt light verb 'do' and a noun, such as 'dance'. Their proposal was further motivated under the bare phrase structure model (Chomsky, 1995), as it maintained structurally distinct forms for unergatives and unaccusatives. An incorporation model of unergatives accounts for verbs which do not, in any context, allow the presence of a cognate object – presumably because that position has already been filled.

In later work, Hale and Keyser (2002) recognised that many unergative verbs naturally appear with a cognate object, as in (49), but that the representation in (48) would rule these cases out.

(49) a. Bill a dansé (une danse latino) pour nous.
b. Paul a souri (son beau sourire).

In order to account for such occurrences, they revised their earlier proposal by suggesting that the unergative verb enters into a relation with a phonologically null N complement as in (50). This relation is one of classificatory licensing whereby 'the verb identifies the complement to some sufficient extent' (Hale & Keyser, 2002: 92). Although this is meant to be a lexical derivation, their models have since been adapted to syntactic computation: Dobrovie-Sorin (1998), Harley (2002), Roberge (2002). Hyponymy is the basic selectional relation and notated with braced indices.

(50) Hale and Keyser (2002: 93)



This configuration offers the desired result in that it allows the verb *danser*, for instance, to be used alone or to appear with a cognate or near cognate object. Although Hale and Keyser (2002) argue that the configuration in (50) better represents unergatives than (48), the facts discussed in this paper suggest that both are necessary – but not for the same verb. It is shown in section 3.2.3 that verbs like *mentir* are compatible with (46) whereas *sourire* is better represented by (50).

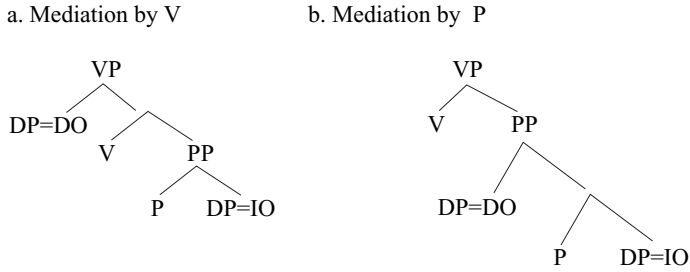
To conclude, there is a growing consensus among various independent researchers that verbs hitherto considered intransitive have in fact an obligatory object position in the syntax. For unaccusatives, the object becomes the grammatical subject, and for unergatives, the object either incorporates to become the verbal form itself, or it is selected as an optionally realised cognate object. The following sections apply these theories to the bivalent constructions discussed earlier.

3.2.2 Unaccusatives

Unaccusative verbs, or verbs whose direct object becomes the grammatical subject, are best represented by an asymmetrical structure of the (35a) type. Such verbs can be divided into two groups according to the head that mediates the relation between the DO and the IO: V or P. Mediation by V denotes locative constructions whereas mediation by P represents abstract relations.

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(51)



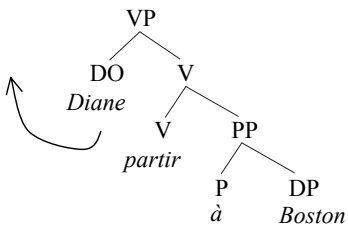
3.2.2.1 Change of location verbs. For change of location verbs such as those in (52), the IO is optional and the sole obligatory argument is the superficial subject. No lexical DO is possible. The relation expressed by these verbs applies to the IO and the subject. Some examples are given in (53).

(52) aller, arriver, descendre, entrer, monter, partir, parvenir, retourner, sortir, tomber, venir, advenir, apparaître, etc.

(53) a. Michelle est allée *à Paris.*
b. Diane est partie *à Boston.*
c. Sophie est revenue *à la maison.*

The generalisation in (28) applies trivially if we assume the traditional unaccusative analysis of these verbs (Perlmutter, 1978; Burzio, 1986), according to which the superficial subject is an underlying DO theme. The following structure is proposed:

(54)



In (28), we made the provisional observation that direct merge between V and an IO appeared to be ruled out for French. This observation is maintained, with the exception of verbs that select for a location, which follows directly, we claim, from the properties of *à* as a weak localising preposition (Ruwet, 1982; Vandeloise, 1991). This means that *à* cannot license its complement independently; it simply identifies the DP as a reference point. The IO can only be licensed by the construction in which it appears. Interestingly, these licensing constructions are limited to those in which the thematic *à*-DP merges with a nominal element which is consequently localised in some general sense. We suggest that only in cases where the verb selects for a location (change of location and locative verbs) can the *à*-DP merge as the verb's complement. In these cases, the verb's selectional properties license the IO.

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These verbs then mediate the localisation of the DP in specifier position. The structure in (54) illustrates this relation.

3.2.2.2 Locative verbs. We also suggest that locative verbs such as those in (55) and (56) be represented by the same structure proposed for change of location verbs. The relationship between the underlying DO and the IO is exactly the same except in this case, the PP must be pronounced to maintain the stative relation between two elements. Change of location verbs may allow an implicit PP because directionality presupposes a destination.

(55) demeurer, habiter, résider, rester, vivre, etc.

(56) a. Il demeure **(au 45 rue d'Ulm)*.
b. Le médecin lui a conseillé de rester **(au lit)*.
c. Ils vivent **(à Montréal)*.

Like change of location verbs, locative verbs pass a number of classic unaccusative tests, such as allowing *en* cliticisation with respect to the subject since *en* relates to an element within the VP (57). Locatives can also appear as non-finite sentential complements with relative clauses. The latter constructions are difficult but acceptable with typical unaccusatives but definitely out with unergatives, as shown in (58a,b) (examples adapted from Labelle, 1992: 384). Crucially, locative verbs show the same contrast (58c), patterning more like unaccusatives than unergative verbs.

(57) a. Il en *est* déjà *arrivé* plusieurs à la fête.
b. Il en *habite/vit* beaucoup à Montréal.

(58) a. ?L'homme que je croyais *être arrivé/parti* en retard est en fait arrivé/parti très tôt.
b. *L'homme que je croyais *avoir téléphoné/toussé* n'était pas en fait, celui que j'ai vu dans le train.
c. ?L'homme que je croyais *avoir habité* à Montréal, a en fait habité à New York.

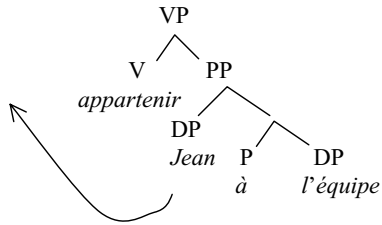
3.2.2.3 Relation verbs. The IO of relation verbs, in (59) and (60), also enters into a relation with the subject, yet the verbs involved do not belong to the class traditionally defined as unaccusative. Nevertheless, a 'derived subject' analysis seems to produce the right results. For these verbs, we propose that P mediates between the DO and the IO.

(59) appartenir, correspondre, manquer, ressembler, etc.

(60) a. Jean appartient *à l'équipe*.
b. Une touche de majesté manque *à ce building*.
c. Bill ressemble *à son père*.

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(61)



The structure in (61) is much like that proposed for trivalent verbs in that P relates *Jean* to *l'équipe*. However, because the lexical content of the verb *appartenir* denotes a relation of belonging and describes a state, the possibility of an external subject is excluded. Moreover, unlike some trivalents, the IO is not optional. Recall that this same difference was observed between change of location and locative verbs.

In addition to Melis's (2004) insights, empirical facts seem to support the derived nature of these subjects. First, the verbs in (59) cannot appear with a DO independently of the subject. This suggests, in the context of stative relation verbs, that no such position is available.

(62) a. *Jean appartient *ce contrat* à l'équipe.
b. *Une touche de majesté manque *quelque chose* à ce building.
c. *Bill ressemble *sa mine* à son père.

Second, as with unaccusatives, many of these verbs can be used in impersonal constructions. The DO is then often heavy and extraposed.

(63) a. Il appartient à l'équipe *de faire signer un contrat à ce joueur.*
b. Il incombe au gouvernement *de prendre les mesures nécessaires*.
c. Il manque à ce building *une touche de majesté*.

Third, the grammatical subject of some relational verbs patterns like the derived subject of unaccusative verbs in constructions with non-finite sentential complements with relative clauses. Again, the important point here is the contrast: Like (64a), (64c) is more acceptable than the same construction in (64b) containing an unergative verb.

(64) a. ?L''homme que je croyais *être arrivé* en retard, est en fait arrivé très en avance.
b. *L'homme que je croyais *avoir téléphoné/toussé* n'était pas en fait, celui que j'ai vu dans le train.
c. ?L'homme que tu croyais *avoir appartenu à l'équipe de foot* est en fait pianiste.

3.2.2.4 Psych verbs. Psych verbs, or dative object experiencer verbs, generally denote states describing the grammatical subject. The dative IO is optional and refers to the individual who is in some way affected by the state. Some of these verbs are listed in (65) followed by a few examples.

(65) (dé)plaire, nuire, peser, agréer, convenir, importer, profiter, répugner, suffire, tarder, etc.

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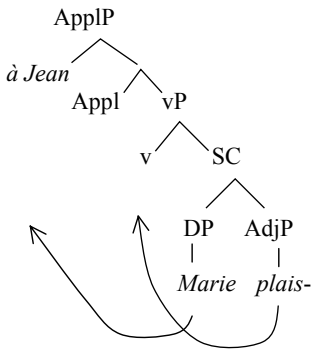
(66) a. Le tabac nuit (*à la santé*)
b. La robe bleu (*lui*) plaît toujours.
c. Les sentiments des autres (*lui*) importent très peu.

Van Peteghem has suggested that the subject of psych verbs in French should be understood as derived from an underlying object, as first proposed in Belletti and Rizzi (1988). Indeed, the diagnostic test in (67) from Burzio (1986) confirms the analysis. The *faire* causative construction licenses the external subject *me*, in (67a), but not the derived subject, in (67b). The generalization in (28) is thus maintained.

(67) a. La robe bleue *m*'a fait penser à Pierre.
b. *La robe bleue *m*'a fait plaire/nuire à Pierre.

Assuming the subject of psych verbs is initially merged in the complement position of the verb, the second participant, the IO, must merge elsewhere. We propose the analysis in Cuervo (2003) in which the grammatical subject merges as the logical subject of a stative predicate. The dative experiencer is external to this predication relation, licensed above the verbal constituent in the specifier of a null applicative head. The following structure would apply for *Marie plaît à Jean*.[4]

(68)



We note that most derived subject analyses would be suitable for the purposes of maintaining the generalisation in (28). The crucial point is that the structure predicts an obligatory DP in the complement of the verb and an optional IO merged elsewhere.

3.2.3 Unergatives

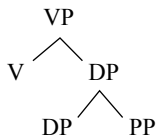
Bivalent verbs with thematic IOs such as verbs of interaction and reflection neither mediate nor semantically select a relation. They are therefore not represented by

[4] Evidence has been presented for both Italian (Belletti & Rizzi, 1988) and Spanish (Cuervo, 2003) that the dative argument asymmetrically c-commands the theme (subject). As French does not allow the dative argument to raise to subject position, these facts cannot be confirmed.

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the structure in (35a). Rather, the IO adjoins in a symmetrical relation to modify the DO:

(69)



In order to account for the lack of an overt DO, Hale and Keyser (1993; 2002) offer two solutions: conflation of a bare nominal element into the verbal head as in (48), or a direct object position occupied by a null or overt cognate object, as in (50).

Verbs of interaction and of reflection, in (70), are best represented by the conflation model given that the IO of these verbs denotes a goal towards which the action is directed. The structure in (69) represents this by relating the bare noun, which becomes the verb itself, to the IO. The construction correctly predicts that these verbs will not allow the presence of an overt DO since this position is filled by the trace of a bare nominal element (71).

(70) parler, obéir, mentir, remédier, renoncer, résister, penser, réfléchir, songer, rêver, etc.[5]

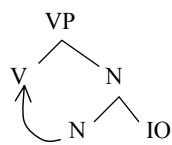
(71) a. *Jean ment souvent *des choses* à ses amis.
b. *Il pense *un souvenir* à ses vacances.
c. *Paul a obéi *une tâche* aux ordres.

Moreover, the IO is optional with these verbs, further justifying the application of the structure in (69).[6]

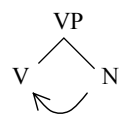
(72) a. Jean a menti (*à son ami*).
b. Marie pense (*à ses vacances*).
c. Bill a obéi (*au colonel*).
d. Les joints ont-ils résisté (*à la chaleur*)? (Labelle, 1992: 382)

The structure in (73a) represents these verbs when an IO is merged to the cognate N, while that in (73b) derives the basic form of the verb.

(73) a.



b.



[5] Psych verbs used in non-stative contexts could be easily represented by the structure in (69).
(i) Jean a fait tout son possible pour lui nuire.

[6] An application of one of the tests given in (4) and (5) supports this conclusion.
(i) *Jean est parti à Montréal et Anne en a fait autant à Toronto. (selected IO)
(ii) Jean a menti à sa femme et Anne en a fait autant à son mari. (adjunct)

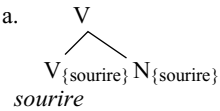
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Furthermore, some unergative verbs, like *sourire*, allow an overt cognate object with an optional IO:

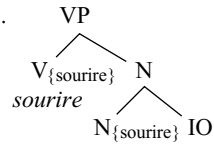
(74) Jean a sourit (son beau sourire) (*à Marie*).

Since the DO in this case is always a hyponym of the verb, the predicate should correspond to Hale and Keyser's proposal in (50) for unergative verbs like *dancer*. Without an IO or a DO, the internal structure of *sourire* would correspond to (75a). When it simply appears with an IO, the IO adjoins to the null cognate object as in (75b). In cases where the cognate object is realised along with the IO, the structure in (75c) applies.

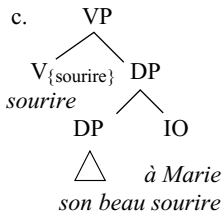
(75) a.



b.



c.



As stated for structure (35b), the complement of V includes constituents that are in a symmetric relation. It seems clear that the DO is targeted to move out of its base position, be it for conflation to occur (N) or for case theoretic reasons (DP).

Note that although unergative verbs such as *danser* and *rire* also derive from a null cognate object, they are not compatible with a thematic IO. We attribute this fact to lexical differences between interaction verbs and canonical unergatives; the latter simply do not express the type of relation described by the structure in (69). When one speaks, lies or thinks, there can always be an implicit or explicit goal towards which that action is directed, yet this is clearly not the case in an event of dancing or laughing.

3.2.4 Conclusion to section 3

In this section, we have shown that the generalisation in (28) holds for both trivalent and bivalent thematic IO arguments. Even when an overt DO is missing, current theory upholds that it is underlying. This was of particular importance for bivalent verbs for which the DO has been shown to become the subject, to become the verb form itself, or to remain a null cognate object. This generalisation was restated in structural terms, reasoning that in French, an *à* DP cannot merge as the complement of a verb, but was slightly modified in section 3.2.2 for change of location and locative verbs.

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4 CONCLUSION

Our goal in this paper was to formally account for the generalisation in (28) that all *à*-DP indirect objects in French must occur with a direct object. Current syntactic theory, namely the converging consensus that all so-called intransitive verbs have an internal nominal argument, has clearly resolved previous exceptions to the generalisation and shown that the transitivity restriction on thematic IOs is structural. To account for the French facts, we posited that a verb cannot merge directly with an IO. This appears to hold for all cases save change of location and locative verbs. It was proposed that the restriction on a [V IO] constituent is the consequence of licensing restrictions on *à*.

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