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### Building complex events: the case of Sicilian Doubly Inflected Construction

Fabio Del Prete, Giuseppina Todaro (CNRS laboratory CLLE-ERSS, Toulouse)

Abstract We examine the *Doubly Inflected Construction* of Sicilian (DIC; Cardinaletti and Giusti 2001, 2003, Cruschina 2013), in which a motion verb V1 from a restricted set is followed by an event verb V2 and both verbs are inflected for the same person and tense features. The interpretation of DIC involves a complex event which behaves as a single, integrated event by linguistic tests. Based on data drawn from different sources, we argue that DIC is an asymmetrical serial verb construction (Aikhenvald 2006). We propose an analysis of DIC in which V1 and V2 enter the semantic composition as lexical verbs, with V1 contributing a motion event and projecting a theme and a goal argument which are identified, respectively, with an agent and a location argument projected by V2. A morphosyntactic mechanism of feature-spread requires that the person and tense features be realized both on V1 and on V2, while, semantically, these features are interpreted only once, in a position from which they take scope over the complex predicate resulting from the combination of V1 and V2. The semantic analysis is based on an operation of event concatenation, defined over spatio-temporally contiguous events which share specific participants, and is implemented in a neo-Davidsonian framework (Parsons 1990).

**Keywords** Doubly Inflected Construction; Serial verb constructions; Motion verbs; Inflectional features; Thematic structure; Event semantics

## 1. Introduction

This paper focuses on a verbal construction of Sicilian—a Romance language mainly spoken on the island of Sicily—with the general structure [V1 a V2], where V1 can be one of the motion verbs *iri* 'go', *vèniri* 'come', *passari* 'pass', and *mannari* 'send', *a* is a connecting element, V2 is an event verb and V1 and V2 must be inflected for the same person and tense features. The construction is exemplified by (1a) and must be distinguished from the infinitival construction (1b), in which V1 is inflected and V2 is in the infinitive form:<sup>1</sup>

(1)	a.	Vaju	(*a	casa)	a	manciu	(a casa).
		go-1SG.PRS.IND	to	home	$a^2$	eat-1SG.PRS.IND	to home
		'I go eat at home.'					

<sup>&</sup>lt;sup>1</sup> Throughout this paper we use data from the variety of the western Sicilian province of Trapani, spoken natively by one of its two authors. The data come from three sources: the previous literature, the web, and a questionnaire that was administered to seven native speakers by one of the two authors. Notice that there are no generally accepted orthographic rules for Sicilian words. The writing conventions that we adopt are based in part on the previous linguistic literature.

<sup>&</sup>lt;sup>2</sup> We avoid glossing the connecting element a in order not to prejudge the issue of its categorial status. Even though this element is not discernible from the preposition a 'to' found in the infinitival construction, it has been shown to derive from the Latin coordinating particle ac 'and', while the preposition a 'to' derives from the Latin preposition ad 'towards' (Rohlfs 1969). We come back to this issue in section 3.6.1.

b.	Vaiu	(a casa)	а	manciari	(a	casa).
	go-1SG.PRS.IND	to home	to	eat-INF	to	home <sup>3</sup>
	'I go to eat at hom	e.'				

We shall follow Cruschina (2013) and call the construction in (1a) *Doubly Inflected Construction* (hereafter, DIC). As we shall see in detail below, reasons to tell (1a) and (1b) apart include the following:

- (a) it is possible in (1b), but not in (1a), to insert a lexical item (other than the connecting element *a*) between V1 and V2;
- (b) different event structures underlie the interpretation of (1a) and (1b)—the former can be shown to involve a complex event, making up a single event structure, while the latter involves reference to two independent events;
- (c) different modal properties characterize the two constructions—we shall argue that V2 occurs in an intensional context in the infinitival construction and in an extensional context in DIC.

Several authors have pointed out that there are similarities between DIC and Serial Verb Constructions (hereafter SVCs; Cardinaletti and Giusti 2001, Manzini and Savoia 2005, Cruschina 2013). Both DIC and SVCs are characterized by the following properties:

- (d) multiple verbs are connected to each other giving rise to an interpretation in which one single event is present;
- (e) sharing of arguments between the connected verbs occurs;
- (f) the connected verbs bear the same inflectional features.

Although there is no consensus on regarding DIC as an SVC—for instance, Cardinaletti and Giusti (2001) argue against such a view on the basis of a strict definition of SVC, which takes object sharing as criterial for seriality (Baker 1989)—alternative views on SVCs have been expressed more recently, which only demand that some argument or other be shared between the connected verbs (e.g. Aikhenvald 2006, 2011). We shall show that DIC displays argument sharing systematically: in most cases the shared arguments include the subject, as in (1a), but later on we shall focus on sentences with the causative motion verb *mannari* 'send', which display a different pattern of argument sharing.

The structure of the paper is as follows. In section 2 we present Cardinaletti and Giusti's (2001, 2003) analysis of DIC as a monoclausal structure involving a complex predicate which refers to a single event, recalling the core morphosyntactic and semantic evidence discussed by the authors. Section 3 provides new empirical data which challenge some aspects of Cardinaletti and Giusti's analysis. It further focuses on properties that DIC shares with SVCs and argues that DIC is a contiguous asymmetrical SVC with concordant marking of inflectional features (Aikhenvald 2006). Section 4 is devoted to the formal analysis of DIC: in section 4.1 we examine Landman's (2008) semantic analysis of serial verb clusters in Dutch and German and present a tentative extension of it to DIC; our theory, casted in a neo-Davidsonian event framework, is presented in section 4.2, in which we propose that V1 and V2 are both lexical verbs which combine through an operation of Event Concatenation to form a complex event structure. The Event Concatenation analysis accounts for the thematic structural properties of the complex predicate

<sup>&</sup>lt;sup>3</sup> The abbreviations in the glosses throughout the paper are as follows:

SG = singular, PL = plural, 1/2/3 = first/second/third person, PRS = present, IND = indicative, INF = infinitive, IMPF = imperfect, PST = past, PTCP = participle, CL = clitic, LOC = locative, REFL = reflexive, M = masculin, F = feminin, DIM = diminutive, VIS = visual, OBJ = object.

[V1 a V2], which have been previously brought to light. Section 5 concludes by examining some implications of our proposal for the study of complex event descriptions and for the analysis of SVCs.<sup>4</sup>

## 2. Previous analyses: Cardinaletti and Giusti (2001, 2003)

In the first formal study devoted to the Sicilian construction (Cardinaletti and Giusti 2001, 2003; hereafter, C&G), Anna Cardinaletti and Giuliana Giusti examine DIC in a cross-linguistic perspective, taking into consideration data from Sicilian, American English and Swedish, in the context of a broader study aimed at analyzing verbal categories that lie between lexical and functional categories. As an instance of such 'semi-lexical' categories (to use their own term) in the languages that they consider, they examine the case of motion verbs in a particular 'inflected construction' (their own term for what we are calling DIC) that they contrast with the infinitival construction. The inflected construction can be illustrated for American English in (2a,b), which contrast with the infinitival construction in (2c):

- (2) a. I go buy bread.
  - b. I go and buy bread.
  - c. I go to buy bread.

From now on, we shall uniquely consider what C&G say of the inflected construction of Sicilian. First, we recall core syntactic evidence used by C&G to support the claim that DIC is monoclausal and that V1 and V2 form a single complex predicate (section 2.1). Then, we discuss data involving the frequency adverb *gnignornu* 'every day' that the authors use to show that DIC has a single event interpretation (section 2.2). After that, we report C&G's evidence in favor of the semi-lexical nature of V1 (section 2.3). Finally, we give C&G's analysis of the inflected construction (section 2.4).

Sornicola (1976: 68-69) and Cruschina (2013: 278-279) discuss these and similar DIC sentences, in which the verb *iri* is used to introduce an unexpected or surprising event—Cruschina (2013: 281) describes *iri* in such examples as an "emphatic past marker employed in narrative contexts". Although we agree with these authors on the desemanticization of the motion verb and its auxiliary-like status in examples of this kind, we note that the relevant use of the 'go' verb is something orthogonal to the question of the semantic composition of DIC—notice that this use is also possible in the infinitival construction of standard Italian, e.g.:

<sup>&</sup>lt;sup>4</sup> In this paper we will not have anything to say about such uses of DIC as exemplified in (i) and (ii) (Sornicola 1976, Cruschina 2013):

<sup>(</sup>i) Vaiu a ssientu iddu ci a sso mugghieri. ca fici stu tuortu a hear-1SG.PRS that he to-her-CL do-3SG.PST wife go-1SG.PRS this wrong to his 'I ended up hearing that he did such a wrong to his wife.'

<sup>(</sup>ii) Cuannu u vitti ca sunava nna banna, vaju a pruvu na gioia! when him-CL see-1SG.PST that play-3SG.IMPF in-the band go-1SG.PRS a feel-1SG.PRS a joy 'When I saw him play in the band, I ended up feeling such a joy!'

<sup>(</sup>iii) Vado a sapere che lui le ha fatto un torto così grave! go-1SG.PRS to know-INF that he to-her-CL have-3SG.PRS do-PTCP a wrong so serious 'I ended up knowing that he did such a serious wrong to her!'

## 2.1 Monoclausal structure

We start from inflectional features. DIC exhibits the following property: the person, tense and mood features on V1 and V2 must be the same—a property we shall call later on *Feature Matching*. This is shown in (3a,b) and (4a,b) for the tense features (Cardinaletti and Giusti 2001: 385):

(3)	a.	*Ìa	а	pigghiu	u	pani.
		Go-1SG.IMPF.IND	a	fetch-1SG.PRES.IND	the	bread
	b.	*Vaju		1 00	u	pani.
		go-1SG.PRES.IND	a	fetch-1SG.IMPF.IND	the	bread
(4)	a.	*Ìi		pigghiu	u	pani.
		Go-1SG.PAST.IND	a	fetch-1SG.PRES.INI	) the	bread
	b.	*Vaju		pigghiai	u	pani.
		go-1SG.PRES.IND	a	fetch-1SG.PAST.IND	the	bread

Sentences (3a,b) and (4a,b) are ungrammatical. An example showing that person features too must be the same is the following:

(5) \*Vaju a pigghia u pani. Go-**1**SG.PRS.IND a fetch-**3**SG.PRS.IND the bread

No linguistic element whatsoever (other than the connecting particle *a*) can be inserted between V1 and V2 in DIC, in particular, neither clitic pronouns nor quantifying elements can (Cardinaletti and Giusti 2001: 389-390). Let's consider clitics first. Clitics in Sicilian must obligatorily appear to the immediate left of the finite verb,<sup>5</sup> as in (6a), and to the immediate right of the non-finite verb, as in (6b):

(6)	a.	U	pani,	(lu)	accattu	(*lu)	rumani.
		the	bread	it-CL	buy-1SG.PRS.IND	it-CL	tomorrow
		'The	e bread,	I'll bu	y it tomorrow.'		

b. U pani, vaju a (\*lu) accatta- (llu) rumani.<sup>6</sup> the bread go-1SG.PRS.IND to it-CL buy-INF it-CL tomorrow 'The bread, I'll go to buy it tomorrow.'

(i) U pani, accàttalu rumani! the bread buy-2SG.IMP it-CL tomorrow

'The bread, buy it tomorrow!'

Here the clitic pronoun must appear to the immediate right of the finite verb.

- (i) U pani, lu vaju a accattari rumani.
  - the bread it-CL go-1SG.PRS.IND to buy-INF tomorrow 'The bread, I'll go to buy it tomorrow.'

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<sup>&</sup>lt;sup>5</sup> An exception to this rule is given by imperatives:

<sup>&</sup>lt;sup>6</sup> In (6b) there is also the option for the clitic to appear in front of the matrix finite verb (*clitic climbing*), as in (i):

In the DIC (7a), the clitic u 'it', which corresponds to the object of *pigghiu* 'eat', can appear to the immediate left of V1 but not to the immediate left of V2—in other words, it must obligatorily climb. This is in contrast with what is observed in the coordinate structure (7b), where the same clitic must appear in front of V2:

(7)	a.	(U) vaju a (*u) pigghiu. It-CL go-1SG a it-CL eat-1SG 'I'll go take it.'
	b.	(*U) vaju e (u) pigghiu. [Cardinaletti and Giusti 2003: 33] It-CL go-1SG and it-CL eat-1SG 'I'll go and I'll take it.'

Let's turn to quantifying elements. In (8a) the floating quantifier *tutti* 'all' must follow V2, and the same holds true of the frequency adverb *mai* 'never' in (8b). This is in contrast with what we observe in the infinitival constructions (8c,d), where the quantifying element can also appear immediately after V1:

(8)	a.	I picciotti vannu (*tutti) a pigghianu (tutti) u pani ne sta putìa. the boys go-3PL all a fetch-3PL all the bread in this shop 'The boys all go buy bread in this shop.'
	b.	Un vaju (*mai) a pigghiu (mai) u pani ne sta putia. not go-1SG never a fetch-1SG never the bread in this shop 'I never go buy bread in this shop.'
	c.	I picciotti vannu (tutti) a pigghiari (tutti) u pani ne sta putìa. the boys go-3PL all to fetch-INF all the bread in this shop 'The boys all go to buy bread in this shop.'
	d.	Un vaju (mai) a pigghiari (mai) u pani ne sta putìa. not go-1SG never to fetch-INF never the bread in this shop 'I never go to buy bread in this shop.'
(1967) (		r difference between DIC and coordinate structures is based on <i>wh</i> -extraction facts relating to Ross' <i>the Structure Constraint</i> . Consider (9a,b) (Cardinaletti and Giusti 2003: 33): <sup>7</sup>
$\langle \mathbf{O} \rangle$		

(9)	a.	Cu	soccu	vai	а	aggiusti	a	machina?
		With	what	go-2sg	а	fix-2sg	the	car
		'What	t do yoι	i go and :	fix t	he car with	n?'	

b. \*Cu soccu vai e aggiusti a machina? With what go-2sG and fix-2sG the car

In (9a), but not in (9b), we can extract the instrumental complement of V2 through the interrogative phrase *cu soccu* 'with what'. If *vai a aggiusti* in (9a) were a coordinate structure (analogously to *vai e aggiusti* in (9b)), the *wh*-extraction would result in an unacceptable sentence.

<sup>&</sup>lt;sup>7</sup> See also Manzini and Savoia (2005: 700-701) and Cruschina (2013: 268) on this point.

From the data in (3)-(9) C&G conclude that DIC has a different structure from coordinations and the infinitival construction. More precisely, they conclude that the verbs V1 and V2 in DIC behave as a single predicate heading a single clause.

## 2.2 Single event interpretation

On the semantic side, C&G argue that DIC has a single event interpretation, based on evidence coming from modification by the quantifying adverb *gnignornu* 'every day'.<sup>8</sup> They consider the following pair of discourses (Cardinaletti and Giusti 2001: 387):

- (10) a. Vaju a accattari a cicoria gnignornu, ma unn'a trovu mai. go-1SG to buy-INF the chicory everyday but not it-CL find-1SG never 'I go to buy chicory every day, but I never find it.'
  - b. \*Vaju a accattu a cicoria gnignornu, ma unn'a trovu mai. go-1SG a buy-1SG the chicory everyday but not it-CL find-1SG never

On the one hand, (10a) has a consistent reading, which can be rendered as 'On every day, I go to a contextually relevant place in order to buy chicory there, but I never find chicory there'. On the other hand, (10b) is inconsistent, in the same way as the English discourse *On every day, I go buy chicory, but I never find chicory* (see Shopen 1971, cited by C&G). C&G claim that *gnignornu* only modifies the motion verb in (10a), thus this discourse entails that an event of going occurs on every day, while it does not entail that an event of buying chicory occurs on every day; moreover, they claim that *gnignornu* modifies the whole predicate *vaju a accattu a cicoria* in (10b), thus this discourse entails that an event of buying chicory occurs on every day.<sup>9</sup> They conclude that the complex predicate *vaju a accattu a cicoria* refers to one single event. This event, to the best of our understanding of their argument, coincides with an event of buying chicory. In other terms, although the predicate *vaju a accattu a cicoria* appears to contain the motion verb *vaju*, its semantics, according to the authors, does not involve a motion event. We can thus reasonably conjecture that for C&G the unacceptability of (10b) has a structurally similar explanation as the unacceptability of (10b'):

(10) b'. \*Accattu a cicoria gnignornu, ma unn' a trovu mai. buy-1SG the chicory everyday but not it-CL find-1SG never 'I buy chicory every day, but I never find it.'

In section 3.3 we will come back to the contrast between (10a) and (10b) and suggest that, although it does indeed bear on a single event interpretation of DIC, the relevant sense of *single event* does not require that the complex predicate in a DIC only refer to an event of type V2, with V1 not referring to any distinct event. Moreover, we will see that the contrast in question bears on a difference between DIC and the infinitival construction pertaining to modality.

<sup>&</sup>lt;sup>8</sup> We note that this way to prove the single event interpretation of DIC is related to the definition of the so-called *Macro-Event Property* provided by Bohnemeyer et al. (2007), as discussed in section 3.6.4.

<sup>&</sup>lt;sup>9</sup> Contrasts similar to the one between (10a) and (10b) have been used by other scholars in the literature on Serial Verb Constructions to show that serial verbs refer to complex events *qua* unitary events (e.g., Bamgbose 1974: 18-19).

## 2.3 Semi-lexical behavior

C&G claim that the motion verb in the inflected construction has been partly desemanticized and displays a functional behavior. They do recognize that some aspect of its semantic content is still present in the interpretation of the sentence (specifically, they contrast the motion verbs in DIC with completely desemanticized motion verbs such as the French tense/aspect auxiliaries *aller* and *venir*—see section 3.1),<sup>10</sup> although this may seem at odds with their diagnosis of the contrast between (10a) and (10b).

The motion verbs in DICs are said to share the following properties with functional verbs:

- (a) they belong to a closed class,
- (b) they take a fix order with respect to the other verb in the construction,
- (c) they do not take arguments or adjuncts,
- (e) they do not introduce an event in the semantic interpretation.

## 2.3.1 Closed class

Only few verbs are allowed in the position of V1 in the construction under consideration—in the variety from Trapani's province considered by the authors, these verbs are *iri* 'go', *vèniri* 'come', *passari* 'pass', and *mannari* 'send'. C&G report that there is cross-linguistic variation as to what motion verbs are possible V1s. Their suggestion is that the weakest verbs *come* and *go* are allowed in all languages, while for the less weak verbs *pass by* and *send* (and they also mention the manner of motion verb *run*, which is found in the inflected construction in American English and Swedish) we find that some languages allow for some of them but not for others.<sup>11</sup>

## 2.3.2 Fix order

The motion verb in DIC must be on the left and the other event verb on the right. This order cannot be reversed, thus sentence (11b), obtained by commuting the order of V1 and V2 in the DIC (11a), is not acceptable:

(11)	a.	Vaju go-1SG 'I go fet	a	fetc	h-1SG	
	b.	*Pigghiu fetch-1S			L	vaju. go-1SG

We may add that the coordination *Pigghiu u pani e vaju* 'I fetch the bread and (then) I go' is an acceptable sentence, which provides further evidence for the non-coordinative nature of DIC.

<sup>&</sup>lt;sup>10</sup> C&G also consider the use of the Italian verbs *andare* 'go' and *venire* 'come' as passive and progressive auxiliaries as an instance of complete desemanticization of a motion verb. We believe however that the case of progressive uses of *andare* and *venire* might call for a more nuanced and scalar conception, based on varying degrees of grammaticalization. Indeed, from the point of view of the presence of a deictic motion component, it seems to us that *andare* and *venire*, in their progressive uses, might still retain the deictic aspects they have in their lexical uses (see Bertinetto 1989/1990).

<sup>&</sup>lt;sup>11</sup> C&G report that, at least in American English and Swedish, the inflected construction is also possible with V1s that are not motion verbs, e.g. *try* and *stay* in American English (e.g., *He'll try get a parking spot near the entrance*, from Shopen 1971: 255). In this paper we do not consider the question whether Sicilian DIC is possible with non-motion verbs in V1 (for possible realizations of the Sicilian DIC with non-motion verbs, e.g. the aspectual verb *accuminciari* 'to begin', see Di Caro 2014; also Di Caro and Giusti 2015 on the variety of Deliano).

#### 2.3.3 No arguments or adjuncts

To show that the arguments of V1 are not projected in DIC, C&G consider data with the directional preposition *agghiri* 'towards'. While *agghiri* can head a PP-argument of *iri* when this verb is used as a motion verb, as in (12a), the preposition cannot head a PP-argument of *iri* when the verb occurs in a DIC, as shown in (12b):

(12)	a.	Peppe	to	eat-INF	agghiri a towards to	
	b.	11			agghiri a towards to	

The authors remark that the case of the spatial PP  $a \ casa$  'to/at home' is different, as shown by the acceptability of their example (12c), which is a minimal variant of (12b):

(12) c. Peppe va a mancia a casa. Peppe go-3SG a eat-3SG at home 'Peppe goes to eat at home.'

The PP *a casa* features the preposition *a*, which is ambiguous between a directional ('towards') and a locative ('at') interpretation. Now, under its locative reading, *a casa* can felicitously modify the event verb in the position of V2, as shown by (13) (to be contrasted with \**Peppe mancia agghiri a casa* '\*Peppe eats towards home'):

(13) Peppe mancia a casa. Peppe eat-SG at home 'Peppe eats at home'

Hence—so the authors conclude—(12c) is acceptable as long as we can interpret the spatial PP as a locative modifier of V2 (while it would not be possible to interpret it as the directional argument of V1).

As further evidence supporting the functional behaviour of V1 in DIC, C&G consider the contrast in (14a,b), showing that the adjunct *c'a machina* 'by car' can felicitously modify the motion verb *iri* only in the infinitival construction, while in the DIC it gives rise to the odd implication that Peppe eats by car:

(14)	a.	Peppe va	a	manciari	c'	а	machina.
		Peppe go-3SG			with	the	e car
		'Peppe goes to	eat	by car.'			

b. \*Peppe va a mancia c' a machina. Peppe go-3SG a eat-3SG with the car

We will come back to the unacceptability of the directional argument *agghiri a casa* and the instrumental adjunct *c'a machina* in the DICs above in section 3.4.

#### 2.3.4 No motion event

As already discussed in section 2.2, C&G excludes that DIC involves reference to two events—a motion event  $e_1$  corresponding to V1 and another separate event  $e_2$  corresponding to V2—based on evidence coming from modification by the quantifying adverb *every day*, and they conclude that V1 and V2 refer to a single event. A straightforward consequence of this claim is that V1 does not contribute a separate motion event to the sentence meaning. This consequence is in line with C&G's contention that V1 is a functional-like verb in DIC. In the

foregoing we will see that DIC actually denotes a complex event (we will relate this property to Bonhemeyer & al.'s 2007 Macro-Event Property – see section 3.6.4 below). It will then become clear that to talk about a "single event" in C&G's sense does not help understanding the internal structure of the complex event in question. As we shall propose in section 4.2, a proper understanding of this internal structure requires a full-fledged event semantics analysis based on an operation of Event Concatenation.

## 2.4 C&G's analysis

To account for the properties reviewed in the previous sections, C&G propose that the motion verb V1 in a DIC is merged in a functional position in the extended projection of the lexical verb V2. They argue that merging of a lexical item  $\alpha$  in a functional position entails a (partial) loss of  $\alpha$ 's lexical properties. On the one hand, being the lexical head of the whole construction, V2 is claimed to be able to check its  $\varphi$ -features (person and tense) in a direct way. On the other hand, V1 is claimed to be merged higher in the structure than the inflectional features, as a consequence it is not able to check its  $\varphi$ -features in the same way as V2 does and it only checks them in a derivative way, namely through the head V2. On standard views about the relationship between feature-checking and interpretation (Cormack 1996, Cinque 1999), these assumptions imply that only the features on V2 are semantically interpreted, while those on V1 are a morphosyntactic reflex of V2's interpreted features.

Here, we first put forward a formalization of C&G's analysis, in order to be able next to present our argument in the clearest way possible. For the sake of formalization, we use the symbol " $\Phi$ " for the alleged functional position in which the motion verb is merged. To illustrate the analysis with a concrete example, let us consider the DIC in (15):

(15) Vaju a pigghiu u pani.'I go fetch the bread.'

This is syntactically analyzed as in (16), where the red and the blue arrows represent the direct relation of feature-checking, respectively:



(16)  $[_{IP}[pro] [_{\Phi P} [_{\Phi} vaju] [[_{1}1SG, PRES][_{VP2} [_{V2} pigghiu] [_{DP} u pani]]]]$ 

Only the feature-checking relation marked in red in (16) determines interpretability, not the derivative one marked in blue. This means that the 1SG feature is interpreted only on *pigghiu* in (15), hence the agent of *vaju a pigghiu u pani*—i.e., the person who fetches the bread—is predicted to be the speaker.

## **3.** A new take on the properties of DIC

In this section we consider new data and revisit old one with the aim to shed lights on core properties of DIC which, in our view, have not received due attention in the previous literature. By discussing these properties, we will pave the way to our formal analysis of DIC, to be presented in section 4.

#### 3.1 No grammaticalization of V1 as a tense/aspect marker

When V1 is one of the deictic motion verbs *iri* 'go' and *vèniri* 'come', it may appear plausible to regard it as having the status of a tense/aspect marker. Indeed, it is well-known that the verbs *go* and *come* are recruited for the encoding of future/past tense notions cross-linguistically. The case of French can be taken as an example. In this language, the

verbs *aller* 'go' and *venir* 'come' have both auxiliary uses as near future and recent past tense markers, respectively, as shown in (17a,b):

(17)	a.	Je vais	manger chez	moi.
		I go-1SG	eat-INF by	me
		'I'm going t	o eat at home.	

b. Je viens d' acheter ce livre. I come-1SG from buy-INF this book 'I've just bought this book.'

Notice that in such uses no restrictions are in place regarding the actional type of V2, in particular V2 can be a purely *stative* verb, as shown in (18a-d):

(18)	a.	Je vais être malade. I go-1SG be-INF sick 'I'm going to be sick.'
	b.	Je vais le savoir. I go-1SG it-CL know-INF 'I'm going to know it.'
	c.	Je viens d' avoir la fièvre. I come-1SG from have-INF the fever 'I've just had the fever.'
	d.	Je viens de le savoir. I come-1SG from it-CL know-INF 'I've just come to know it.'
	This is	s in striking contrast to what we find in DIC, in which a purely stative V2 is unacceptable:
(19)	a.	*Vaju a sugnu malato. [Accattoli and Todaro 2017] go-1SG a be-1SG sick
	b.	*U vaju a sacciu. it-CL go-1SG a know-1SG

- c. \*Vègnu a aiu a freve. come-1SG a have-1SG the fever
- d. \*U vègnu a sacciu. it-CL come-1SG a know-1SG

Sentences (19a-d) are plainly ungrammatical; in particular, they are not acceptable structures to express the meaning of the corresponding French sentences (18a-d).

Notice that motion verbs, in their lexical uses, are not compatible with purely stative complements, as shown by the contrast of acceptability between the following English examples:<sup>12</sup>

- (20) a. Mary went from home to the casino to win enough money to pay off her debts.
- b. John came from school to my house to pick up a book.
- (21) a. ?Mary went from home to the casino to have enough money to pay off her debts.
  - b. ?John came from school to my house to have a book with him

The infinitival complements in (20a,b) are *eventive*: the verb phrase in each of them denotes a certain kind of events and the whole sentence expresses that an instance  $e_2$  of this kind may have taken place in the location to which the motion event  $e_1$  was directed—the *goal* of the motion event—. Thus, in (20a), across the modal alternatives projected by Mary's intentions, the spatial location of the event  $e_2$  of Mary winning constantly overlaps with the casino, which is the goal of the event  $e_1$  of Mary going. Analogously, in (20b), across the worlds projected by John's intentions, the spatial location of the event  $e_2$  of John picking up the book constantly overlaps with the speaker's house, which is the goal of the event  $e_1$  of John coming. On the other hand, the infinitival complements in (21a,b) are *stative*: their verb phrases refer to a kind of states which, in normal cases, do not felicitously take locative complements.<sup>13</sup> This property is shown by the unacceptability of the locative adverbials in (22c,d), which contrasts with the acceptability of the same adverbials in (22a,b):

- (22) a. At the casino, Mary won enough money to pay off her debts.
  - b. John picked up a book at my house.
  - c. (?At the casino) Mary has enough money to pay off her debts.
  - d. John has a book with him (?at my house).

Since the states denoted by the infinitival complements in (21a,b) do not have a spatial location in the first place, *a fortiori* they do not have a spatial location that may overlap with the goal of the motion events denoted by the main clauses, thus they cannot be spatially related to those motion events in the same way as we saw  $e_2$  was spatially related to  $e_1$  in (20a,b). In other words, if *iri* and *vèniri* in DIC retain the thematic requirements they have in their uses as motion verbs, the ungrammaticality of (19a-d) is expected.<sup>14 15</sup>

\*Vaju a vaju n' campagna.

(i)

- go-1SG a go-1SG to countryside
- (Impossible reading: 'I'm going to go to the countryside.')

- (ii) Je vais aller à la campagne.
  - I go-1SG go-INF to the countryside
  - 'I'm going to go to the countryside.'

See Aurnague (2011) for a semantic account of the unacceptability of motion sentences similar to (i) in French.

<sup>15</sup> Building on the observation that the English progressive is incompatible with purely stative VPs (e.g., \**I am being sick*, \**She is not knowing what to do*), an anonymous reviewer suggests that if DIC were seen as a periphrastic construction with an aspectual meaning (i.e., andative/venitive, for V1 = iri/veniri), the ban against pure statives would be expected. This view, however, is not general enough: the andative/venitive aspectual classification does not

<sup>&</sup>lt;sup>12</sup> The point made here does not hinge on the choice of a particular language (Jackendoff 1990).

<sup>&</sup>lt;sup>13</sup> On the subject of locative modification of statives, see Maienborn 2008, Moltmann 2013, Ernst 2016, among others.

<sup>&</sup>lt;sup>14</sup> Other evidence bearing on the lexical status of the motion verb in DIC comes from the ungrammaticality of (i):

Notice that motion verbs used as auxiliaries clearly allow for two-verb constructions in which V1 and V2 appear to be the same verb. This is shown by the French sentence (ii) (and by its English translation as well):

One may note that there are in fact acceptable DICs featuring a stative V2, for example (23):

(23) Va a sta ni so soro picchì un avi casa. go-3SG a stand-3SG in his sister because not have-3SG home 'He goes to stay at his sister's because he has no home.'

However, stative predicates built with verbs like *stand* or verbs of body position and posture like *sit* have been known to fail crucial properties of prototypical stative predicates at least since Dowty (1979) (see the discussion of the "*sit-stand-lie*" class in Dowty 1979: 173-180). Notice that the stative verb *sta* in (23) *does* take a locative complement, which already shows that it behaves differently from *be sick* or *know the answer*.

The data considered in this section provide strong evidence that *iri* and *vèniri* (and, *a fortiori*, the other motion verbs that can appear as V1 in DIC) have their ordinary lexical semantics in the construction under consideration.

#### 3.2 Negative DICs

We now consider facts concerning negation of DIC. These show that, although DIC is monoclausal and has a single event interpretation, semantically it involves two event components.

Negation in DIC must precede the whole complex predicate [V1 a V2], thus appearing to take *syntactic* scope over the whole predicate. However, it need not take *semantic* scope over both components V1 and V2, but it can selectively associate with one or the other. Following previous research (Beaver and Clark 2008, among others), we assume that negation associates with a constituent  $\alpha$  via a focus placed on  $\alpha$  (indicated below by means of the notation "[ $_F \alpha$ ]"), commonly marked by prosody. The possibility for negation to take scope over V2, to the exclusion of V1, is shown in (24):

(24) Un vaju a [*<sub>F</sub>* curru], vaju a caminu. not go-1SG a run-1SG go-1SG a walk-1SG 'I'm not going to run, I'm going to walk.'

The negative sentence in (24) does not negate that the speaker is going somewhere to do something but rather that what the speaker is going to do is to run.<sup>16</sup>

Examples (25a,b) are more interesting for us in that they show the possibility for negation to take scope over the V1 component, to the exclusion of the V2 component:

(25) a. Un  $[_F$  va] a pigghia u pane iddru stesso, u manna a pigghia. not go-3SG a fetch-3SG the bread him self it-CL send-3SG a fetch-3SG 'He does not go to fetch the bread himself, he sends someone to fetch it.'

(i) Un vaju a [F astutu] a luci, a vaju a addumu. not go.1SG a turn-off the light it-CL go.1SG a turn-on 'I'm not going to turn off the light, I'm going to turn it on.'

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apply to DICs with *mannari* 'to send' or *passari* 'to pass by'; still, these pattern exactly like DICs with *iri* and *vèniri* with respect to the ban against pure statives.

<sup>&</sup>lt;sup>16</sup> An anonymous reviewer has pointed out that, since the focused verb in (24) is at the end of the negative sentence and this rightmost position is the default one for the assignment of the main prominence in Sicilian, it is problematic to test that the scope of negation in (24) is determined through a prosodically marked focus on *curru*. He/she has suggested the example in (i) as less ambiguous in this respect:

b.	Un	$[_F va]$	a	mancia	ddra,	vene	a	mancia	cà.
	not	go-3SG	a	eat-3SG	there	come-3SG	a	eat-3SG	here
'He does not go to eat there, he comes to eat here.'									

Discourse (25a) negates that the subject himself *goes* to fetch the bread (and affirms that he *sends* someone instead). A similar reasoning applies to (25b): the discourse negates that the subject *goes* to a certain location to eat (and affirms that he *comes* to the speaker's location instead). Since the event component which is negated in (25a,b) is a motion event (taken along with one of its participants, i.e., its theme in [25a] and its goal in [25b]), these examples provide evidence that V1 is interpreted as a lexical motion verb in DIC.<sup>17</sup>

## 3.3 Single event interpretation and modality

In section 2.2 we reviewed C&G's argument to support the claim that DIC has a single event interpretation. In this section we come back to this argument and reconsider the issue of the single event in more depth. In particular, we consider a further argument to exclude that the singularity of the event in DIC depends on V2 being the only verb contributing an event to the meaning of the sentence.

Consider the contrast in (10a,b) again:

(10)	a.	Vaju	a	accattari	a	cicoria	gnignornu,	ma	unn'	а	trovu	mai.
		go-1SG	to	buy-INF	the	chicory	everyday	but	not	it-CL	find-1SG	never
		'I go to buy chicory every day, but I never find it.'										

b. \*Vaju a accattu a cicoria gnignornu, ma unn'a trovu mai. go-1SG a buy-1SG the chicory everyday but not it-CL find-1SG never

We have seen that for C&G the inconsistency of (10b) has the same explanation as the inconsistency of (10b') (repeated below), namely, *vaju a accattu* just refers to an event of buying and, to put it roughly, the sentence to the left says that such an event occurs while the sentence to the right says that such an event does not occur.

(10)	b'.	*Accattu	a	cicoria	gnignornu,	ma	unn'	а	trovu	mai.
		buy-1sG	the	chicory	everyday	but	not	it-CL	find-1SG	never
		'I buy chico	cory every day, but I never find it.'							

Notice, however, that discourse (26) is also inconsistent, intuitively for similar reasons as discourse (10b):

(26) ?Vaju o mircato *e* accattu a cicoria gnignornu, ma unn'a trovu mai. go-1SG to-the market *and* buy-1SG the chicory everyday but not it-CL find-1SG never 'I go to the market *and* I buy chicory every day, but I never find it.'

<sup>&</sup>lt;sup>17</sup> As suggested by an anonymous reviewer, the contrast relations that are relevant for interpreting negation in (25a,b) may be activated by lexical oppositions (*iddru stessu* vs. the implicit indefinite object of *manna* in [25a], *ddra* vs. *ccà* in [25b]) rather than by a prosodically marked focus. Notice that this possibility would not undermine our argument: whether the semantic scope of negation is determined through a focus marked by prosody or some other mechanism, what uniquely matters is that negation can take scope over one of V1 and V2, to the exclusion of the other, at the semantic level.

Since (26) contains an overt coordination of two clauses, one referring to a motion event and one referring to an event of buying chicory, the fact that (26) is unacceptable shows that the unacceptability of (10b) does not depend on (10b)'s reference to a single event *of buying chicory*.

We remark that the contrast in (10a,b) also shows that DIC and the infinitival construction differ from one another with respect to their *modal* properties: on the one hand, the infinitival construction in (10a) is *intensional* with respect to V2, since it does not entail that a V2-event occurs on every day in the actual world but only that such an event occurs on every day in the possible worlds that are projected by the intentions of the subject (this can be seen by considering that the infinitival construction allows for a paraphrase making use of a purpose clause, i.e. *go in order to V2*); on the other hand, the DIC in (10b) is *extensional* with respect to V2, since it entails that a V2-event occurs on every day in the actual world.<sup>18, 19</sup> These properties are depicted in Fig. 1 and Fig. 2 below (Fig. 1 uses a Branching Time representation to emphasize the relevance of modal alternatives in the semantics of the infinitival construction; in the figures,  $w_0$  is the actual world,  $w_1$ ,  $w_2$ ,  $w_3$  are the possible worlds projected by the intentions of the subject,  $e_1$  is the motion event,  $e_2$  is the event described by V2).

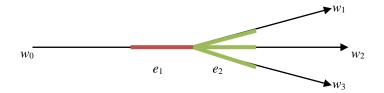


Fig. 1 Intensionality of the infinitival construction

- (i) ??Tous les jours je vais acheter de la chicorée au marché mais je n' en trouve all the days I go-1SG buy-INF of the chicory at-the market but I not of-that-CL find jamais.
   never
- (ii) Tous les jours je vais au marché pour acheter de la chicorée mais je n' en trouve all the days I go-1SG to-the market for buy-INF of the chicory but I not of-that-CL find jamais.
   never

'Every day I go to the market to buy chicory but I never find it.'

<sup>&</sup>lt;sup>18</sup> The distinction in question appears to correspond to the one found in French between (i) and (ii):

The French construction in (i) might have relevant properties in common with the Sicilian DIC with respect to single event interpretation and extensionality, while the one in (ii) might be closer to the Infinitival Construction (Philippe Schlenker, p.c.; thanks to Anne Condamine for her judgment). We leave a closer examination of this correspondence for future research.

<sup>&</sup>lt;sup>19</sup> Sornicola (1976) recognizes the purpose reading (what she calls *valore finale*) as a fundamental semantic value of the infinitival construction (*tipo ipotattico*), as distinct from the DIC (*tipo paratattico*). Regarding the DIC, she proposes as a tentative hypothesis that it might have acquired the purpose reading typical of the infinitival construction—her hypothesis is based on diachronical considerations about Southern Italian dialects that need not concern us here (Sornicola 1976: 70). In our view, however, her argument is not conclusive as to DIC having a purpose reading and rather bears on the different issue of the lexical status of V1 as a motion verb in DIC.

	-		
Wo			
	$e_1$	$e_2$	

Fig. 2 Extensionality of DIC

Summing up, the contrast in (10a,b) shows that the interpretation of the infinitival construction involves an event  $e_1$  (the motion event) which occurs in the actual world and another event  $e_2$  which only occurs in the possible worlds projected by the agent's intention, while the interpretation of the DIC involves a single event  $e^*$  occurring in the actual world. We'll see next that  $e^*$  is not just an event of the type described by the verb V2 but is best seen as the concatenation of a motion event and an immediately subsequent event of the type described by V2.

## 3.4 Back to agghiri and c'a machina

In section 2.3.3 we recalled a test involving the directional preposition *agghiri* ('toward') and the instrumental adverbial *c'a machina* ('by car') which has been used to argue that the motion verb in DIC does not project a goal (12b) or an instrumental role (14b) (we repeat the relevant examples here as (27) and (28), respectively):

(27)	*Peppe	va	а	mancia	aggł	niri	a casa. <sup>20</sup>
	Peppe	go-3SG	а	eat-3SG	towa	ards	home
	(Imposs	ible readir	ng: '	Peppe goe	s hon	ne to	eat.')
(28)	*Peppe	va	а	mancia	c'	a	machina.

Peppe go-3SG a eat-3SG with the car (Impossible reading: 'Peppe goes to eat by car.')

We now argue for a different interpretation of these data. Our claim is that the directional *agghiri a casa* and the instrumental *c'a machina* are bad in (27) and (28) not because V1 does not project a goal or an instrumental role in those sentences, but because these adverbials are (semantically or pragmatically) compatible with only one of V1 and V2 there. This partial compatibility is shown by the contrasts in (29) and (30):

- (29) a. Peppe va agghiri a casa. 'Peppe goes to his home.'
  - b. \*Peppe mancia agghiri a casa. 'Peppe eats to his home.'
- (30) a. Peppe va c'a machina. 'Peppe goes by car.'
  - b. \*Peppe mancia c'a machina. 'Peppe eats by car.'

<sup>&</sup>lt;sup>20</sup> Notice that *agghiri*, though being diachronically derived from Latin *ad ire* ('go towards'), which has a clearly directional meaning, has uses in synchrony as an approximative locative preposition (at least in some western varieties of Sicilian), similar to English *near* or *around*. For speakers accessing the locative interpretation of *agghiri*, example (27) may result acceptable, obtaining the reading 'I go eat near home' (Accattoli and Todaro 2017).

On the one hand, the pair in (29) shows that, in sentence (27), *agghiri a casa* is compatible with V1 (it is related to *va* 'goes' via the GOAL thematic relation) but incompatible with V2 (the thematic structure of *mancia* 'eats' does not allow for directionals). On the other hand, the pair in (30) shows that, in sentence (28), *c'a machina* is compatible with V1 (it is related to *va* via the INSTRUMENT thematic relation) but pragmatically incompatible with V2 (although *mancia* is in principle modifiable via instrumentals, it just so happens that a car is not the right instrument for an event of eating).

Now, there is evidence to assume the following condition (based on Accattoli and Todaro 2017):

## (31) Full Compatibility

A locative or instrumental adverbial in a DIC is acceptable only if it is compatible with both verb components VI and V2.

Positive evidence in support of Full Compatibility comes from (32a) (= [12c]) and (32b) (adapted from Cruschina 2013):

(32)	a.	11	va go-3SG goes to eat at	a e	a at	casa. home	
	b.	Peppe	u va him-CL go goes to pick h	0-3SG	1 00	c' G wit	machina. car

Concerning (32a), we observe that the locative adverbial *a casa* is compatible both with *va* (if taken in its directional reading 'towards home') and with *mancia* (if taken in its stative reading 'at home'). This is shown in (33a,b), where *a casa* is related to the verbal head via the thematic relation GOAL in (33a) and via LOCATION in (33b):<sup>21</sup>

- (33) a. Peppe va a casa. 'Peppe goes to his home.'
  - b. Peppe mancia a casa. 'Peppe eats at his home.'

Concerning (32b), we observe that the instrumental adverbial c'a machina 'by car' is compatible both with va and with *pigghia* 'pick up'. This is shown in (34a,b), where the adverbial is related to both verbs via the same thematic relation in this case, that is, INSTRUMENT:

- (34) a. Peppe va c'a machina. 'Peppe goes by car.'
  - b. Peppe u pigghia c'a machina. 'Peppe picks him up by car.'

(i) I [talked to] without [actually meeting] everyone in the committee.

<sup>&</sup>lt;sup>21</sup> We note in passing that the fact that one and the same constituent may bear more than one thematic role is observed in Right Node Raising structures, e.g. (i) (from Wilder 1997):

What DIC has in common with these structures is that some element (i.e., the locative adverbial *a casa* in (32a)) is shared by multiple verbal heads.

In (35) we give a piece of negative evidence for the condition of Full Compatibility showing that partial compatibility with V2, to the exclusion of V1, likewise produces an unacceptable DIC:

(35) ?Peppe va a mancia c' a furchetta. Peppe go-3SG a eat-3SG with the fork

The instrumental c'a furchetta 'with a fork' is compatible with mancia but, crucially, not with va, as shown in (36a,b):

- (36) a. ?Peppe va c'a furchetta. 'Peppe goes with a fork.'
  - b. Peppe mancia c'a furchetta. 'Peppe eats with a fork.'

The adverbial *c'a furchetta* is related to the verb in (36a,b) via the INSTRUMENT relation. Since, pragmatically, a fork is a possible instrument for an event of eating but not the right sort of instrument for an event of going, (36b) turns out to be acceptable but (36a) is unacceptable.

As will become clear when we give our formal analysis (section 4.2), our idea is that V1 in DIC is a motion verb associated with its full thematic structure, including in particular a goal argument. We will then propose that the goal of V1 is identified with the location of V2 via an operation of Event Concatenation, defined in section 4.2.1; this goal/location can be referred to via spatial adverbials which, *prima facie*, may seem to be locative modifiers of V2 alone but are actually related to both verb components via distinct thematic functions. The interaction between Event Concatenation and Full Compatibility will be understood as follows: as long as there is no overt adverbial in the sentence referring to the goal of V1 or the location of V2, these two thematic arguments are identified via Event Concatenation; however, if the sentence contains an overt adverbial that expresses the goal argument of V1, Full Compatibility has to be checked before Event Concatenation, requiring that the morphosyntactic form of this adverbial be also compatible with expressing the location argument of V2.

## 3.5 DICs with the causative motion verb mannari

We now consider previously neglected DICs with the causative motion verb *mannari* 'send', focusing on two aspects of such sentences: (i) the apparent non-projection of the direct object of *mannari* and (ii) a clash between morphosyntax and semantics, due to the property of featural concord (Feature Matching) reviewed in section 2.1.

Starting from the first aspect, we observe that *mannari* is a ditransitive motion verb. For example, in the infinitival construction (37a) the clitic pronoun *ti* 'you' is the direct object of *manna*, realizing the theme argument of the event of sending, while the PP *o mircatu* 'to the market' is the indirect object of this verb, realizing the goal argument of the event of sending; accordingly, the sentence receives the interpretation that Peppe sends the addressee to the market to fetch the bread. However, the direct object of *mannari* does not seem to project in DIC, as suggested by the interpretive contrast between (37a) and the corresponding DIC (37b):

(37)	a.	Peppe ti	manna	0	mircatu	а	pigghiari	u	pani.
		Peppe 2SG.CL	send-3SG	to-the	market	to	fetch-INF	the	bread
'Peppe sends you to the market to fet					fetch the b	read	1.'		

Peppe ti manna a pigghia u pani o mircatu.
 Peppe 2SG.CL send-3SG a fetch-3SG the bread to-the market
 'Peppe sends someone to the market to fetch the bread for you.'
 [Impossible reading: 'Peppe sends you to the market to fetch the bread.']

In (37b) the clitic *ti* cannot be the object of *manna* but must be understood as the beneficiary argument of *pigghia u pani*, thus the sentence receives the different interpretation that Peppe sends someone to the market to fetch the bread for the addressee.

The impossibility of encoding the object of *mannari* in DIC is confirmed by the contrast of grammaticality between the DICs (38a) and (38b), which only differ from one another in that the 3SG clitic pronoun is feminine in the former but masculine in the latter:

(38)	a.	Ti	la	manna	а	dici	sta	cosa.
		2SG.CL	3SG.CL.F	send-3SG	а	say-3SG	this	thing-F
		'He/she s	ends someor	ne to say this	thi	ng to you.'		
		[Impossil	ole reading: '	He/she send	s he	r to say thi	is thir	ng to you.']
	b.	*Ti	lu	manna	а	dici	sta	cosa.
		2SG.CL	3SG.CL.M	send-3SG	а	say-3SG	this	thing-F

[Impossible reading: 'He/she sends him to say this thing to you.']

The only possible reading of (38a) is one in which the feminine clitic *la* co-refers with the feminine object *sta cosa* 'this thing' of the verb *dici* 'say'—this sentence does not have a reading in which *la* refers to the person who is sent. Indeed, the minimally different (38b), in which the clitic *lu* is masculine, is not grammatical: on the one hand, we cannot construe *lu* as co-referring with the object of *dici* in this case, since the two NPs differ in gender features; on the other hand, there are no other interpretive possibilities for this clitic.

We now turn to the second aspect of DICs with *mannari* that was mentioned above. Consider sentence (39):

(39) Mannu a pigghiu u pani. send-1SG a fetch-1SG the bread 'I send someone to fetch the bread.'

Notice that, by the property of Feature Matching, the 1SG person feature on V1 (*mannari*) in (39) must also show up on V2 (*pigghiari*). The interpretation of (39) is that the speaker sends *some other person* to fetch the bread. In other terms, in spite of V2 being inflected for 1SG person, the person who fetches the bread is not the speaker. This is most clearly shown by embedding (39) in discourse (40), which is a perfectly consistent sequence:

 (40) Un mannu a pigghiu u pani, u pigghiu iu. Not send-1SG a fetch-1SG the bread it fetch-1SG I
 'I do not send anyone to fetch the bread, I fetch it myself.'

We emphasize that this clash between morphosyntax and semantics in DICs with *mannari* raises a problem for a syntactic analysis which, like C&G's analysis, assumes that V2 is the head of the construction and as such has interpreted features while V1 has uninterpreted features that are checked derivatively. For concreteness, consider the syntactic analysis which (39) would receive on C&G's account, given in (41) (as in section 2.4, a red arrow represents the direct relation of feature-checking and a blue arrow the derivative relation):



(41)  $[IP[pro] [\Phi P [\Phi mannu] [[I1SG, PRES][VP2 [V2 pigghiu] [DP u pani]]]]]$ 

As we explained in section 2.4, the feature-checking relations here are such that the 1SG feature is interpreted only on *pigghiu*. Hence, C&G's analysis predicts that the agent of *pigghiu* is the speaker. However, the intuitive interpretation of this example clearly shows that the 1SG feature is interpreted only on *mannu*.<sup>22</sup>

One might take the behavior of *mannari* described as the first aspect as further evidence (converging with the one reviewed in section 2.3.3) for the claim that motion verbs in DIC do not retain the full thematic structure characterizing their lexical uses—hence, possibly, as further evidence for the special status of V1 as an auxiliary verb in DIC. Notice, however, that *mannari* has semantic features that make it particularly interesting for a study of DIC aiming at empirical comprehensiveness: this verb is clearly more contentful than the other deictic motion verbs that can appear in this construction (especially *iri* and *vèniri*, whose counterparts in unrelated languages are known to undergo grammaticalization) and it more obviously retains its lexical meaning in the relevant examples—this is shown in particular by examples (25a) and (38a) above. This meaning crucially includes the projection of a theme participant, as the translations provided above make clear. Thus, the case of *mannari* rather provides fresh reasons to resist the general conclusion of the auxiliary-like status of V1 in DIC. The question to be addressed is just why the theme of *mannari* cannot be syntactically realized in DIC, in spite of being underlyingly present in the semantic interpretation. We come back to this question at the end of section 4.2.3, which provides a detailed analysis of a DIC with *mannari*.

## 3.6 Properties shared with Serial Verb Constructions

In her typological work on SVCs (Aikhenvald 2006, 2011), Alexandra Aikhenvald defines the SVC as "a grammatical technique whereby two or more verbs form one predicate" and classifies SVCs as belonging to one or

<sup>&</sup>lt;sup>22</sup> The property of DICs with *mannari* described here is not a quirk of Sicilian but is an instance of a general phenomenon attested across typologically diverse languages. In her work on Serial Verb Constructions (SVCs), Aikhenvald (2006) discusses this phenomenon for the Niger-Congo language Akan (spoken in Ghana) and the Arawakan language Tariana (spoken in Amazonas, Brazil) under the general heading "Concordant Marking of Different Underlying Subjects". She reports that the single verb components of a SVC may have different underlying subjects which acquire the same surface marking (Aikhenvald 2006: 40) and she gives the following examples:

(i)	Mede	aburow	migu	msum.
	take-1SG	corn	flow-1SG	water.in
	'I pour co	orn into v	vater (lit. [	I pour (corn)]-[I flow (in water)]).'

[Akan; from Schächter 1974]

[Tariana]

(ii) Emite-tiki nu-na dihpani di-adeta-naka.
 child-DIM 1SG-OBJ 3SG.M+work 3SG.M-prevent-PRES.VIS
 'The little boy is preventing me from working.'

Concerning (i), the two verb components of the SVC, *take* and *flow*, have different underlying subjects (*I* and *corn* respectively), but they receive the same surface subject marker, that is, the 1SG person feature is present on both verbs. As for (ii), although the subject of *prevent* is the 3SG noun *child*, and the subject of *work* is the 1SG *I*, the whole SVC takes third person singular cross-referencing. These examples are interesting for us as they show that morphosyntactic markers of person may have multiple realizations in certain constructions, not all of which are semantically interpreted, hence they help putting the Sicilian data in a broader typological perspective.

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the other of two broad groups: asymmetrical SVCs and symmetrical SVCs. Asymmetrical SVCs consist of a minor verb from a closed class (possibly a class of motion verbs), and a major verb from an open class, which is seen as the head of the SVC and determines whether the whole construction is transitive or intransitive. Cross-linguistically and diachronically, the minor verbs tend to grammaticalize into markers of direction, aspect, and valency changing. Symmetrical SVCs consist of components chosen from major lexical classes. SVCs may form one grammatical and/or phonological word, or be multi-word. In multiword SVCs, various grammatical categories can either receive concordant marking (on every component) or be marked just once. The person of the subject is more likely to receive concordant marking than any other category. Aikhenvald identifies some properties as criterial for the status of SVCs:

- (a) they are constructions containing no marker of syntactic dependency between the verb components;
- (b) they are distinct from idiomatic double verb sequences which have restrictions on their mood, tense and aspect choices;
- (c) they form one prosodic unit;
- (d) they describe what is conceptualized as one integrated situation, or one single event—such an event may be composed of a series of sub-events;
- (e) their verb components share arguments;
- (f) their verb components may bear the same inflectional features (concordant marking).

As we shall see next, DIC actually patterns as an SVC with respect to all the properties (a)-(f).

Before moving on, we note that other researchers before us have considered the possibility to analyze DIC as an SVC. Cardinaletti and Giusti (2001: 374) exclude this possibility on the basis of a narrow definition of SVC, going back to Baker (1989). Their argument is the following:

"the lack of object sharing between the two verbs excludes that the [DIC] is parallel to serial verb constructions (cf. Baker 1989; Lee 1992; Collins 1997 for recent discussion). This conclusion has been pointed out for American English by Baker (1989: 519, fn.3), Jaeggli and Hyams (1993: 322, fn.7) and Pollock (1994: 303, fn.19). The very same conclusion, we claim, holds for Marsalese and Swedish, since the [doubly] inflected construction of these languages also lacks object sharing."

It is generally agreed, though, that Baker's definition of SVC is overly restrictive and that a more flexible notion of argument sharing is needed if one is willing to look at the relevant constructions in a broader cross-linguistic perspective. Cruschina (2013) adopts a more vague stand on this issue. On the one hand, he recognizes (following Aikhenvald 2006) that object sharing is too strict a requirement for verb seriality. On the other hand, he says that he will "explore the hypothesis that Sicilian DIC may be treated as a serial verb construction" and that "such an analysis would be able to capture both its morphosyntactic and its semantic properties" but, due to some alleged difficulties that would be raised by the defectivity of the DIC's paradigm and by certain instances of DIC in which the motion verb *iri* is used as a narrative past tense marker, he abstains from drawing the clear-cut conclusion that DIC is an SVC.

## 3.6.1 No marker of syntactic dependency

The connecting element *a*, as we saw in section 2.1, does not mark any syntactic dependency, be it a coordination or other. Aikhenvald describes such kind of elements as *empty markers* and characterizes them as follows:

"An erstwhile marker of dependency between two verbs may lose it productivity, its meaning and gradually become an empty morpheme. The sequence of verbs containing such a semantically empty marker may have all the features of a serial verb construction. The marker itself no longer indicates a dependency relation - it is a pure and simple indicator of a serial verb." (Aikhenvald 2011: 21)

Notice moreover that, as pointed out by Cruschina (2013), in some varieties of Sicilian DICs do not have the connecting element a, so that in these varieties V1 and V2 are contiguous in the surface string. This is shown in (42) for Pantesco, a variety of Sicilian spoken on the island of Pantelleria:

(42) Vaju vidu. go-1SG see-1SG 'I go see (it).' [Cruschina 2013: 271]

Here the event verb occurs immediately after the motion verb and the interpretation of the sentence is the same as would be obtained for the full-fledged DIC *Vaju a vidu*.

#### 3.6.2 No idiomaticity

Although they are known to display a defective paradigm in some varieties (Cardinaletti and Giusti 2001, Cruschina 2013, Manzini and Savoia 2005),<sup>23</sup> it is clear that DICs differ from idiomatic constructions, whose meaning is completely frozen and non-compositional, and they are the result of productive morphosyntactic processes: indeed, they are attested in the indicative and imperative mood, in both the present and (imperfective and perfective) past tense in at least some varieties of Sicilian (Ascoli 1896, Sorrento 1950, Rohlfs 1969, Sornicola 1976, Leone 1995). While discussing the issue here would take us too far afield, we note that the problem of the defectivity of the paradigm is orthogonal to the serial verb status of DIC.<sup>24</sup>

#### 3.6.3 One prosodic unit

The property in (c) is particularly clear if one considers the possibility of DICs where the connecting element a is absent and V1 is immediately followed by V2 (as just seen in section 3.6.1). DICs with *iri* ('to go') as V1 have contracted forms in which V1 is phonologically reduced and is phonologically attached to V2; for example, for the DIC (43a) one finds the contracted form in (43b):

(43)	a.	Vaju a ffazzu a spisa. go-1SG a make-1SG the shopping
	b.	Vaffazzu a spisa. go+make-1SG the shopping 'I go shopping.'

Notice that the possibility of the contracted form rests on *vaju* and *fazzu* forming a prosodically unitary constituent in (43a).<sup>25</sup>

<sup>&</sup>lt;sup>23</sup> The configuration of the paradigm is also affected by great diatopical variation (see Di Caro and Giusti 2015 for an overview). Cardinaletti and Giusti (2001) put forward a suggestion to the effect that the defectivity of the paradigm would be related to the allomorphy of the motion verb. We leave this as an open problem.

<sup>&</sup>lt;sup>24</sup> We refer the reader to Cruschina (2013) for an in-depth analysis of the relevant data based on Maiden's (2004) concept of *N*-pattern configuration.

 $<sup>^{25}</sup>$  Accattoli and Todaro (2017) suggest that reduced forms with *iri* 'go' can be analyzed as a case of morphologization (Lehmann 2002) of V1 as an andative prefix (Nicolle 2007). We shall not discuss this issue any further in this paper.

### 3.6.4 One single event

DICs describe a single integrated event, which includes a motion event component (see section 2.2). This property is semantically the most important and it is also the most challenging to capture formally, since the notion of a 'single event' (or 'one integrated situation') is hard to define. There have been attempts to formalize this notion using the theoretical construct of a macro-event property (Talmy 2000, Bohnemeyer et al. 2007, Bohnemeyer et al. 2011), the central linguistic correlate of which is the impossibility for a temporal operator (time adverbial, temporal clause or tense) to modify only one of the composing sub-events to the exclusion of the other. Bohnemeyer et al. (2011: 48) defines this notion as follows:

## (44) Macro-Event Property (MEP)

An event-denoting construction has the MEP iff it combines only with those time-positional or durational operators [tenses, time adverbials, temporal clauses] that have scope over all subevents it entails.

The authors give the following pair of sentences from English to illustrate this property (Bohnemeyer et al. 2011: 47-48):

- (45) a. Floyd pushed the door open immediately / after a moment of breathless suspense.
  - b. Floyd pushed the door and it opened immediately / after a moment of breathless suspense.

They show that while the temporal operators *immediately* / *after a moment of breathless suspense* in (45a) modify the whole sequence  $e_1 + e_2$  of the event  $e_1$  of Floyd pushing the door and the event  $e_2$  of the door opening, with the sentence meaning that the sequence  $e_1 + e_2$  followed a contextually given event  $e^*$  by a certain temporal distance, the same operators in (45b) only modify the event  $e_2$  of the door opening, to the exclusion of the event  $e_1$  of Fred pushing the door, the meaning of the sentence being that  $e_2$  followed  $e_1$  by a certain temporal distance. Thus, their point is that the temporal operators in (45a) take necessarily scope over both event components, unlike what they do in (45b); accordingly, their conclusion is that the resultative construction in (45a) has the MEP.

DIC can be easily shown to have the MEP. Let's consider tense first. That DIC has the MEP is immediately clear from the property of featural concord discussed in section 2.1 above. In particular, we saw that the verb components in DIC necessarily bear the same tense/aspect features and are interpreted in the scope of the same tense/aspect operator. Turning to temporal adverbials/clauses, it is also easy to show that DIC has the MEP relative to this kind of temporal operators. Consider the following pair of sentences:

- a. ?Vaju a ppigghiu u picciriddro rumani ma mi lu runano vènnare.
   go-1SG a take-1SG the kid tomorrow but to-me him give-3PL Friday
   'I go pick up the kid tomorrow but they'll give him to me on Friday.'
  - b. Vaju a ppigghiari u picciriddro rumani ma mi lu runano vènnare. go-1SG to take-INF the kid tomorrow but to-me him give-3PL Friday 'I go to pick up the kid tomorrow but they'll give him to me on Friday.'

On the one hand, the temporal adverb *rumani* 'tomorrow' in (46a) refers to the whole predicate *vaju a ppigghiu* '(I) go pick up', as a consequence, the event of picking up the kid has to occur on the day denoted by *rumani* and continuing by saying that the kid will be picked up on Friday instead gives rise to oddness. On the other hand, *rumani* in (46b) can selectively scope over *vaju* '(I) go', to the exclusion of *pigghiari u picciriddro* 'to pick up the kid', as a consequence only the event of going has to occur on the day denoted by *rumani* and the continuation is fine.

## 3.6.5 Argument sharing

Turning to the argument sharing property, we observe that the verb components V1 and V2 in DIC systematically share arguments: subject sharing occurs in DICs featuring as V1 any one of the motion verbs *go*, *come*, and *pass by*; DICs with the causative motion verb *mannari* display a different pattern of argument sharing, whereby the object of V1 is identified with the subject of V2.

#### 3.6.6 Feature Matching

Finally, let's turn to the (optional) morphosyntactic property of SVCs by which their verb components bear the same inflectional features—we call this phenomenon of featural concord *Feature Matching*. Although not all SVCs have this property, Feature Matching characterizes an important subclass of SVCs—in Aikhenvald's own terminology, those SVCs that show *concordant marking of inflectional features*. DIC patterns like SVCs belonging to this subclass: as we saw in section 2.1, the V1 and the V2 in DIC must obligatorily be inflected for the same person and tense/aspect features, and thus also display Feature Matching.

The conclusion of section 3 is that DIC has to be kept separate from cases of grammaticalization of motion verbs as tense/aspect auxiliaries: the motion verbs in DIC display thematic selectional requirements that characterize their lexical uses outside of this construction and can moreover be focused, as we have argued from the interpretation of negative DIC sentences. The "single event interpretation" of DIC is not to be understood in the sense that V1 does not contribute any separate event to the sentence interpretation, but in the sense that two event components (a motion event  $e_1$  and another event  $e_2$ , spatio-temporally contiguous to  $e_1$ ) are combined to form a complex event which behaves as a unitary event by linguistic tests. We have shown that the two event components occur in the same world (DIC is extensional, unlike the infinitival construction). Finally, we have argued that, assuming Aikhenvald's typology of SVCs, DIC can be naturally regarded as a *contiguous asymmetrical SVC with Feature Matching*.

#### 4. The analysis

In section 4.1 we present Landman's analysis of serial verb clusters in Dutch and German and try to extend it to DIC. In section 4.2 we present our analysis of DIC, based on an operation of *Event Concatenation*.

#### 4.1 Landman (2008) on serial verbs

In unpublished work (Landman 2008), Fred Landman proposes a semantic analysis for serial verb clusters in Dutch and German, as in (47) (from Dutch):

(47) dat Fred Susan Dafna haar pap helpen laten eten. that Fred Susan Dafna her pap help let eat 'that Fred helps Susan let Dafna eat her pap.'

He assumes a framework for compositional semantics with two distinct operations: function application, which computes meanings in phrasal domains, and function composition, which computes meanings in lexical domains. By relying on a number of syntactic tests, he shows that serial verb clusters as in (47) are contiguous SVCs: no element can be inserted between any two verbs in the cluster, the cluster displays argument sharing between the verbs in it, the verbs in the cluster do not move independently from one another but only as a unit. On this basis, he concludes that the serial verb in (47) belongs to the lexical domain, hence its meaning is computed via function composition: the *laten* function composes with the *eten* function (as shown in [49a] below), and then the *helpen* function composes with the result (as shown in [49b]).

The compositional operation that computes the meaning of the serial verb, called "Generalized Function Composition", is formally defined as follows:

#### Generalized Function Composition (GFC)

Let *g* be a function from *n*-tuples of objects  $x_1, ..., x_n$  and *f* a function which is defined for  $g(x_1, ..., x_n)$ : the composition  $f \circ g$  is the function which, applied to an *n*-tuple  $x_1, ..., x_n$  in the domain of *g*, returns the value obtained by applying *f* to  $g(x_1, ..., x_n)$ . [In symbols:  $f \circ g = \lambda x_1, ..., x_n$ .  $f(g(x_1, ..., x_n))$ ]

Assuming the semantic values in (48a-c) for the component verbs, the interpretation of the serial verb in (47) is computed via two applications of GFC, as shown in (49a,b):

(48)	a.	[[ helpen ]] = $\lambda P \cdot \lambda x \cdot \lambda u$ . HELP( $u$ , $P(x)$ )
	b.	$[[laten ]] = \lambda P.\lambda y.\lambda x. LET(x, P(y))$
	с.	[[ eten ]] = $\lambda z . \lambda y . EAT(y, z)$
(49)	a.	[[ laten ° eten ]] = $\lambda P . \lambda y . \lambda x$ . LET( $x, P(y)$ ) ° $\lambda z . \lambda y$ . EAT( $y, z$ ) =
		$\lambda z.[\lambda P.\lambda y.\lambda x. \text{ LET}(x, P(y))](\lambda z.\lambda y. \text{ EAT}(y, z))(z) =$
		$\lambda z.[\lambda P.\lambda y.\lambda x. LET(x, P(y))](\lambda y. EAT(y, z)) =$
		$\lambda z.\lambda y.\lambda x.$ LET( $x$ , ( $\lambda y.$ EAT( $y, z$ ))( $y$ )) =
		$\lambda z.\lambda y.\lambda x.$ LET( $x$ , EAT( $y$ , $z$ ))
	b.	$[[\text{helpen}^{\circ}(\text{laten}^{\circ}\text{eten})]] = \lambda P_{\langle e, b} \cdot \lambda x \cdot \lambda u \cdot \text{HELP}(u, P(x))^{\circ} \lambda z \cdot \lambda y \cdot \lambda x \cdot \text{LET}(x, \text{EAT}(y, z)) =$
		$\lambda z.\lambda y.[\lambda P_{\langle e, r \rangle}.\lambda x.\lambda u.$ HELP $(u, P(x))](\lambda z.\lambda y.\lambda x.$ LET $(x, EAT(y, z)))(z)(y) =$
		$\lambda z.\lambda y.[\lambda P_{\langle e,t \rangle}.\lambda x.\lambda u. \text{HELP}(u, P(x))](\lambda x. \text{LET}(x, \text{EAT}(y, z))) =$
		$\lambda z.\lambda y.\lambda x.\lambda u.$ HELP $(u, (\lambda x.$ LET $(x, EAT(y, z)))(x)) =$

 $\lambda z.\lambda y.\lambda x.\lambda u.$  HELP(u, LET(x, EAT(y, z)))

Notice that the result of GFC-composing the *laten* function with the two-place function denoted by *eten* is a threeplace function ( $\lambda z.\lambda y.\lambda x. x$  lets y eat z), and the result of GFC-composing the *helpen* function with this three-place function is a four-place function ( $\lambda z.\lambda y.\lambda x.\lambda u. u$  helps x lets y eat z). This property of GFC, by which it possibly increases the adicity of the function to the right, corresponds to the property of the verb occurring to the right. For example, consider the causativization of an unaccusative predicate, as in (50a,b):

- (50) a. Mary goes to Rome.
  - b. John sends Mary to Rome.

The verb *send* can be analyzed semantically as the result of the composition via GFC of the causative predicate *make* (three-place:  $\lambda P.\lambda y.\lambda x. x$  makes y P) with the unaccusative verb go. Assuming that go is two-place ( $\lambda z.\lambda y. y$  goes to z; with a place for the theme y and one for the goal z), the result of this composition is a three-place predicate: besides the arguments it inherits from go, the verb *send* has an additional argument corresponding to the individual x that causes the going ( $\lambda z.\lambda y.\lambda x. x$  makes y go to z). Thus, in this respect causativized unaccusatives can be similar to serial verbs constructed with a '*make*' verb, in that the output predicate has a greater valency than the input predicate.

Landman intends to show how GFC accounts for the increased adicity of serial verbs over their verb components; to this end, referring to the event arguments of the verbs would introduce an unnecessary complication. Since we aim at a full-fledged event semantics for DIC, we integrate Landman's analysis with the underlying event arguments and then try to extend this analysis to DIC (for the sake of explicitness, we indicate the semantic type of a variable as a subscript—unless this is already clear from the context; as usual, the types of individuals and truth

values are **e** and **t**, respectively, while for events and locations we assume the types **E** and **L**, respectively; we follow the general practice of using ' $e_1$ ', ' $e_2$ ', etc. as variables over events; as usual, whenever  $\alpha$  and  $\beta$  are types,  $\langle \alpha, \beta \rangle$  is the type of functions from objects of type  $\alpha$  to objects of type  $\beta$ ). To illustrate with the Dutch serial verb, the semantic values of *laten* and *eten* are expanded as in (51a,b) (this is a minimal expansion to accommodate the event argument; below we further introduce locative arguments for the analysis of DIC):

(51) a. [[ laten ]] =  $\lambda e_1 \cdot \lambda P_{\leq e, t>} \cdot \lambda y_e \cdot \lambda x_e$ . LET $(e_1, x, P(y))$ b. [[ eten ]] =  $\lambda e_2 \cdot \lambda z_e \cdot \lambda y_e$ . EAT $(e_2, y, z)$ 

The meanings of *laten* and *eten* are composed as in (52):

- (52) [[ laten  $^{\circ}$  eten ]] =
  - 1.  $\lambda e_{1,\lambda} P_{\langle e, t \rangle} \lambda y_{e,\lambda} x_{e,\lambda} \text{ LET}(e_1, x, P(y)) \circ \lambda e_{2,\lambda} z_{e,\lambda} y_{e,\lambda} \text{ EAT}(e_2, y, z) =$
  - 2.  $\lambda e_2 \cdot \lambda z_e \cdot [\lambda e_1 \cdot \lambda P_{\langle e, \Box} \cdot \lambda y_e \cdot \lambda x_e \cdot \text{LET}(e_1, x, P(y))](\lambda e_2 \cdot \lambda z_e \cdot \lambda y_e \cdot \text{EAT}(e_2, y, z))(e_2)(z) =$
  - 3.  $\lambda e_2 \lambda z_e [\lambda e_1 \lambda P_{\langle e, \rangle} \lambda y_e \lambda x_e. \text{ LET}(e_1, x, P(y))](\lambda y_e. \text{ EAT}(e_2, y, z))^{26} =$
  - 4.  $\lambda e_2 \lambda z_e \lambda e_1 \lambda y_e \lambda x_e$ . LET $(e_1, x, (\lambda y_e, EAT(e_2, y, z))(y)) =$
  - 5.  $\lambda e_2 \cdot \lambda z_e \cdot \lambda e_1 \cdot \lambda y_e \cdot \lambda x_e$ . LET $(e_1, x, \text{EAT}(e_2, y, z))$

According to the last step of (52), the result of composing the *laten* function and the *eten* function is a complex predicate which holds of individuals z, y, x and events  $e_2$  and  $e_1$  if and only if  $e_1$  is an event of letting eat whose agent is x and  $e_2$  is an event of eating whose agent is y and whose patient is z and  $e_1$  is in *some* relation to  $e_2$ . Notice that the analysis does not say anything about what sort of relation connects  $e_1$  to  $e_2$ .

For the analysis of DIC, the following additional assumptions are needed:

- (a) event predicates project a locative thematic role, which may or may not be overtly realized (e.g., *Jones eats a toast (in the bathroom)*);
- (b) besides a goal z and a theme x, motion verbs project an 'actional role' representing the action performed by x at the location z—this role too may or may not be overtly realized (e.g., *Jones goes to the bathroom (to eat a toast)*);
- (c) the connecting element *a* of DIC denotes GFC.

We analyze a DIC with *iri* first (e.g., *Vaju a manciu u pani* 'I go eat the bread'). The semantic values of *iri* and *manciari* are given in (53a,b) and they are composed as in (54):

- (53) a. [[ iri ]] =  $\lambda e_1 . \lambda P_{\langle L, \langle e, b \rangle} . \lambda z_L . \lambda x_e$ . GO( $e_1, x, z, P(x, z)$ ) b. [[ manciari ]] =  $\lambda e_2 . \lambda z_L . \lambda y_e . \lambda x_e$ . EAT( $e_2, x, y, z$ )
- (54) [[ iri a manciari ]] = [[ iri ]] ° [[ manciari ]] =
  - 1.  $\lambda e_2 \cdot \lambda y_e \cdot [\lambda e_1 \cdot \lambda P_{\langle L, \langle e, t \rangle \rangle} \cdot \lambda z_L \cdot \lambda x_e \cdot \operatorname{GO}(e_1, x, z, P(x, z))](\lambda e_2 \cdot \lambda z_L \cdot \lambda y_e \cdot \lambda x_e \cdot \operatorname{EAT}(e_2, x, y, z))(e_2)(y) = 1$
  - 2.  $\lambda e_2 \cdot \lambda y_e \cdot [\lambda e_1 \cdot \lambda P_{\langle L, \langle e, t \rangle \rangle} \cdot \lambda z_L \cdot \lambda x_e \cdot GO(e_1, x, z, P(x, z))](\lambda z_L \cdot \lambda x_e \cdot EAT(e_2, x, y, z))$
  - 3.  $\lambda e_2 \cdot \lambda y_e \cdot \lambda e_1 \cdot \lambda z_L \cdot \lambda x_e$ . GO( $e_1, x, z, (\lambda z_L \cdot \lambda x_e \cdot \text{EAT}(e_2, x, y, z))(x, z)$ ) =
  - 4.  $\lambda e_2 \cdot \lambda y_e \cdot \lambda e_1 \cdot \lambda z_L \cdot \lambda x_e \cdot \operatorname{GO}(e_1, x, z, \operatorname{EAT}(e_2, x, y, z))$

<sup>&</sup>lt;sup>26</sup> Since the *eten* function, of type  $\langle E, \langle e, e, t \rangle \rangle$ , has to saturate the *laten* function's *P*-argument, of type  $\langle e, t \rangle$ , we need to reduce the former function to type  $\langle e, t \rangle$ , and we do this by saturating both its *e*<sub>2</sub>-argument and its *z*-argument, as shown in steps 2-3 of (52).

According to step 4 of (54), the result of composing *iri* and *manciari* is a complex predicate which holds of individuals y, x, a location z, and events  $e_2$  and  $e_1$  if and only if  $e_1$  is an event of going whose theme is x and whose goal is z and  $e_2$  is an event of eating which takes place in location z whose agent is x and whose patient is y and  $e_1$  is in some (unspecified) relation to  $e_2$ .

Turning to a DIC with *mannari* (e.g., *Mannu a pigghiu u pani* 'I send (someone) fetch the bread'), the semantic values of *mannari* and *pigghiari*, given in (55a,b), are composed as in (55c):

- (55) a.  $[[\text{ mannari }]] = \lambda e_1 \cdot \lambda P_{\langle L, \langle e, t \rangle \rangle} \cdot \lambda z_L \cdot \lambda x_e \cdot \lambda u_e. \text{ SEND}(e_1, u, x, z, P(x, z))$ 
  - b. [[ pigghiari ]] =  $\lambda e_2 . \lambda z_L . \lambda y_e . \lambda x_e$ . FETCH( $e_2, x, y, z$ )
  - c. [[ mannari a pigghiari ]] = [[ mannari ]] ° [[ pigghiari ]] =
    - 1.  $\lambda e_2 \cdot \lambda y_e \cdot [\lambda e_1 \cdot \lambda P_{\langle L, \langle e, t \rangle \rangle} \cdot \lambda z_L \cdot \lambda x_e \cdot \lambda u_e$ . SEND $(e_1, u, x, z, P(x, z))](\lambda e_2 \cdot \lambda z_L \cdot \lambda y_e \cdot \lambda x_e$ . FETCH $(e_2, x, y, z))(e_2)(y) =$ 
      - 2.  $\lambda e_2 \cdot \lambda y_e \cdot [\lambda e_1 \cdot \lambda P_{\langle L, \langle e, \rangle \rangle} \cdot \lambda z_L \cdot \lambda x_e \cdot \lambda u_e$ . SEND $(e_1, u, x, z, P(x, z))](\lambda z_L \cdot \lambda x_e \cdot FETCH(e_2, x, y, z))$
      - 3.  $\lambda e_2 \cdot \lambda y_e \cdot \lambda e_1 \cdot \lambda z_L \cdot \lambda x_e \cdot \lambda u_e$ . SEND $(e_1, u, x, z, (\lambda z_L \cdot \lambda x_e \cdot \text{FETCH}(e_2, x, y, z))(x, z)) =$
      - 4.  $\lambda e_2 \cdot \lambda y_e \cdot \lambda e_1 \cdot \lambda z_L \cdot \lambda x_e \cdot \lambda u_e$ . SEND( $e_1, u, x, z$ , FETCH( $e_2, x, y, z$ ))

As step 4 of (55c) shows, the composition of *mannari* and *pigghiari* yields a complex predicate which holds of individuals y, x, u, a location z, and events  $e_2$  and  $e_1$  if and only if  $e_1$  is an event of sending whose agent is u, whose theme is x and whose goal is z and  $e_2$  is an event of eating which takes place in location z whose agent is x and whose patient is y and  $e_1$  is in some (unspecified) relation to  $e_2$ .

There are two problems raised by this extension of Landman's analysis. First—as remarked above for the analysis in (52)—it does not clarify what kind of relation obtains between the event components  $e_1$  and  $e_2$ . This aspect, however, is crucial to the interpretation of SVCs (as well as what sort of operation applies to the event components in building the complex event). Second, as shown in (55c), its application to the DIC *Mannu a pigghiu u pani* predicts that *mannari*'s theme argument ( $\lambda x_e$  in [55] above) is inherited as one of the arguments of the complex predicate, exactly like *mannari*'s agent argument ( $\lambda u_e$  in [55] above), but we have seen that this is disconfirmed by actual data (examples [37] and [38] in section 3.5). We conclude that an event analysis based on GFC alone would not be well-suited for DIC. The analysis that we propose in the next section aims to overcome these problems.

#### 4.2 Proposal for an analysis of DIC based on Event Concatenation

Our proposal for an analysis of DIC aims to explain the properties of DIC in terms of an operation of *Event Concatenation*. This operation builds a complex event with a given thematic structure out of two events satisfying certain input conditions. It is presented in details in section 4.2.1. Section 4.2.2 is devoted to the analysis of tense and person features. In sections 4.2.3 - 4.2.7 we show how the proposed analysis applies to the data considered in the previous sections.

#### 4.2.1 Event Concatenation

We cast our analysis in a model-theoretic framework in which linguistic expressions are evaluated via a denotation function [[.]]<sub>c,g,w</sub> parameterized to a context of utterance c (specifying a speaker  $c_a$ , a hearer  $c_h$ , a time  $c_t$  and a world  $c_w$ , among other pieces of information), a function g assigning values to free variables,<sup>27</sup> and a world of evaluation w—the latter, for purposes of evaluation of utterances in their context, is assumed to be identical to the world  $c_w$  of the utterance context (Kaplan 1989). We further assume an event-semantics in the style of Parsons (1990), characterized by the following theses:

 $<sup>^{27}</sup>$  The variable assignment *g* should properly be seen as one of the coordinates of the utterance context (Heim and Kratzer 1998; Del Prete and Zucchi 2016). Since the point is orthogonal to our present concerns, we'll stick to the standard practice of specifying the assignment as an independent parameter on the denotation function.

- (i) verb predicates denote properties of events, i.e., functions from events to truth values (these have semantic type  $\langle E,t \rangle$ , where E is the semantic type of events);<sup>28</sup>
- (ii) thematic roles, such as *agent* and *theme*, denote functions that apply to an individual x (semantic type e) and an event property f (semantic type  $\langle E, t \rangle$ ) and yield a more complex event property which specifies the thematic relation holding between x and an event satisfying f (the semantic type of a thematic role function will thus be  $\langle e, \langle E, t \rangle, \langle E, t \rangle \rangle$ ).

To illustrate, the denotations of the verbs *pigghiari* and *mannari* and those of the thematic roles *agent* and *theme*, relative to a context *c* and a possible world *w*, are formally represented as in (56a,b) and (57a,b), respectively:

- (56) a. [[ pigghiari ]]<sub>c,w</sub> =  $\lambda e_{\text{E}}$ . FETCH(e, w) b. [[ mannari ]]<sub>c,w</sub> =  $\lambda e_{\text{E}}$ . SEND(e, w)
- (57) a. [[ agent ]]<sub>c,w</sub> =  $\lambda x_e$ .  $\lambda f_{\leq E, \triangleright}$ .  $\lambda e_E$ . f(e) & AGENT(e) = xb. [[ theme ]]<sub>c,w</sub> =  $\lambda x_e$ .  $\lambda f_{\leq E, \triangleright}$ .  $\lambda e_E$ . f(e) & THEME(e) = x

We propose that DIC predicates [V1  $ac^{29}$  V2] denote event properties that are true of 'concatenated events.' These are complex events that are built through the following operation:

## (58) Event Concatenation (EC)

Let  $e_1$  and  $e_2$  be events satisfying the following conditions: ( $\alpha$ )  $e_1$  and  $e_2$  are spatio-temporally contiguous (hence, their temporal and spatial traces are adjacent; see Krifka 1998); ( $\beta$ ) the goal of  $e_1$  is identical with the location of  $e_2$  and the theme of  $e_1$  is identical with the agent of  $e_2$ . Then we define the Event Concatenation ( $e_1 \bullet e_2$ ) as that event  $e_3$  whose temporal trace  $\tau_T(e_3)$  is the convex interval obtained by summing the temporal traces of  $e_1$  and  $e_2$  and whose spatial trace  $\tau_S(e_3)$  is the convex spatial region obtained by summing the spatial traces of  $e_1$  and  $e_2$  (i.e.,  $\tau_T(e_3) = \tau_T(e_1) \oplus_T \tau_T(e_2)$  and  $\tau_S(e_3) = \tau_S(e_1) \oplus_S \tau_S(e_2)$ ).

Notice that, by condition ( $\beta$ ), EC is only defined for events  $e_1$  and  $e_2$  such that a goal and a theme are defined for  $e_1$  and an agent and a location are defined for  $e_2$ . These requirements are satisfied when  $e_1$  is a motion event and  $e_2$  is an action or intentional event. The relevant notion of intentional event allows for predicates of eventualities which, from the point of view of *aktionsart*, are stative—in particular, it allows for stative predicates that can be felicitously modified by locative adverbials and whose subjects play an active role in the eventuality referred to (see section 4.2.6 below, in particular example [78]). An anonymous reviewer has suggested a characterization of the admissible V1s of DIC according to which they would require obligatory dislocation of the theme to a goal different from the source of the motion (this clearly holds of the deictic path verbs *iri* and *vèniri*, but also arguably of *mannari* and *passari*—the place where the theme is sent to or passes by must differ from the place where the theme was in at the beginning of the motion); then, assuming that this characterization provides a sufficient condition, other motion verbs besides the four ones documented in the literature might turn out to be acceptable V1s, as long as they were able to satisfy it—e.g., the manner of motion verb *cùrriri* 'run' might be acceptable for speakers who understand it as

 $<sup>^{28}</sup>$  Champollion (2015) argues for a neo-Davidsonian event semantics in which verb predicates have a more complex interpretation than assumed here, i.e. they denote generalized quantifiers over events (semantic type <<E,t>,t>) whereby existential quantification of the event variable is introduced already at the lexical level. Since Champollion's motivation for providing the more complex interpretation is based on data that lie beyond the scope of this paper, we'll stick to the simpler denotation for verb predicates in terms of sets of events and assume that existential closure of the event variable is triggered by tense.

<sup>&</sup>lt;sup>29</sup> From now on, we will refer to the element connecting V1 and V2 in DIC as *ac*, relying on its derivation from the Latin coordinating particle written in the same way (see footnote 2).

expressing a directed motion. We interpret the reviewer's point as the suggestion that the admissible V1s in DIC are all and only those verbs encoding directed (non-cyclic) paths. We leave this suggestion as an open issue here.

Now that we have introduced the notion of EC we can define a concatenating function over event properties as in the equation (59):<sup>30</sup>

(59) 
$$[[ac]]_{c,w} = \lambda f^2_{\langle E, L \rangle}, \lambda f^1_{\langle E, L \rangle}, \lambda e_3, \exists e_1 f^1(e_1) \& \exists e_2 f^2(e_2) \& e_3 = (e_1 \bullet e_2)$$

The event properties  $f^2$  and  $f^1$  feeding the concatenating function in (59) correspond to the interpretations of V2 and V1, respectively. Event  $e_3$  is the macro-event resulting from EC of the  $f^1$ -event and the  $f^2$ -event. Notice that, even though there are no explicit domain conditions associated with  $\lambda f^2$  and  $\lambda f^1$  in the concatenating function in (59), the fact that EC is subject to the conditions ( $\alpha$ )-( $\beta$ ) of definition (58) above makes the concatenating function in question a *partial function*: it is defined only for event properties  $f^2$ ,  $f^1$  which can be instantiated by events  $e_2$ ,  $e_1$  satisfying conditions ( $\alpha$ )-( $\beta$ ). As we will see below, this feature of the analysis allows us to explain the unacceptability of sentences like (19a-d) from section 3.1.

#### 4.2.2 Semantics of person and tense features

We assume that the person features denote functions that take thematic roles  $\theta$  as arguments and impose on  $\theta$  the condition that the selected participant be suitably related to (in the simplest case, be identical with) the speaker/hearer of the context. For our purposes in this paper, we make the simplifying assumption that 1SG is a basic person feature, instead of analyzing it as encompassing a person feature (i.e., first person) and a number feature (i.e., singular). We also assume that person features can be adequately analyzed in presuppositional terms, i.e. as introducing definedness conditions, although a presuppositional analysis has been shown to be problematic (Sudo 2012). Thus, for the first person singular we have the following semantics (" $x = c_a$ " is the definedness condition requiring identity to the speaker):

(60) [[ 1SG ]] 
$$_{c,w} = \lambda \theta_{<<\!e,<\!E,\!D>,<\!E,\!E>} \lambda x_e$$
:  $x = c_a$ .  $\lambda f_{<\!E,\!D>}$ .  $\lambda e_E$ .  $f(e)$  &  $\theta(e) = x^{31}$ 

We adopt a referential/presuppositional analysis of tense (Heim 1994; von Stechow 1995). Concerning the Sicilian indicative present tense, a proper analysis should assume that it encompasses both a tense and an aspectual (imperfective) feature: the tense feature refers to a time interval which is presupposed to overlap with the time of utterance, while the imperfective feature expands a time interval forward in time—if *t* is any time interval, its forward expansion *f*-exp(*t*) is an interval which extends over *t* to the right and whose left bound is the left bound of *t* (Condoravdi 2001, 2003; Deo 2010; Del Prete 2013). To avoid unnecessary complications, however, we'll make the simplifying assumption that the Sicilian present corresponds to a basic tense feature PRES with the complex semantics given in (61) below, without analyzing it into a tense component proper and an aspect component (in [61], the subscript *k* on PRES is the time variable carried by tense; the symbol " $\subseteq_T$ " denotes inclusion between time intervals; "*g*(*k*) = *f*-exp(*c*<sub>*i*</sub>)" is the presuppositional condition requiring identity between the interval referred to by the tense and an interval which is a forward expansion of the time of utterance):

(61) 
$$[[\operatorname{PRES}_k]]_{c, g, w} = \lambda P_{\langle E, t \rangle} : g(k) = f \operatorname{exp}(c_t). \exists e [P(e) \& \tau(e) \subseteq_T g(k)]$$

 $<sup>^{30}</sup>$  We specify the concatenating function through a lexical entry for the element *ac*. This choice is only made for the sake of concreteness and we might have proposed instead that the concatenating function is the semantic correlate of the particular mode of composition that combines V1 and V2 in DIC.

<sup>&</sup>lt;sup>31</sup> As in Heim and Kratzer (1998: 34-35), the lambda-term  $\lambda x_T$ :  $\varphi$ .  $\psi$  represents a partial function *f* which is defined for an object of type **T** if and only if condition  $\varphi$  (the *domain condition*) is satisfied. If *f* is defined for *x*, then the value it assigns to *x* is whatever value is described by  $\psi$ .

According to (61), the Sicilian present makes the following semantic contribution: (i) it introduces a time variable at Logical Form; (ii) it presupposes that the value of this variable is f-exp( $c_t$ ); (iii) it triggers existential closure of the event variable.

## 4.2.3 Application of the analysis to a sentence with "mannari"

We now show how our analysis works for sentence (39), repeated here as (62) along with its Logical Form (62'):

- (62) Mannu a pigghiu u pani.'I send someone to fetch the bread.'
- (62') [PRES<sub>k</sub> [[1SG(agent)(pro)] [(theme)(u pani)] [mannari ac pigghiari]]]

We assume that the denotations of its implicit subject pro and direct object u pani are as in (63a,b):

- (63) a. [[ pro ]]<sub>c,w</sub> =  $c_a^{32}$ b. [[ u pani ]]<sub>c,w</sub> = the-bread
- The 1SG person feature composes with the thematic role *agent* to yield (64): (64) [[1SG(agent)]]<sub>*c*,*w*</sub> =  $\lambda x_e$ :  $x = c_a$ .  $\lambda f_{\langle E, L \rangle}$ .  $\lambda e_E$ . f(e) & AGENT(e) = x

This is a modified thematic role *agent*: applied to an individual *x*, it yields an event property modifier *F*, on condition that *x* is the speaker of the context; then *F* applies to an event property *f* and builds a more complex event property which includes the condition that the agent of the *f*-event is *x*. The modified thematic role *agent* in (64) applies to [[ pro ]]<sub>*c*,*w*</sub> to yield (65):

(65) [[ 1SG(agent)(pro) ]]<sub>c,w</sub> = 
$$\lambda f_{\langle E,t \rangle}$$
.  $\lambda e_E$ .  $f(e)$  & AGENT( $e$ ) =  $c_a$ 

The thematic role *theme* applies to the direct object *u pani* to yield (66):

(66) [[ (theme)(u pani) ]]<sub>*c*,*w*</sub> =  $\lambda f_{\langle E, \triangleright}$ .  $\lambda e_E$ . f(e) & THEME(*e*) = the-bread

The value of the concatenated predicate is derived in (67):

(67) [[ mannari ac pigghiari ]]<sub>*c,w*</sub> =  $(\lambda f^2_{<E, \triangleright}, \lambda f^1_{<E, \triangleright}, \lambda e_3, \exists e_1 f^1(e_1) \& \exists e_2 f^2(e_2) \& e_3 = (e_1 \bullet e_2))(\lambda e_E. FETCH(e, w))(\lambda e_E. SEND(e, w))$ =  $\lambda e_3, \exists e_1 SEND(e_1, w) \& \exists e_2 FETCH(e_2, w) \& e_3 = (e_1 \bullet e_2)$ 

The thematic role functions (65) and (66) successively apply to the complex event property in (67) to yield (68):

(68)  $[[ [1SG(agent)(pro)] [(theme) u pani] [mannari ac pigghiari] ]]_{c,w} =$   $= (\lambda f_{\langle E, L \rangle}, \lambda e_3, f(e_3) \& AGENT(e_3) = c_a)((\lambda f_{\langle E, L \rangle}, \lambda e_3, f(e_3) \& THEME(e_3) =$   $the-bread)(\lambda e_3, \exists e_1 SEND(e_1, w) \& \exists e_2 FETCH(e_2, w) \& e_3 = (e_1 \bullet e_2)))$   $= (\lambda f_{\langle E, L \rangle}, \lambda e_3, f(e_3) \& AGENT(e_3) = c_a)(\lambda e_3, \exists e_1 SEND(e_1, w) \& \exists e_2 FETCH(e_2, w) \& e_3 = (e_1 \bullet e_2) \& THEME(e_3) =$   $FETCH(e_2, w) \& e_3 = (e_1 \bullet e_2) \& THEME(e_3) =$  the-bread)

 $<sup>^{32}</sup>$  Given the first person singular morphology on the verb in (62), the implicit subject is understood as referring to the speaker.

=  $\lambda e_3$ .  $\exists e_1 \text{ SEND}(e_1, w) \& \exists e_2 \text{ FETCH}(e_2, w) \& e_3 = (e_1 \bullet e_2) \& \text{ THEME}(e_3)$ = the-bread & AGENT $(e_3) = c_a$ 

Finally, tense applies to the event property in (68) to yield the truth conditions in (69):

(69) [[ [PRES<sub>k</sub>[[1SG(agent)(pro)] [(theme)(u pani)] [mannari ac pigghiari]]] ]]<sub>c,g,w</sub> = 1 iff  $(\lambda P_{\langle E, \sqsubset}: g(k) = f \cdot \exp(c_t). \exists e [P(e) \& \tau(e) \subseteq_T g(k)])(\lambda e_3. \exists e_1 \text{ SEND}(e_1, w))$   $\& \exists e_2 \text{ FETCH}(e_2, w) \& e_3 = (e_1 \bullet e_2) \& \text{ THEME}(e_3) = \text{ the-bread } \& \text{ AGENT}(e_3) = c_a) = 1$ iff  $\{g(k) = f \cdot \exp(c_t)\} \exists e_3 [\exists e_1 \text{ SEND}(e_1, w) \& \exists e_2 \text{ FETCH}(e_2, w) \& e_3 = (e_1 \bullet e_2) \& \text{ THEME}(e_3) = \text{the-bread } \& \text{ AGENT}(e_3) = c_a \& \tau(e_3) \subseteq_T g(k)]^{33}$ 

This predicts that (62) is true, relative to a context c and world of evaluation w, at the following conditions:

- (i) there is a concatenated event  $e_3$  whose left component  $e_1$  is a sending event in world w and whose right component  $e_2$  is a fetching event in world w;
- (ii) the agent of  $e_3$  is the speaker of *c*—hence, the speaker is the participant *x* such that *x* sends (someone) to fetch (something);
- (iii) the theme of  $e_3$  is the bread—hence, the bread is the participant z such that the speaker sends (someone) to fetch z;
- (iv)  $e_3$  occurs within an interval that expands the utterance time towards the future;
- (v) by the definition of EC, it is implied that the theme of  $e_1$  is identical with the agent of  $e_2$ —hence, the person y who is sent is the person who fetches the bread;
- (vi) again, by the definition of EC, it is implied that the goal of  $e_1$  is the location of  $e_2$ —hence, the place where y is sent is the place where the bread is fetched.

A question we raised at the end of section 3.5 (in connection with examples such as [53]) is why the theme of *mannari* cannot be syntactically realized in DIC, though being underlyingly present at the level of semantic interpretation. We acknowledge that we cannot provide a definite answer to this question—the definition of Event Concatenation, by itself, does not say anything about the projected argument structure of concatenated events. Here we will just propose, as a tentative hypothesis, that this syntactic peculiarity of DICs with *mannari* may be due to a ban against (unitary) event structures with two syntactically realized themes: since the complex event in (62)—a unitary event structure—already has a syntactically realized theme, i.e. the object *u pani*, this fact would prevent the underlying theme of *mannari* from being syntactically realized too.<sup>34</sup> This hypothesis suggests that the different behaviour in this respect of the infinitival construction with *mannari* (reviewed in section 3.5, in connection with

<sup>&</sup>lt;sup>33</sup> When  $\lambda x: \varphi[x]. \psi[x]$  represents the partial function *f*, we represent the result of applying *f* to an object denoted by a constant *a* via the notation { $\varphi[a]$ }  $\psi[a]$ , which means that we obtain  $\psi[a]$  under the supposition that  $\varphi[a]$  is satisfied.

<sup>&</sup>lt;sup>34</sup> Aiming at a more complete account of the syntax-semantics interface of DIC (which lies beyond the scope of this paper), an alternative route one might explore would consist in assuming a rule of restructuring along the lines of Rizzi (1978). We thank an anonymous reviewer for bringing our attention to the possible relation between our proposal and Rizzi's restructuring analysis.

example [37a]) depends on the fact that the infinitival construction does not involve a unitary event structure (its semantics is not based on EC; see section 4.2.5 below).

## 4.2.4 Single event interpretation and extensionality of DIC

We now apply our analysis to example (10b) from section 2.2, repeated below as (70)—this was used to argue for the single event interpretation and the extensionality of DIC, as opposed to the two-event interpretation and intensionality of the infinitival construction.

(70) Vaju a accattu a cicoria gnignornu (\*ma unn'a trovu mai).'I go buy chicory every day (\*but I never find it).'

We assume that the quantifying time adverb *gnignornu* 'every day' takes scope immediately below tense at Logical Form and combines with its matrix SCOPE—usually determined by the surface clause out of which *gnignornu* has been raised—so as to form a predicate of events [gnignornu[SCOPE]], whose interpretation is the event property 'being an event  $e_0$  such that, for every day *d* included in the temporal trace of  $e_0$ , there exists an event  $e_3$  whose temporal trace is included in *d* and  $e_3$  has the property expressed by SCOPE' (cf. Del Prete 2013 for a similar analysis of the Italian quantifying adverb *sempre* 'always'). Thus, for (70) we assume the Logical Form (71):

(71) [PRES[gnignornu[[1SG(agent)(pro)] [(theme)(a cicoria)] [iri ac accattari]]]]

We propose that *gnignornu* has the denotation in (72a), while the denotation of the event predicate [[1SG(agent)(pro)] [(theme)(a cicoria)] [[iri] ac [accattari]]], with which *gnignornu* combines, is given in (72b) (the details of the semantic derivation are left to the reader):

(72) a. [[ gnignornu ]]<sub>c,w</sub> = 
$$\lambda P_{\langle E, \triangleright}$$
.  $\lambda e_0$ .  $\forall d \subseteq_T \tau(e_0)$  [DAY( $d$ )  $\rightarrow \exists e_3 [\tau(e_3) \subseteq_T d \& P(e_3, w)]$ ]  
b. [[ [[1SG(agent)(pro)] [(theme)(a cicoria)] [iri ac accattari]] ]]<sub>c,w</sub> =  
=  $\lambda e_3$ .  $\exists e_1$  GO( $e_1$ ,  $w$ ) &  $\exists e_2$  BUY( $e_2$ ,  $w$ ) &  $e_3 = (e_1 \bullet e_2)$  & THEME( $e_3$ ) = the-chicory  
& AGENT( $e_3$ ) =  $c_a$ 

The application of the denotation of *gnignornu* to the denotation of its matrix scope yields the event property in (73):

(73) [[ gnignornu[[1SG(agent)(pro)] [(theme)(a cicoria)] [iri ac accattari]] ]]<sub>*c,w*</sub> =  
= 
$$\lambda e_0$$
.  $\forall d \subseteq_{\mathrm{T}} \tau(e_0)$  [DAY(*d*)  $\rightarrow \exists e_3 [\tau(e_3) \subseteq_{\mathrm{T}} d \& \exists e_1 \operatorname{GO}(e_1, w) \& \exists e_2 \operatorname{BUY}(e_2, w) \& e_3 = (e_1 \bullet e_2) \& \operatorname{THEME}(e_3) = \operatorname{the-chicory} \& \operatorname{AGENT}(e_3) = c_a]]$ 

Assuming (70) is evaluated in context c (i.e., relative to the world of context c), we obtain the truth conditions in (74):

(74) [[ PRES<sub>k</sub>[gnignornu[[1SG(agent)(pro)] [(theme)(a cicoria)] [iri ac accattari]]]]]]<sub>c,g,cw</sub> = 1  
iff {g(k) = f-exp(c<sub>t</sub>)} 
$$\exists e_0 [\forall d \subseteq_T \tau(e_0) [DAY(d) \rightarrow \exists e_3 [\tau(e_3) \subseteq_T d \& \exists e_1 GO(e_1, c_w) \& \exists e_2 BUY(e_2, c_w) \& e_3 = (e_1 \bullet e_2) \& THEME(e_3) = the-chicory \& AGENT(e_3) = c_a]]$$
  
 $\& \tau(e_0) \subseteq_T g(k)$ ]

This predicts that (70) is true in context c at the following conditions:

(i) there is a big eventuality  $e_0$  such that for every day d included in the temporal trace of  $e_0$  there is a concatenated event  $e_3$  taking place in d whose left component  $e_1$  is a going event in world  $c_w$  and whose right component  $e_2$  is a buying event in  $c_w$ ;

- (ii) the agent of  $e_3$  is the speaker of c—hence, the speaker is the goer;
- (iii) the theme of  $e_3$  is the chicory—hence, the chicory is what is bought;
- (iv)  $e_0$  is part of a large interval that expands the utterance time towards the future;
- (v) by the definition of EC, the theme of  $e_1$  is the agent of  $e_2$ —hence, the person y who goes is the buyer of the chicory;
- (vi) by the definition of EC, the goal of  $e_1$  is the location of  $e_2$ —hence, the place where y goes is the place where the chicory is bought.

One may now wonder how all this bears on the single event interpretation and extensionality of (70). Here is how: the former aspect is accounted for by the requirement that there be a (single) concatenated event  $e_3$  (for each day), while the latter aspect by the conditions  $GO(e_1, c_w)$  and  $BUY(e_2, c_w)$ , which require that the going event and the buying event happen in the same world, i.e. the world of the utterance. Notice that the unacceptability of the continuation *but I never find it* is expected, since a buying chicory event is predicted to occur on each day, thus it cannot be the case that the speaker never finds chicory (see Fig. 2 in section 3.3).

#### 4.2.5 Intensionality of the infinitival construction

Concerning the infinitival construction, although we will not analyze it in full details here, we remark that an intensional analysis is required in order to account for the contrast between (70) and (75):

(75) Vaju a accattari a cicoria gnignornu (ma unn'a ttrovu mai).'I go to buy chicory every day (but I never find it).'

The analysis must predict truth conditions for (75) along the lines of (76) below, in which universal quantification over worlds compatible with the intentions of the subject is introduced: the relational formula  $R(e_1, w)$ , which provides a restriction for the universal quantifier  $\forall w$ , has to be understood as saying that world w is compatible with the intentions that the agentive theme of  $e_1$  has in  $e_1$ —that is, w is a world in which the intentions that the theme of  $e_1$  has in  $e_1$  are brought about.

(76)  $\forall d [\text{DAY}(d) \rightarrow \exists e_1 [\text{GO}(e_1, c_w) \& \tau(e_1) \subseteq d \& \text{THEME}(e_1) = c_a \& \forall w [R(e_1, w) \rightarrow \exists e_2 \text{ BUY}(e_2, w) \& \text{AGENT}(e_2) = c_a \& \text{THEME}(e_2) = \text{the-chicory}]]]$ (For every day *d* there is an event  $e_1$  with the following properties: (i)  $e_1$  is an event of going that occurs in the actual world, (ii) (the temporal trace of)  $e_1$  is included in *d*, (iii) the theme of  $e_1$  is the speaker, (iv) every world *w* which is compatible with the intentions of the speaker in  $e_1$  is such that there is an event of buying chicory that occurs in *w*.)

Notice that, according to (76), the scope of *gnignornu* in (75) is limited to the motion verb: only the motion event is located within the duration of the day introduced by the temporal quantifier. Moreover, only the motion event is said to happen in the world of the utterance, while the event of buying chicory is only said to occur in a world compatible with the speaker's intentions (see Fig. 1 in section 3.3). An analysis of this kind can be motivated, following insights in Hacquard (2006) and Kratzer (2015), by assuming that motion events can project modal domains, so functioning as "modal anchors": when the theme of such an event has agentive properties and undertakes the movement with certain intentions, the motion event can project a domain consisting of worlds which satisfy the propositional content of those intentions.

#### 4.2.6 Unacceptability of a stative V2

Our semantic analysis can straightforwardly account for the unacceptability of the DICs with stative V2 from section 3.1. Let's go back to sentences (19a,b), repeated here as (77a,b):

(77) a. \*Vaju a ssugnu malato. go.1SG a be.1SG sick
b. \*U vaju a ssacciu. It.CL go.1SG a know.1SG

It is immediate to see that these are now ruled out as semantically incoherent, for a two-fold reason. First, their stative verb predicates 'be sick' and 'know' do not allow for a location, as witnessed by the unacceptability of the sentences *Sugnu malato a Roma* 'I am sick in Rome' and *U sacciu a Roma* 'I know it in Rome'; a location for  $e_2$ , however, is a pre-condition for the applicability of the EC operation, which is only defined for events  $e_1$  and  $e_2$  such that the goal of  $e_1$  is identical with the location of  $e_2$  (by condition ( $\beta$ ) in definition (58)). Second, their stative verb predicates do not allow for an agent either; the applicability of EC, however, requires that  $e_2$  have an agent, since EC is only defined for events  $e_1$  and  $e_2$  such that the theme of  $e_1$  is identical with the agent of  $e_2$  (again, by condition ( $\beta$ ) in definition (58)).

Ernst (2016) has recently proposed a theory of stative verbs which accounts for the oddness of predications like I know it in Rome without assuming that states of knowing lack a location. Ernst's proposal is structurally similar to Magri's (2009) account of the distinction between Individual Level and Stage Level predicates: the main idea is that states sentences and events sentences do not differ in their underlying Logical Form representations, however, states of knowing hold irrespective of location, i.e., if somebody knows that p in a certain location, then she knows that p in any other location; on the other hand, if the speaker uses a locative modifier in a predication, she implicates that the predication in question does not hold at places different from the place introduced by the locative expression she has used; from this it follows that, if a speaker uses a locative modifier with a state, the result is infelicitous because of a clash between the general knowledge that states hold irrespective of location and the implicature, triggered by the use of the locative, that the state in question holds at the mentioned location but does not hold at others. If one prefers a theory of states like Ernst's, then, assuming our analysis of DIC, one can still account for the unacceptability of the DICs with stative V2s, although the explanation under Ernst's view will no longer be in terms of a semantic incoherence but in terms of pragmatics (for example, u vaiu a sacciu is unacceptable not because the thematic function LOCATION is undefined for the verb sacciu but because it would say that I know the relevant stuff in a certain location and so implicate that I do not know the relevant stuff at other locations). If we adopt Ernst's view, then the acceptability of sentence (23), repeated here as (78), is not surprising:

(78) Va a sta ni so soro picchì un avi casa. go-3SG a stand-3SG in his sister because not have-3SG home 'He goes to stay at his sister's because he has no home.'

States of staying at one's sister's place involve both an active subject and a location, as shown by the possibility of the modifications *I deliberately/voluntarily stayed at my sister's* and *I stayed at my sister's in her apartment in Rome*.

4.2.7 Apparent loss of arguments and adjuncts for V1

We now turn to the data from section 3.4. We do locative adverbials first. Consider the contrast between (27) and (32a) again, repeated below as (79) and (80), respectively:

- (79) \*Peppe va a mancia agghiri a casa. Peppe go-3SG a eat-3SG towards home (Impossible reading: 'Peppe goes home to eat.')
- (80) Peppe va a mancia a casa. Peppe go-3SG a eat-3SG at home 'Peppe goes to eat at home.'

The directional *agghiri a casa* 'towards home' instantiates the goal thematic role in (79), which is combined with the whole concatenated predicate [iri ac manciari], as shown in the LF representation (79'):

(79') [PRES [[3SG(agent)(Peppe)] [(goal)(agghiri a casa)] [iri ac manciari]]]

Assuming the condition of Full Compatibility (section 3.4), which requires compatibility of a locative modifier with both event components, (79') determines the truth conditions in (79"), in which the house is related via the thematic role GOAL to both event components  $e_1$  and  $e_2$ :

(79")  $\exists e_3 \exists e_1 \operatorname{GO}(e_1) \& \exists e_2 \operatorname{EAT}(e_2) \& e_3 = (e_1 \bullet e_2) \& \operatorname{GOAL}(e_1) = \text{the-house} \& \operatorname{GOAL}(e_2) = \text{the-house} \& \operatorname{AGENT}(e_3) = \operatorname{Peppe}$ 

The thematic participant [(goal)(agghiri a casa)] is predicted to give rise to semantic anomaly since it is semantically incompatible with the event component  $e_2$  (the sub-formula 'GOAL( $e_2$ ) = the-house' is undefined since  $e_2$  is an eating event and eating events don't have goals).

Turning to sentence (80), the ambiguous locative adverbial *a casa* 'at home/towards home' instantiates an underspecified thematic role here, a role that can be specified as either location or goal. We refer to the underspecified role in question as 'goal/location' in the LF below and regard it as a sort of "disjunctive" role. Again, this thematic role is combined with the whole concatenated predicate [iri ac manciari] in the LF of the sentence, which we give in (80'):

(80') [PRES [[3SG(agent)(Peppe)] [(goal/location)(a casa)] [iri ac manciari]]]

Again, assuming Full Compatibility, (80') determines the truth conditions in (80")—this time, the house is related via the thematic role GOAL to event component  $e_1$  but via the different thematic role LOCATION to event component  $e_2$ :

(80")  $\exists e_3 \exists e_1 \operatorname{GO}(e_1) \& \exists e_2 \operatorname{EAT}(e_2) \& e_3 = (e_1 \bullet e_2) \& \operatorname{GOAL}(e_1) = \text{the-house} \& \operatorname{LOCATION}(e_2) = \text{the-house} \& \operatorname{AGENT}(e_3) = \operatorname{Peppe}$ 

No semantic anomaly is predicted to arise in this case and sentence (80) is expected to be acceptable.

We now turn to instrumentals. Let's go back to the contrast between (28) and (32b), repeated below as (81) and (82), respectively:

(81) \*Peppe va a mancia c'a machina.
 Peppe go-3SG a eat-3SG with-the car
 'Peppe goes to eat by car.'

(82) Peppe u va a pigghia c'a machina. Peppe him-CL go-3SG a take-3SG with-the car 'Peppe goes to pick him up by car.'

The PP *c'a machina* 'by car' instantiates an instrumental thematic role in both sentences, and this is combined with the whole concatenated predicate in each of them, as shown in the LF representations (81') and (82'):

- (81') [PRES [[3SG(agent)(Peppe)] [(instrument)(c'a machina)] [iri ac manciari]]]
- (82') [PRES [[3SG(agent)(Peppe)] [(theme)(u)] [(instrument)(c'a machina)] [iri ac pigghiari]]]

Assuming Full Compatibility, these LFs determine the truth conditions in (81") and (82"):

- (81")  $\exists e_3 \exists e_1 \operatorname{GO}(e_1) \& \exists e_2 \operatorname{EAT}(e_2) \& e_3 = (e_1 \bullet e_2) \& \operatorname{INSTRUMENT}(e_1) = \operatorname{the-car} \& \operatorname{INSTRUMENT}(e_2) = \operatorname{the-car} \& \operatorname{AGENT}(e_3) = \operatorname{Peppe}$
- (82")  $\exists e_3 \exists e_1 \text{ GO}(e_1) \& \exists e_2 \text{ PICK-UP}(e_2) \& e_3 = (e_1 \bullet e_2) \& \text{ INSTRUMENT}(e_1) = \text{the-car } \& \text{ INSTRUMENT}(e_2) = \text{the-car } \& \text{ AGENT}(e_3) = \text{Peppe } \& \text{ THEME}(e_3) = \text{him}$

On the one hand, the thematic participant [(instrument)(c'a machina)] is predicted to give rise to oddness in (81), since it is pragmatically incompatible with the event component  $e_2$  (the sub-formula 'INSTRUMENT( $e_2$ ) = the-car' is pragmatically odd since  $e_2$  is an eating event and eating events don't take cars as their instruments). On the other hand, the same participant is compatible with both event components in LF (82'), hence no anomaly or oddness is predicted to arise in this case and sentence (82) is expected to be acceptable.

## 5. Conclusion

In this paper we have examined the Sicilian DIC, involving two connected verbs, a motion verb V1 from a restricted class and an event verb V2, inflected for the same person and tense/aspect features. We have reviewed arguments from the previous literature showing that the DIC is a monoclausal construction referring to a single event. We have shown that the "single event" property is related to the Macro-Event Property of Bohnemeyer et al (2007): the single event encompasses two sub-event components which however cannot be modified independently from one another. By looking at a number of parameters that have been individuated in the literature on serial verbs, we have argued that DIC exemplifies a particular kind of SVC, namely, Aikhenvald's asymmetrical contiguous SVC with Feature Matching. We have made the single event property formally precise through an operation of Event Concatenation: EC operates on events  $e_1$ ,  $e_2$  satisfying specific thematic and spatio-temporal conditions, and builds a complex event out of them. The analysis based on EC accounts for the main properties of DIC considered in the paper: the single event interpretation, the internal structure of the macro-event, as well as the extensionality of DIC-the central semantic properties which distinguish DIC from the infinitival construction and coordinate structures. We have shown how the EC analysis accounts for previously neglected DIC with mannari which are problematic for previous syntactic analyses. Central to our definition of EC are the spatio-temporal and the thematic relations obtaining between the two event components. Concerning these two aspects, Aikhenvald (2006) observes that SVCs can express a variety of relations between events. In this conclusion we shall consider four particularly significant types of SVCs, which we refer to as venitive, resultative, consecutive, and simultaneous. These are illustrated by the following examples:

(83)	a.	Ó mú ìwé wá. he take book come 'He brought the book.'	[venitive; Yoruba, Bamgbose (1974)]
	b.	Kofi naki Amba kiri. Kofi hit Amba kill 'Kofi struck Amba dead.'	[resultative; Sranam, Sebba (1987)]
	c.	Bólá sè eran tà. Bola cook meat sell 'Bola cooked some meat and sold it.'	[consecutive; Yoruba, Baker (1989)]
	d.	Ajanta chichi-tu samma=y sing cross.PL-1PL.S/A water=LOC 'We crossed the river singing'	[simultaneous; Yurakaré, Aikhenvald (2011)]

The above examples can be intuitively characterized as follows. In (83a) the 'take' event and the 'come' event have the same subject and must plausibly be spatio-temporally contiguous: the described situation is such that the subject takes the book and comes (with the book) right after that. The effect of chaining the two verbs is that the deictic motion verb 'come' introduces a direction towards the discoursively relevant deictic point for the macro-event denoted by the serial verb. In (83b) the 'hit' event and the 'kill' event have same subject and object and are spatiotemporally connected, since the killing follows the hitting in a direct way; the sentence also implies that the killing is a causal effect of the hitting, whence the term "resultative". In (83c) the 'cook' event and the 'sell' event have same subject and object and are consecutive but not causally related, whence the term "consecutive". Finally, in (83d) the 'sing' event and the 'cross' event share the subject, but this time the spatio-temporal relation between them is not one of contiguity, the two events rather being simultaneous: the described situation is such that the subject crosses the river while singing at the same time. We claim that a neo-Davidsonian event semantics would provide a suitable framework to formalize the meaning of the SVCs in (83a-d). An issue we set out to explore in future research is whether the analysis developed in our paper may provide us with insights concerning the proper semantic treatment of the SVCs in (83a-d). It seems plausible to us that for SVCs of these kinds one should entertain operations over events which, similarly to EC, are constrained via specific spatio-temporal and thematic relations between the input events. For instance, for a 'spatially deictic' SVC like (83a), one might assume an operation defined for spatiotemporally contiguous events  $e_1$ ,  $e_2$ , where  $e_2$  is a motion event with a deictically specified goal and the source of  $e_2$ is the same as the location of  $e_1$ . For a simultaneous SVC such as (83d), on the other hand, one should assume an operation defined over spatio-temporally overlapping events  $e_1$ ,  $e_2$  sharing the same agent. These speculative remarks only address the semantic aspects. The treatment of other aspects of SVCs, for example the well-known restrictions on the overt realization of the arguments of an SVC's component verbs (Baker 1989), calls for an extension of our analysis that includes an explicit morphosyntactic account (cf. Todaro and Del Prete 2019 for a proposal).

A dimension we have left aside in the paper concerns productivity of DIC: why is the general operation of EC apparently restricted to the four motion verbs mentioned at the outset? What is the reason for the reported restriction? Although variation is reported between more restrictive and more liberal varieties of Sicilian regarding what motion verbs are allowed in DIC, it seems that speakers of no variety recognize sentences such as (84a,b) as possible sentences (Di Caro 2014):

(84)	a.	Scinnu	a	ppigghiu	u pani.
		go-down-1SG	a	fetch-1SG	the bread
		'I go down fetch the bread.'			

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b. Curru a ppigghiu u pani. run-1SG a fetch-1SG the bread 'I run fetch the bread.'

Still, we clearly see the intelligible sense that such sentences would convey, were they uttered in suitable contexts (notice that the infinitival counterparts of (84a,b), *Scinnu / Curru a ppigghiari u pani*, are unproblematic). We observe that the occurrence of *iri*, *vèniri* and *passari* is typologically not surprising, if one considers that all these verbs belong to the class of deictic path verbs and verbs in this class are known to be commonly recruited in the construction of complex predicates involving a motion component (Matsumoto 1996). The case of *mannari* is different: this may have to be related to the class of ditransitive verbs such as *give* or *take*, which are also known to enter into the composition of complex verbs cross-linguistically. We leave this and the other issues considered above as open problems and topics to be addressed in future research.

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