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Adverbial causal clauses as relative clauses: on siccome “because/since” from Old to Contemporary Italian

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(Article begins on next page)









English ones exhibit a *wh*-movement introducing the protasis of conditional clauses (Kayne 1991, Bhatt & Pancheva 2006). Like relative clauses, adverbial clauses have the same distribution as DPs or PPs (e.g., Bresnan & Grimshaw 1978, Larson 1987, a.o.). They usually yield island effects, as relative clauses, since *wh*-movement applies (Donati 1997, Larson 1987, Caponigro 2003, Bhatt & Pancheva 2006, a.o.).

Causal clauses, however, seem to be an exception to this pattern. As noted in Caponigro (2003) and Cecchetto & Donati (2012), causal clauses exhibit two main differences that tease them apart from the mentioned adverbial clauses: (i) their reading; (ii) the morphology of subordinators. Causal clauses do not display the intersective reading exhibited by the adverbial clauses (5). (This was illustrated in (2).<sup>2</sup> Another property highlighted in Cecchetto & Donati (2012) is the lack of correspondence attested in various languages between relativizers and causal subordinators. An example is provided by English in which the *wh*-element cannot introduce adverbial causal clauses.

Cecchetto & Donati (2012) account for these two peculiarities by suggesting that causal clauses do not involve relativization. The authors propose that in relative clauses, as well as in adverbial clauses like those in (5), the intersective reading arises from the presence of a trace in the TP/vP layer, and thus from movement of the *wh*-phrase from this portion of the clause to the left periphery. For the authors, relativization involves two ingredients: the raising of the *wh*-element, which leaves a copy in the embedded clause, and the labeling of the structure by the element itself. While the lack of correspondence between relativizers and causal subordinators is accounted for in terms of labeling, the intersective reading, which according to the authors is captured in terms of movement of the *wh*-element. We focus on the latter aspect.

Rizzi (1990, 2001) demonstrated that the archaic *wh*-items, like *where* and *when*, are sensitive to the sentential negation, unlike *why* and *how*. This contrast has been captured in Rizzi (2001) by claiming that *where* is directly merged in the left periphery, while the other *wh*-items move there, thereby triggering inversion and intervention effects. Cecchetto & Donati (2012) extend this analysis to adverbial causal clauses. In comparative and temporal conditional, locative clauses the *wh*-items move from the TP/vP layer to the left periphery, the subordinator introducing causal clauses is directly merged in the left periphery of the clause and, thus, no movement of the *wh*-items is involved. As a consequence, no intersective reading arises in causal clauses.

A different approach is taken by Shlonsky (2001). *Wh* argues that all adverbial subordinate clauses are derived by a generalized strategy of relativization and are therefore underlyingly relative clauses. In this terms, relativization involves a derivation in which one argument in the subordinate clause is abstracted, turning the clause into a predicate over the respective type, which combines with an argument of the same type in the matrix clause and figures as its modifier. Focusing on causal

<sup>2</sup> Notice, however, that there are languages like *Hebrew* (see Caponigro et al. 2011, Mantenuito & Caponigro 2011) in which the *wh*-element can introduce causal clauses.

<sup>3</sup> Alternatively, whyCPs may involve a short movement of the element *why* which moves locally in the left periphery, as argued by Shlonsky and Soare (2001). Important point is that also under such an analysis, the *wh*-element does not leave a trace within the IP/vP.

clauses, the author proposes that they modify the situation argument in the matrix clause which is targeted by a speech act, content or attitude predicate (V H Q L M H Y L ü 2021: 3) The subordinate clause is a relative clause and modifies the situation of the matrix clause. As a result, the matrix proposition is generically asserted in the domain of the restricted situation, i.e., for the situations in which the subordinate proposition obtains. To illustrate, the causal clause (6) provides the restricted situations for the matrix proposition to be asserted.

(6) John stays late because he has a deadline.

§ ) R U W K H D F W X D O V L W X D W i n t h e s a m e s i t u a t i o n K L F K - R K C  
he stayed late.

(adapted from \$ U V H Q L M H Y L ü 2021: 4)

Since the subordinator modifies a more abstract argument, i.e., the situation in . U D W ] H U ¶ V W H U P V D Q G Q R W W K H 2) ¶ H D V R Q D U the intersective reading, typical of relative clauses, is obtained (6) as well. Hence, under such an approach, the relative clause analysis can be extended also to causal clauses.

We depart from \$ U V H Q L M H Y L ü R S R V D O L Q F O D L P L Q J W K D W W K H a role in the derivation of the causality interpretation, in line with cartographic works (Haegeman 200). Moreover, we propose that the relation involved in causation is not simply correlation as in (6). Rather, in our case, the similarity in manner between the events in the two clauses is enriched by the implicature that correlation between events taking place in the same marine involves a causal relation.

## 2.2 Causal subordinators: typology and diachrony

Causality has been claimed to be a central notion relating two propositions. Indeed, causal relations are usually encoded morphologically in many languages of the world (Kortmann 1997, Cristofaro 2003). For instance, all European languages exhibit at least an adverbial subordinator for the expression of causation. In addition, cause is also the semantic relationship which exploits the greater number of subordinating conjunctions (Kortmann 1997: 1470).

Crosslinguistically causal relations are often coded by means of the same morphology used in relative, purpose and temporal clauses (Thompson, Longacre & Hwang 1985). For instance, in classical Indian and European languages causal subordinators are old adverb derived from the theme of the relative, e.g., Sanskrit Greek K À V Latin *ut* or, more often, the causal form of the neuter singular of this pronoun, regardless of the root (\*yo-, \*kwo, and \*so-/to), like in Sanskrit Avestan *ya* Greek *hóti*, *hóte* Latin *quod*, *quon* (Baños 2011). In Ngizim, a Chadic language, the complementizer *gáa* *ã* can introduce purpose and causal clauses (Schuh 1972: 380). Likewise, Hutchison (1976) notices a similar relation in Kanuri, a-Saharan language, having the morpheme expressing both purpose and reason relations. Moreover, the literature has long noticed that causal subordinators usually develop from temporal and purpose connectors as the result of diachronic analysis (Heine & Kuteva 2002: 246, 291; Cristofaro 2003: ch.6). Likewise, temporal and causal relations can be encoded by the same morphology as in the case of English.

Diachronically, forms used to express purpose or temporal meanings may be extended to cover causal relations. For instance, Homeric Greek, the subordinator

Introduced purpose and temporal when-clauses, while it was extended to introduce causal clauses in Classical Greek (Cristofaro 1998). Romance languages exhibit several causal subordinators derived from temporal expressions referring to a... An example is provided by the Romance causal subordinators originated from Latin *postquam* comparative variant *postquam* Spanish *después* (que) Portuguese *pois* (que) Occitan/Catalan *puix* (que), French *puisque* Italian *poichè*. Another source of causal subordinators is represented by aspectual adverbs meaning... Some Romance languages for instance, they are found Spanish (ya que), Portuguese (já que), Catalan and some Occitan varieties (ja que), Italian (giacché) while they are absent in French. The same grammaticalization process from temporal to causal subordinator is also attested in German (Weil).

Finally, few studies, focusing especially on European languages, report another lexical source for causal subordinators, namely modal expressions (Kortmann 1977: 195-197, Hualde & Pérez Saldanya 2019). In Romance languages, the modal subordinator originated from the Latin adverb *quomodo* Spanish *como* Catalan *com* French *comme*. The same observation holds for Basque, in which the interrogative word *ola* with causal interpretation (Hualde & Pérez Saldanya 2019). Likewise, the form etymologically related *wh* introduces causal clauses in Serbo-Croatian *kako* and in Polish *jako*.

Grammaticalization research suggests that the changes just outlined from the enrichment of the original meaning of the items with context-dependent pragmatic meanings that the speakers and addressees regularly associate with them. This process is known as conventionalization of pragmatic implicature (Hopper & Traugott 2003), inference (Bybee, Perkins & Pagliuca 1994), contextualized reinterpretation (Heine, Claudi & Hnnemeyer 1991), or metonymization (Traugott & Dasher 2002). Conventionalization of implicature, the terminology adopted in this study, is conceived of as a gradual diachronic process that leads a context-dependent inference to be conventionalized, and thus no longer cancelable. As noted by Grice (1975) and Traugott (2004), conversational implicatures may become conventionalized. When an item or a structure used in a specific context rise to the same invited inference often enough, it may become a generalized invited inference which is normally associated with the meaning of the item/structure but it can still be cancelled. These inferences may become conventionalized and the inference formerly associated with the item/structure becomes part of its semantics. At this point, the item/structure may be ambiguous between its original and its newly grammaticalized meanings or the original meaning may be lost. In either case, when the newly grammaticalized meaning is recovered, it cannot be cancelled. Such a process has been claimed to be the mechanism at the basis of change from temporal simultaneity to causal meaning (Weil) in German (Kortmann 1997, Hopper

<sup>4</sup> As noted by Ernout & Thomas (1953: 350, 362), Latin *postquam* may exhibit both temporal and causal readings



since in English (Kortmann 1997+ R S S H U 7 U D X J, R H A T T E 2015 254). The meaning of simultaneity has become enriched inferentially by the implicature that the simultaneous events are causally related. Likewise, the meaning of past temporality has been enriched by the implicature that sequence of events implies causality. Conventionalization of implicatures has also been invoked as a possible scenario leading from purpose to causal meaning: the implicature that the intended outcome of the purpose clause was actually achieved (Schmid 2009). While studies on the grammaticalization process of temporal to causal expressions are quite numerous, the diachronic path from modal to causal meanings still deserves investigation. Indeed, it is still open how the change from modal to causal expressions fit into this picture. Our paper addresses this issue, by adding a new path in the grammaticalization process of causal clauses, thus uncovering a diachronic link between similative-comparative and causality. This diachronic change will be formally captured adopting the relative clause analysis of causal clauses

### 3. Our study: the diachrony of *siccome/sì come* CPs

This section illustrates the diachrony of *siccome/sì come* CPs through the history of Italian. Section 3.1 provides an overview of the meanings encoded by *siccome/sì come* CPs. We show that the causal meaning available in Contemporary Italian arises from a similative-comparative interpretation. These two interpretations are not uniformly distributed diachronically: comparative and causal meanings of *siccome/sì come* are indeed attested in different periods with different frequencies. In particular, three chronological periods are individuated. In Section 3.2, we describe the different syntactic, semantic, pragmatic properties exhibited by *siccome/sì come* CPs. Section 3.3 demonstrates that the causal interpretation was restricted to specific contexts in the early stages and that it was extended beyond them after the grammaticalization process was completed.

To understand the development of the subordinate, we explored its diachrony through a survey of MIDIA, a corpus of about 800 written Italian texts ranging from the 13<sup>th</sup> and the first half of the 20<sup>th</sup> century. Since *siccome* is a morphologically complex form composed of the *wh*-pronoun *come*  $\mu$  K R Z ¶ D Q G W K H S I Q V R ¶ E L D I O S U R searched for the lexical item *siccome* as well as for its non-verbated variants *sì come*.<sup>5</sup> We extracted 874 instances of *siccome* and 1865 of *sì come*, and we identified the semantic relations they expressed. 53 occurrences over a total of 2739 were not classifiable. Therefore, we plotted the results obtained from the remaining 2686 occurrences. In addition to our introspective judgments as native speakers on Contemporary Italian were collected by investigating the CORIS corpus as well as its later updates. The CORIS corpus contains circa 150 million words from written texts dated 1982-2000. Its following updates (monitor corpora) are added every three years in order to record innovations and modifications of the language. For our search, the monitor corpora cover the age ranges between 2001 and 2000. 1000 sentences containing *siccome* were analyzed.

<sup>5</sup> In the MIDIA corpus we searched for *come* as lemma, preceded by the lemma *sì*.

<sup>6</sup> Our query consisted of the following elements:  $\{ \text{IRUP} \} \{ \text{VLFFRPH} \} \{ \text{7LPH} \} \{ \text{6OLF} \} \{ \$ \text{OO} \} \{ \text{6XEFRUSXV} \} \{ \text{Spin} \}$  set to 1000 lines.  $\{ \text{SQGRUGDQFH} \}$

### 3.1 The meaning of siccome/sì come in diachrony

Throughout the history of Italian siccome/sì come expresses both complement and adverbial relations. We here focus on the latter ones and we limit our investigation on siccome/sì come introducing a clause, leaving aside DPs and AdjPs.

When the clause is merged in an adjunct position, a temporal, comparative similitive, and causal interpretation is available. The temporal interpretation of siccome/sì come is very scarcely attested throughout the history of Italian. The total number of occurrences in which siccome/sì come introduces a temporal CP amount to 9 instances in the entire MIDIA corpus: seven occurrences in the 14<sup>th</sup> century, three in the 15<sup>th</sup> century and one in the 16<sup>th</sup> century. In all cases, the dependent event is factual and takes place either simultaneously or immediately before the main event, as in (7).

- (7) E [si-ccome si scontraro con gli  
 and so-as CL.RFL meetPST.3PL with DET  
 occhj] si punsono il cuore d'  
 eyePL CL.RFL stingPST.3PL DET heart of  
 amoroso disire  
 loving desire  
 μ \$ Q G D V W K H L s t u n g H W K H V L P H K W H D U W K W \ Z L W  
 (Alberti, Istorietta amorosa fra Leonora de' Bardi e Ippolito Bonde  
 15<sup>th</sup> cent)

Given the scarcity of attestations in which the subordinator exhibits a temporal reading, we do not further discuss these cases and restrict our focus on the comparative-similitive and causal interpretations.

Siccome/sì come introduces a comparison in which two events or propositions are compared with respect to some manner or degrees of some properties, as in (8). Conversely, when the dependent event provides a motivation for the event to occur, the subordinator encodes a causal relation between the dependent and the main events as in (9).

- (8) Veleni de la terça generatione uccidono per  
 PoisonPL of DET third generation kill. PRS3PL by  
 loro freddeça, [si-ccome fa O ¶ oppio]  
 their coldness so-as do.PRS3SG DET opium  
 μ 7 K L U G J H Q H U D W L R Q S R L V R Q V . ¶ L O O E  
 \* U H J R U L R F i o g i ¶ i s m e d i c ¶ n a r ¶  
 (Fiorini, *Giornale di medicina*, 14<sup>th</sup> cent.)

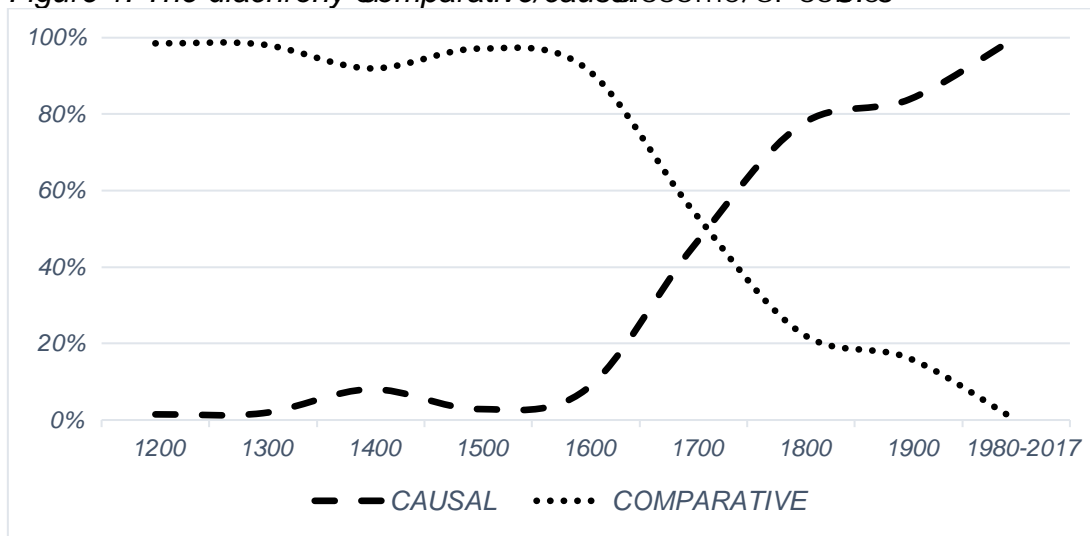
- (9) ma [si-ccome ero stanco], prima di  
 but so-as bePST.3SG tired before to

<sup>7</sup> Siccome/sì come can also introduce a complement clause. This is rarely found and ranges from a maximum of 21 instances found in 14<sup>th</sup> century texts to a minimum of 1 occurrence in 17<sup>th</sup> and 20<sup>th</sup> century texts. An example of complement clause introduced by siccome/sì come is siccome ricordandomi sì come io potea morire di questa guerra (Alberti, *Istorietta amorosa*, 14<sup>th</sup> cent.). In Contemporary Italian, this option is only available for come.

tornare indietro, mi fermai un poco  
 go.INF back CL.1SG stopPST.1SG DET little  
 per riposarmi.  
 to restINF-CL.1SG  
 but since I was tired, before going back, I stopped a little to rest  
 (Fucini, Le veglie di Nerf 1890)

In order to investigate how the comparative and causal interpretations were distributed in the history of Italian we calculated how many comparative and causal readings were found in the 2686 occurrences from the MIDIA corpus and in the 1000 occurrences from the CORIS corpus. Figure 1 illustrates the results.

Figure 1. The diachrony of comparative/causal siccome/sì come CPs



Three macroperiods can be individuated on the basis of Figure 1. (i) Stage 1 From 13<sup>th</sup> to mid-14<sup>th</sup> century, siccome/sì come exhibits almost exclusively a comparative similative meaning. (ii) Stage 2 Between mid-14<sup>th</sup> to the end of 17<sup>th</sup> century, the main value of the subordinator is still comparative, but in few occurrences a causal interpretation is attested. (iii) Stage 3 From the end of the 17<sup>th</sup> century, we witness an increase of the occurrences with a causal interpretation and a concomitant decrease of the occurrences with a comparative reading. This trend reaches a turning point during the middle of the 18<sup>th</sup> century. From this point onwards, the instances of siccome/sì come with a causal meaning exceed those with a comparative reading. In the 20<sup>th</sup> century, the causal value becomes the only one attested. Therefore, we conclude that siccome/sì come originally introducing a comparison between the dependent and the main clause, it eventually acquired a causal reading.

### 3.2 Properties of comparative and causal siccome/sì come CPs

The question we now address is whether, in the history of Italian, comparative and causal clauses introduced by siccome/sì come exhibit different properties. The aim is to detect whether the two readings are restricted to specific syntactic, semantic and pragmatic conditions.

Throughout the history of Italian, causal and comparative clauses introduced by siccome/sì come have always differed with respect to four properties as illustrated in Table 1.

Table 1 Diachronically stable properties in comparative and causal CPs.

Properties	Comparative CPs	Causal CPs
(i) Factuality	Factual and nonfactual	Only factual
(ii) Finiteness of the predicate	Finite and nonfinite	Only finite
(iii) Semantic relation between the dependent and main predicates	Closely related	independent
(iv) (non)-at issue	At issue	Non at issue

While the dependent event in comparative clauses may be both factual and nonfactual (is only factual in causal CPs), likewise, while the dependent predicate may be non-finite in comparative clauses, it must be finite in causal CPs.

(10) a. e diede indulgenza e perdono, [sì come  
 and give.PST.3SG indulgence and absolution so as  
 andasse oltremare, a chi fosse contro  
 go.SBJV.3SG overseas to whom be.SBJV.3SG against  
 a-  
 detto Federigo;  
 to-DET mentioned Federigo  
 μ \$ Q G K H J U D Q W H G L Q G X O J H Q F H D Q  
 the abovementioned Federigo, as if they were going overseas  
 (Villani, Nuova Cronica 7.25; first half 14<sup>th</sup> cent.)

b. e [si-come un serpente mortifero toccass  
 and so-as DET snake deadly touch.SBJV.3SG  
 toccò la ciocca delle amate chiome  
 touch.PST.3S DET lock of-DET beloved hair  
 G  
 μ \$ Q G V K H W R X F K H G W K H O R F N R I W  
 snake  
 (Grossi, Ildegonda III, XLVI ; 1820)

(11) a. Ciascuna intende sol Dio contemplando  
 each understand.PRS3SG only God contemplating  
 tutte le cose manifeste e certe [sì come  
 all DET things manifest and sure so as  
 nui nello specchio guardand

<sup>8</sup> The comparative hypothetical clause introduced by siccome/sì come can be coordinated with the comparative marker followed by as in > «*si come se* nella matricola della detta fosseno scritti siccome I R V V R Q R D U W H I L F L μ G H O O ¶ D U W H as if they were enrolled in the abovementioned art and as if they were authors of the above P H Q W L R Q H S a t i l l e A r t i d e i ¶ r n a i e d e i v i n a t t i e r i d i ¶ B o a z e



DET siren  
 μ2 K P \ E H O R Y H G R Q H \ R X S O H D V H  
 (Gozzano) colloqui p.71; 1911)

(13) a. Saffo era accorsa quel giorno,  
 Sappho bePST.3SG run that day  
 [si-ccome soleva a-lla festività]  
 so-as use\_toPST.3SG to-DET festival  
 μ6 D S S K R K D G U X Q W R W K H I H V W L Y  
 (Verri, Le avventure di Saffo book 1, ch. 4; 1782)

b. laddove insino a- l diluvio gli uomini > «  
 where until to-DET Flood DET men  
 si erano pasciuti de- lle erbe e de- lle  
 CL.RFL bePST.3PL fed of-DET herbPL and of-DET  
 frutta che la terra e gli arbori  
 fruit.PL thatREL DET earth and DET treePL  
 somministravano loro spontaneamente > « [si-ccome  
 providePST.3PL them spontaneously so-as  
 usano di sostentarsi anche oggidì alcuni  
 usePRS3PL to sustainNF-CL.RFL also nowadays some  
 popoli, e particolarmente quelli di California]  
 people and particularly those of California  
 μ > « @ Z K H U H X Q W L O W K H ) O R R G P H Q :  
 fruits that the earth and trees spontaneously provided to them, as even  
 nowadays some peoples, particularly those of California, use to susta  
 W K H P V H O Y H V ¶  
 (Leopardi, Storia del genere umano 1827)

Conversely, when the predicate of the dependent event is semantically  
 close to the predicate of the main event, a causal interpretation is strongly favored (14).

(14) a. e, [si-ccome dovunque era trattato così],  
 and so-as everywhere bePST.3SG treated so  
 non se la prendeva.  
 NEG CL.3SG CL.ACC.F takePST.3SG  
 μ D Q G V L Q F H K H Z D V W U H D W H G O L N  
 (Tozzi, Con gli occhi chiusi 1913)

b. [Si-ccome un Inglese non viaggia per  
 So-as DET Englishman NEG travelPRS3SG to  
 vedere Inglese], io P ¶ avviai a-lla  
 seeINF Englishmen I CL.1SG set\_outPST.1SG to-DET  
 mia camera.  
 my room  
 μ \$ Q G V L Q F H D Q ( Q J O L V K P D Q G R H V Q  
 P \ U R R P ¶  
 (Foscolo, Viaggio sentimentale di York, 1804-1806)

Causal and comparative clauses also differ in terms of (a)issueness: the former being nonat issue, while the latter can be at issue. In Contemporary Italian, causal clauses introduced by siccome/sì cannot be (i) fragmented answers to μ Z K \ Z K L F K U H D V R Q ¶ T X In the scope of focus particles or negation (Salvi & Renzi 2001, Frenguelli 2002, Dardano 2020). In these respects, they differ from causal clauses introduced by perchè μ E H F D (15a, 17a). Likewise, siccome/sì clauses also differ from comparative clauses introduced by μ K R Z ¶ Z K L F K F D Q E H I U D J P H Q W (17b) and can be in the scope of focus particles and negation (18b-19b) (Salvi & Renzi 2001, Dardano 2020).

- (15) a. *Per quale motivo sei arrivato tardi?*

*Perché/\*siccome ero in palestra*

μ: K \ G L G \ R X D U U L Y H O D W H  
% H F D X V H , Z D V D W W K H J \ P ¶

- b. *Come hai cucinato il pollo?*

*Come mi aveva consigliato mia mamma.*

*μ + R Z G Cook the chicken?*

\$ V P \ P X P V X J J H V W H G P H ¶

- (16) a. *Sono venuto a cena da te non perché/\*siccome ne avevo voglia, (ma perché mi hai invitato).*

*μ came for dinner at your place not because I wanted to (but because you*

*L Q Y L W H G P H ¶*

- b. *Ho cucinato il pollo non come mi aveva insegnato mia mamma (ma come diceva la ricetta)*

μ, F R R N H G W K H F K L F N H Q Q R W D V P \ P X P W R O G

- (17) a. *Sono venuto a cena da te solo perché/\*siccome hai insistito tanto.*

*μ came for dinner at your place only because you insisted so much ¶*

- b. *Ho cucinato il pollo solo come mi aveva insegnato mia mamma.*

μ, F R R N H G why as my friend told me

We searched the MEDIA corpus for the occurrence of siccome/sì preceded by negation and focus particles: precisely, by the lemma μ Q R W ¶ D Q G solo/soltanto/solamente μ R Q O \ ¶ 7 K H V H D U F K U H W X U Q H G J H U R

<sup>9</sup> A reviewer correctly noticed that, to establish the issueness of causal clauses, their use with the negation or focus markers has been contrasted with perchè and come clauses. S/he suggested to add comparison with comparative-simulative siccome clauses, because it may be something about the conjunction or the general underlying structure that is responsible for the effect. Although we agree with the reviewer, we cannot pursue this option, since in Contemporary Italian the comparative-simulative is not used anymore. A possible implementation may be the form sì come μ V R D V 7b) can include the adverb così and the sentence could still be in the scope of the focus particle. As for the previous stages of Italian, the comparison is illustrated in (18) (

siccome/sì come. The only instances in which the element was part of a focalization structure involved siccome/sì come as a comparative subordinator.

(18) Li ufficiali delle castella del detto Comune  
 DET officer.PL of-DET castle.PL of-DET mentioned Commune  
 non possano per alcuno modo spendere o  
 NEG cansBJV.3PL for any way spendINF or  
 fare spendere o diliberare che si  
 makeINF spendINF or approveINF that CL  
 spenda per inanzi o che si dea  
 spendsBJV.3SG for onwards or that CL give.SBJV.3SG  
 o che si paghi alcuna cosa della pecunia  
 or that CL pay.SBJV.3SG any thing of-DET money  
 del detto Comune se non [sì come si  
 of-DET mentioned Commune if NEG so as CL  
 diliberrae una volta o più] > « @  
 approveFUT.3SG one time or more

The officers of the castles of the mentioned Commune cannot in any spend or cause to be spent or approve that anything of the money of the mentioned Commune be spent in advance, or given or paid, except as it is shown (Ordinamenti provvisioni e riformagioni del Comune di Firenze 1557)

Although the very scant number of attestations in the MIDIA corpus related to siccome/sì come CPs should be treated with caution, on the basis of these data, we conclude that the content of causal siccome/sì come CPs is not at issue, since non-issue content cannot be focalized (at least, the entire content, Simons et al. 2016). It can be at issue in comparative CPs as it can be focalized.

In addition to the above-mentioned four properties, causal and comparative clauses also differ with respect to other three properties which, differently from the former ones, are subject to a diachronic change: (i) sharing of the event participants (vi) temporal relation between the dependent and the main, and (vii) positioning of the subordinate clause relative to the matrix one.

While in comparative clauses the predicates of the dependent and main events are usually semantically related one another, participants are not necessarily shared between the two events (see example (14)). In contrast, the occurrences of causal clauses extracted from the MIDIA corpus show that in the first and second stage (from 1200 to the end of 1600) the dependent and the main event almost always share their participants, namely the agent/theme or the patient. In particular, from a syntactic point of view, the subject or the direct object of the causal clause is coreferential to the subject or direct object of the matrix clause, as it is shown in (19).

(19) a. la saetta > « @ [sì come egli

<sup>10</sup> Likewise, both negation and focus particles could precede comparative clauses introduced by *come* and causal clauses introduced by *ch*. In the MIDIA corpus we found in 94 and 151 instances, respectively.



DET arrow so as they  
 erano congiunt], passò l' uno  
 bePST.3PL joined passPST.3SG DET one  
 e l' altro a un' otta.  
 and DET other to one time  
 μ 6 L Q F H V o i k e d W R J H U M K H U W K H D U U R i  
 R Q F H ¶  
 (Arrigo Simintendi da Prato, *Volgarizzamento delle Metamorfosi*  
 half 14<sup>th</sup> cent.)

b. Poi che Tullio si pose a  
 after that Tullius CL.RFL put.PST.3SG to  
 sedere, Catilina [si-ccome era apparecchiato ad  
 sit.INF Catiline so-as bePST.3SG prepared to  
 infignere tutte cose] con faccia chinata  
 fake.INF all thing.PL with face bowed  
 domandò D ¶ Padri che egli non  
 askPST.3SG to Father.PL that they NEG  
 credessono mattamente niuna cosa di lui,  
 believesBJV.3PL foolishly any thing of him  
 μ 7 K W O n T u l l i u s s a t d o w n , C a t i l i n e , s i n c e h e w a s s e t t o :  
 everything, with bowed face, asked the Fathers not foolishly believe  
 D Q \ W K L Q J D E R X W K L P > « @ ¶  
 (Bartolomeo da San Concordio, *Catilinario* XXIII; first half 14<sup>th</sup> cent.)

However, from the mid-18<sup>th</sup> century, sharing of participants does not hold anymore as it is illustrated in (20).

(20) [Si-ccome Francesco non arrivavā, Drogo  
 So-as Francesco NEG arrivePST.3SG Drogo  
 e Maria si salutarono con esagerata  
 and Maria CL.RFL greetPST.3PL with exaggerated  
 cordialità  
 cordiality  
 μ 6 L Q F H ) U D Q F H V F R G L G Q R W D U U L Y H  
 H [ D J J H U D W H G F R U G L D O L W \ > « @ ¶  
 (Buzzati, *Il deserto dei Tartari*, ch. 19; 1945)

Concomitantly, nonreferential subjects start to be found in causal CPs which was not attested before the third stage.

(21) Tonia [si-ccome domani è festā mi  
 Tonia so-as tomorrow bePRS3SG holiday CL.1SG.DAT  
 piacerebbe che faceste sentire ai vostri  
 like.COND.3SG that makesBJV.2PL tasteINF to.DET your  
 forestieri un cappone nero, che dicono  
 guest.PL DET capon black which sayPRS3PL  
 abbia la ciccia più saporita.

have<sub>BJV.3SG</sub> DET meat more tasty  
 μ7 R Q L D V L Q F H W R P R U l i k e y ō t o m a k e y o k i r g u e s  
 W D V W H D E O D F N F D S R Q Z K L F K W K H \

A change occurred in the mid-18<sup>th</sup> century with respect to the temporal relation between the causal and the main events. Till stage 2 a causal interpretation of siccome/ sì come was possible only when the dependent event is simultaneous to or immediately preceding the main event (see ex. (19)). Conversely, in comparative clauses the dependent and the main event may be temporally independent

(22) a. E passato il termine, decidino e  
 and passed DET deadline decides<sub>BJV.3PL</sub> and  
 sentenzino la questione [sì come vedranno che  
 judges<sub>BJV.3PL</sub> DET matter so as see<sub>FUT.3PL</sub> that  
 sia giusta  
 be<sub>BJV.3SG</sub> right  
 μ \$ Q G Z K H Q W K H G H D G O L Q H L V R Y H L  
 will see that it is right ¶  
 (Statuto degli oliandoli di Firenze 1310-1313)

b. Io nulladimeno continuerò a chiamarla  
 I nevertheless continue<sub>FUT.1SG</sub> to call<sub>INF-CL3SG</sub>  
 poesia [si-ccome ho fatto fin-qui]  
 poetry so-as have<sub>PRS1SG</sub> done up-here  
 μ , Q H Y H U W K H O H V V Z L Q S , K D Y W L Q R Q H I  
 (Muratori, Della perfetta poesia italiana; 1706)

Temporal simultaneity or immediate precedence holds as a condition for the causal reading to arise until about the mid-18<sup>th</sup> century. From then onwards siccome/ sì come begins to receive a causal interpretation even when the dependent and the main event are temporally independent

(23) [Si-ccome io dovrò navigare ancora],  
 So-as I have<sub>toFUT.1SG</sub> sail<sub>INF</sub> again  
 progetto di dar-vi O ¶ incarico  
 plan<sub>PRS1SG</sub> of give<sub>INF-CL.2PL.DAT</sub> DET responsibility  
 della mia figlia.  
 of-DET my daughter  
 μ 6 L Q F H , Z L O O K D Y H W R V D L O D J D L C  
 G D X J K W H U ¶  
 (Garibaldi, Lettere a Speranza von Schwab 1858)

The last property that differentiates causal and comparative siccome/ sì come CPs regards their position relative to the host clause. We took the position of the main predicate as the benchmark to establish the position of the subordinate clause. adverbial clauses could be found to the left or to the right of the host clause.

Figure 2. The position of comparative/causal siccome/sì come CPs relative to the host clause.

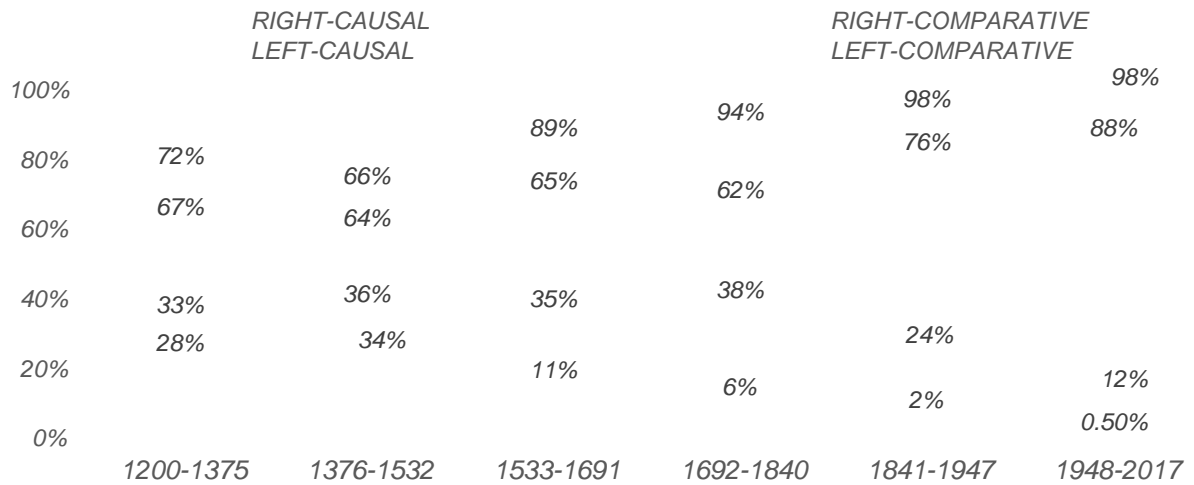


Figure 2 shows that overall, comparative CPs tend to be found to the right of the host clause, while causal CPs tend to be placed to its left. Interestingly, the right position of causal CPs is decreasing significantly from 1533/1691 to Contemporary Italian, when this option is almost absent. Conversely, comparative CPs are quite consistently found to the right of the host clause from 1841/1947. Hence, we can conclude that from 1533/1691 siccome/sì come CPs are differentiated in terms of position relative to the host clause, with causal CPs occurring to the left.

### 3.3 Interim conclusion

Section 3.1 showed that the diachrony of causal siccome/sì come CPs can be divided in three macroperiods. In Stage 1 siccome/sì come almost exclusively encodes a comparative meaning. In Stage 2 the subordinator exhibits mainly a comparative reading but a causal interpretation is also attested. Finally, the causal interpretation increases in Stage 3 and becomes the exclusive reading in Contemporary Italian, while the comparative interpretation decreases and is eventually lost. Up to the mid-18<sup>th</sup> century a causal interpretation arises when (i) the clause is factual, (ii) the CP is finite, (iii) the dependent and the main predicates are not semantically related, (iv) the content of the subordinate clause is on-at-issue, (v) a relation of simultaneity/immediate anteriority and (vi) the sharing of participants between the dependent and the main event are respected, (vii) the subordinate clause is to the left of the main clause. Notice, however, that in these contexts, a comparative interpretation of siccome/sì come is not excluded. Interestingly, when all these conditions are respected a reading ambiguity can emerge and siccome/sì come can receive both a comparative or a causal interpretation, as illustrated in (24), in which the dependent event provides either the manner in which the matrix event takes place or the reason why matrix event occurs.

- (24) [siccome avete guarito lui del male  
so-as havePRS2SG cured him of.DET illness  
della lonzeria, così dovete ora guarire  
of-DET lonzeria so mustPRS2PL now cureINF  
me > « @

*l. acc*

*μ V a s /since you cured him from the illness of the lonzeria, so you mus*

*F X U H P H > « @ ¶*

*(Vincenzo da Filicaia, Lettere inedite a Lorenzo Magalotti, 17<sup>th</sup>-18<sup>th</sup> cent.)*

*From the mid-18<sup>th</sup> century, the temporal contiguity between the dependent and the main events is not a necessary condition anymore, the dependent event does not always share its participants with the main event and causal siccome/sì come clauses almost exclusively precede the host clause*

*We can conclude that from the mid-18<sup>th</sup> century the grammaticalization process of siccome/sì come is completed the conditions licensing a causal interpretation are relaxed and eventually lost*

#### 4. Proposal

*In this section we propose that causal clauses are relative clauses and formalize the diachronic change illustrated in Section 3. In so doing, we extend the proposal advanced for temporal and comparative adverbial clauses to causal clauses introduced by siccome/sì come. This extension is motivated by the diachronic development we documented in the previous Sections and by the morphological form of the subordinator, which clearly contains the -pronoun come μ K R. Section 4.1 illustrates the theoretical assumption on the syntax of relative clauses and their extension to causal clauses. Section 4.2 formalizes the diachronic change in the syntax of siccome/sì come clauses.*

##### 4.1. The syntax of relative clauses

*As in the cartographic literature, our proposal incorporates two fundamental aspects:*

*(a) the syntactic representation obeys antisymmetry as in Chomsky (1995: ch.4); (b) the syntactic representation obeys antisymmetry & L Q T X H F K orks, s i r V D Q Q O & V Q V X E H I V O G V R Q . D \ Q H c-command according to which specifiers are adjuncts and an XP in Spec,ZP can c-command out of the ZP (Kayne 1994: 16, 25 -commands Y iff X and Y are categories, D Q G ; H [ F O X G H V < D Q G H Y H U \ F D W H J R U \ W K D 16). Although specifiers are adjuncts, for ease of exposure we continue using the label ‡ V S H F L I L H U . 6 S H F & 3 6 S H F ) 3 D Q G 6 S H F ' 3 W R respectively to CP, FP, and DP.*

*The derivation of free RCs adopted is the one proposed in Cinque (2013, 2020), and refined in Poletto & Sanfelici (2018), which include the following aspects. We walk the reader through each step, focusing on those aspects which are relevant for siccome/sì come clauses.*

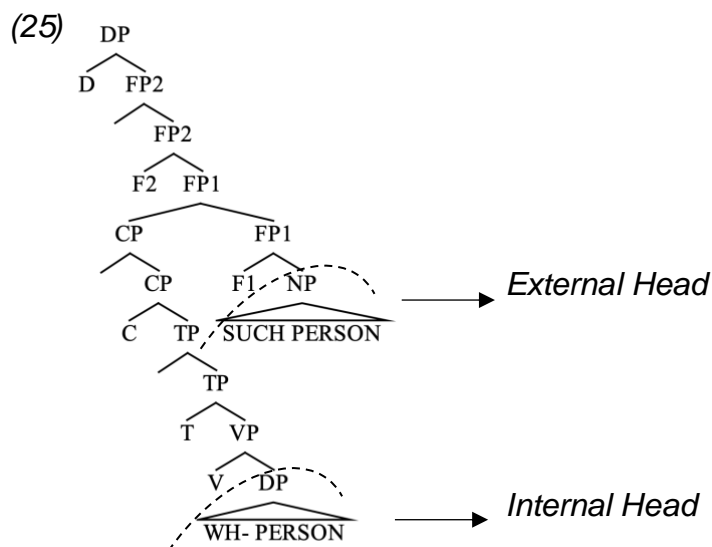
<sup>11</sup> *In the same period, causal and comparative relations become differentiating. Whereas in the first and second periods, siccome/sì come were interchangeably used to cover both comparative and causal relations, from the 18<sup>th</sup> century, sì come was only attested with a comparative meaning and ceased to encode a causal relation. The causal meaning was, and still is, expressed only by the unverbated siccome. We leave an investigation of the difference in writing conventions (and its plausible morphological reflex) to future research*

(i) Free and restrictive RCs are clauses embedded under a DP AdvP. We illustrate the derivation with RCs embedded under DPs. RCs merged as CPs in the specifier of a prenominal functional projection FP1, above the projections which host attributive adjectives and numerals and below the projections hosting strong determiners (Kayne 1994, Cinque 2013: 172, 197).

(ii) RCs involve two non-distinct nominal elements (Hulsey & Sauerland 2006, Cinque 2013, 2020a,b), one merged inside the RC and the other merged outside the RC in the QRPLQDO VSLQH ZKLFK LV PRGLILHG WHLABW KH 5 & \$ (the former Internal Head and the latter external Head, thereby using the term Head with capital letter when we refer to the nominal phrase that the RC modifies and the one that is relativized).

(iii) The external Head in free RCs is a classifiable element of the type PERSON, THING, PLACE, TIME, MANNER, DEGREE, etc. which is the smallest component of a nominal expression (Kayne 2005, Cinque 2020a,b). For ease of exposure, we label it NP. The external Head is modified by a modifier of the sort SUCH, which can be lexically realized in some languages. In Italian, the external Head is usually modified by Italian demonstratives giving rise to the so-called light-headed relative clauses (Benincà 2010).

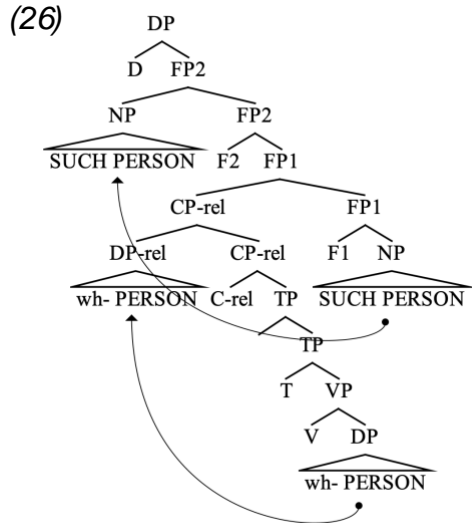
(iv) Since the internal Head is an argument of the predicate and a nominal expression is an argument only if it is introduced by a category (Szabolcsi 1987, Caponigro 2004, Longobardi 2008), the internal Head is a DP, more specifically an indefinite DP (Bianchi 1999, Cinque 2013). This is captured in cartography by proposing an articulated structure as (25) (where the  $\bar{w}$  element takes as complement an NP non-distinct from the external NP).



(v) The  $\bar{C}$  head is specified for a probing feature [ $\bar{w}$ Rel\*] and finds its goal in the internal Head, which has the feature [Rel]. The internal Head enters an Agree relation with  $\bar{C}$  and adjoins to CP. We follow Rizzi (2004) in proposing that the feature [Rel] is a criterial feature. After the internal Head moves to Spec, CP, a criterial configuration is created which involves: DP<sub>rel</sub>, CP,  $\bar{C}$ . As in Rizzi (2015), the head and the specifiers involved in a criterial configuration agree for the criterial feature, which is shared onto their labels.

(vi) RCs can be derived via raising or matching (Cinque 2020b). In the former case, the external Head remains in situ, while in the latter, the external Head raises to Spec,FP (Cinque 2020 a.o.).

We exemplify the points (v) and (vi) in the tree (26). We illustrate only the case in which the external Head raises to Spec,FP.



With these premises, we take into comparative and causal clauses. Following Kayne (2005) and Cinque (2020a,b), we propose that whereas in comparative clauses the internal Head consists of the *wh* paired to a null nominal MANNE/EXTENT, in causal clauses, it is paired to a null nominal SITUATION. In so doing, we derive the following structure:

On the basis of its etymology clearly connected to definiteness, we take the demonstrative *sì* as the modifier of the external Head and precedes the *wh* pronoun. Since *sì* is the modifier of the external Head and precedes the *wh* pronoun, we propose that the external Head moves to Spec,FP.

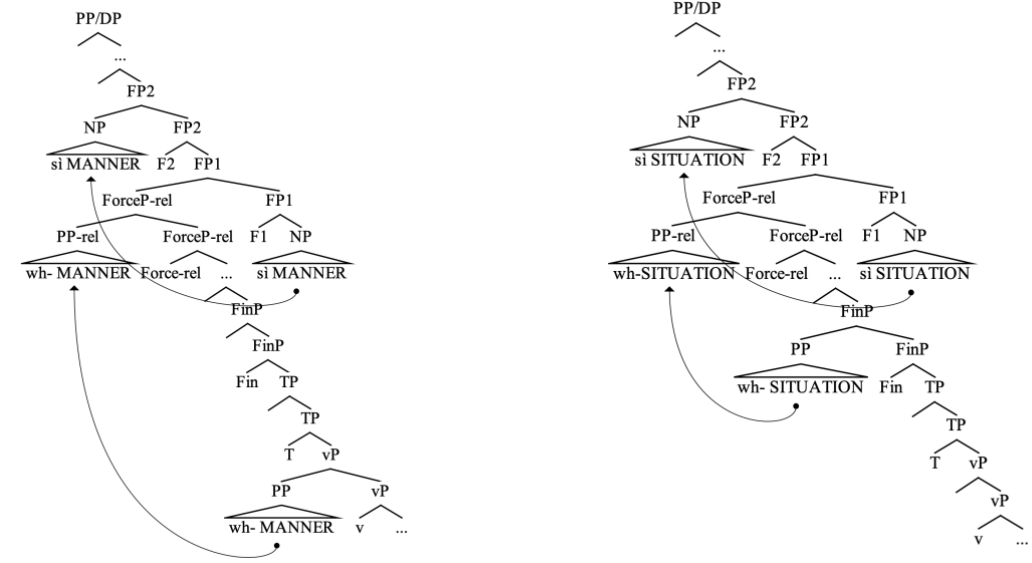
#### 4.2. The syntax of *siccome/sì come* CPs in diachrony

Through the diachrony of the lexical item *siccome/sì come* (Section 3), we showed that the causal reading of *siccome/sì come* arose from a comparative-similitive interpretation. In addition, we demonstrated that the semantic change from a comparative to a causal marker occurred in specific contexts: (a) when the clause was a finite CP in an adjunct position; (b) the dependent event was factually, temporally contiguous to the main event; (c) when the dependent event shared its participants with the main event; and (d) mainly when the clause was to the left of the main CP. In these contexts, *siccome/sì come* could introduce both comparative and causal clauses. From the mid-18<sup>th</sup> century, conditions (c-d) started to be relaxed and are eventually lost. Conversely, the position of causal CPs becomes fixed, preceding the main CP. We claim that the diachronic extension of the meanings conveyed by *siccome/sì come* depends on two properties: (a) the type of null classifier paired with the *wh*-phrase; (b) the movement of the *wh*-phrase.

2 Q WKH EDVLV RI . D \ Qlik Elements, he diachronic extension D V V L I L H U  
of the meanings conveyed by siccome/sì come can be phrased in terms of change in  
the types of classifiers with which the wh-determiner can be paired. The extension is  
restricted to the specific contexts discussed in Section 3 which ends with siccome/sì  
come paired to two different null nominals: MANNER/EXTENT in the case of  
comparative clauses and SITUATION in the case of causal clauses.  
Causal and comparative clauses involve two different syntactic derivations. The type  
of null classifiers determines whether the wh-phrase moves to the COMP domain from  
the vP/TP layer, as in the case of comparative clauses, or whether it is already  
merged in the CP and moves to a higher CP position, as in the case of the causal  
siccome/sì come. We follow Cinque (1999) in claiming that AdvPs and PPs have a  
fixed position within the clausal spine and extend this analysis to semantically related  
CPs. Hence, we assume a unified merge position for manner adverbs and comparative  
CPs as well as for situation adverbials and causal clauses.  
The final landing site of the wh-phrases in relative clauses is Spec,ForceP (Rizzi &  
Bocci 2017). In comparative clauses, the wh-phrase moves from a specifier position  
within the vP layer – the position where manner adjuncts are merged (Cinque 1999)  
to Spec,ForceP. In causal clauses, the wh-phrase moves from a specifier position  
within the CP – the position where situation and speech acts adjuncts are merged  
(Cinque 1999) – to Spec,ForceP. We illustrate the different derivations (27):  
(27) a. Comparative siccome/sì come (27a) and causal clauses (27b).

(27) a. Comparative siccome/sì come

b. Causal siccome/sì come



Our analysis captures the difference noted by Cecchetto & Donati (2012) between  
comparative and causal clauses and maintains their general proposal according to  
which the wh phrase in comparative CPs moves from position within the TP/vP  
layer to the left periphery, whereas it is externally merged in the COMP domain in  
causal clauses (see Rizzi 2001)

As shown in Section 2, in the second stage various occurrences were ambiguous  
between a comparative and causal interpretation: the clause introduced by  
siccome/sì come provided the manner but it also entailed the cause for the realization of the main  
event. The ambiguity arose in specific syntactic contexts: when the dependent event

was (i) factual, (ii) temporally simultaneous or preceding the main event, with event participants shared, (iv) when the subordinate clause was to the left of the main clause, (v) when the subordinate clause was not focalized. Conversely, from the third stage, this ambiguity possibly disappeared in the occurrences with meteorological predicates.

We capture this change by proposing that the original ambiguity results from a invited and then generalized pragmatic implicature which undergoes conventionalization in the history of Italian. According to Grice (1975) and Traugott (2004), when an item or a structure used in a specific context gives rise to the same inference often enough, this inference may become conventionalized and the inference formerly associated with the item/structure becomes part of its semantics. At this point, the item/structure is ambiguous between its original and its newly grammaticalized meanings or the original meaning may be lost. The grammaticalization of causality from the similative comparison is formally captured by proposing a three stage path, illustrated in (28).

(28) Diachronic change of siccome in Italian		
Stage I	Stage II	Stage III
wh-MANNER/EXTENT	wh-MANNER/EXTENT	wh-SITUATION
movement from vP/TP	movement from vP/TP	external merge in
to CP	to CP	CP
	pragmatic inference of	polarization of
	causality (in specific	morphological
	syntactic contexts)	forms

According to (28), in the first stage, only a similative-comparative meaning is associated to siccome/sì. The comparative wh phrase which is paired to the null classifier MANNER/EXTENT moves from vP/TP to the left periphery. In fact, our data showed that between 1200 and 1350 siccome/sì could most exclusively introduced a comparative CP.

In the second stage, when the syntactic conditions were met, pragmatic inference arose the comparison between the manners in which the dependent and main event occurred sharing participants and in a temporal sequence such that the dependent event precedes the main event could be inferred. In fact, a comparison between situations causally linked. Although the wh determiner is paired to the null classifier MANNER/EXTENT, a causal relation arose as a pragmatic inference. The meaning of similarity in the manner/extent which the events take place becomes enriched inferentially by the implicature that correlation between similar manners/extents involves a causal relation. We propose that the implicature is computed in the derived position of the wh phrase, namely in Spec, ForceP. In the analysis of RCs, the wh phrase could be either reconstructed in its original position, where our case it expresses a manner relation, or in its derived position, where it entails a comparison over situations causally connected. Interestingly, our formalization captures the reading ambiguity we found in many occurrences from the second period, namely between 1400 to 1700. When the event was factual, the subordinate was finite, the dependent event was temporally simultaneous or immediately precedes the main event, the event participants were shared between the subordinate and the main



clause, the subordinate clause was *abissive*, not focalized and was to the left of the main clause, a pragmatic inference of causality arises. The temporal coincidence or similarity, the sharing of the event participants, the position of the clause to the left where backgrounded information is usually placed favored the invited and then generalized pragmatic inference that two events which are similar in the manner, temporally related, affecting the same participants may be inferred to be causally connected.<sup>12</sup> These contexts, in which a causal interpretation could arise, do not instantiate independent properties of causal clauses. Indeed, as Cristofaro (2003) noted, causal clauses are temporally independent and do not impose any predetermination on the event participants. Rather, they are felicitous conditions for the pragmatic inference to arise.

Around mid-18<sup>th</sup> century the inference Manners>situations becomes conventionalized. The conventionalization has the syntactic reflex that the *wh* determiner is now paired with the classifier SITUATION. The conditions licensing the pragmatic inference of comparisons between situations causally connected become relaxed and are eventually lost. Thus, at stage 3, two derivations distinguish the comparative and causal adverbial clauses: in the former, the *wh*-phrase moves from the *wh*-phrase vP/TP to the left periphery; in the latter, the *wh*-phrase is externally merged in the left periphery. From around 1750, indeed, temporal coincidence or similarity as well as sharing of event participants are not instantiated in many occurrences. The position of causal CPs is robustly to the left of the main clause in almost all the occurrences.

In conclusion, from a derivation in which *si* comes/sì moves to the left periphery and the causal relation results from a pragmatic inference, Italian slowly develops a derivation with *si* compared to the null classifier SITUATION, which is exclusively externally merged and encodes causality. This diachronic change can be viewed as an instance of the Merge-over-Move principle proposed in van Gelderen (2004).<sup>13</sup>

Our analysis makes an interesting prediction regarding the positioning of the subordinate clause relative to the main clause. Since causal clauses modify a situation argument, they are assumed to be merged in the COMP domain, according to the

<sup>12</sup> A reviewer was very skeptical about this proposal. She criticized the addition of an implicature that becomes conventionalized and suggested to pursue an approach exclusively EDVHG RQ OH [LFDO PHDQLQJ VKLIW † ZKDW DERXW DVVX head SITUATION for independent reasons « @ DQG RYHU WLPH † VLFFRPH · V ZLWK 6,78\$7,21 WRR UDWKHU WKDQ MXVW O\$11(5 (;7( already contains this syntactic change: lexical shift, which then correlates with a different derivation, is indeed proposed at Stage 3. However, an approach based exclusively on lexical meaning shift would not account for the change we observed. More precisely, it cannot account for the fact that a causal interpretation could arise only when specific conditions were met and many instances were ambiguous between a comparative and a causal interpretation in Stage 2 but not in Stage 3. Hence, although admittedly less elegant, we maintain our proposal.

<sup>13</sup> Notice, however, that the status of Merge-over-Move has become quite problematic in most recent minimalist theories. For instance, Chomsky (2019: UCLA lectures) argues that, when possible, Move (Internal Merge) is favored as it requires investigating a smaller domain than External Merge. We thank an anonymous reviewer for having pointed this out. Since many diachronic changes have been captured in terms of the Merge-over-Move economy principle, the consequences of these recent proposals for diachronic syntactic phenomena should be properly and deeply considered in another paper.

cartographic approach. Conversely, since comparative clauses modify a manner argument, they are merged in the vP layer.

While for causal clauses the position to the left of the main clause may be the basic word order of merge, the positioning of comparative CPs to the left of the host clause is derived via topicalization or focalization of the comparative CP to the COMP domain (see also Valmala 2009). One possibility is to move the comparative clause via clitic-left dislocation. In this case, a resumptive pronoun may appear in the host clause as illustrated in (29).

- (29) a. > « ( [si come il capo ne le intelligenze  
 so as DET head in DET intelligence<sub>PL</sub>  
 mistiche e sacre la cognizione e vita  
 mystical and sacred DET cognition and life  
 significa, e li piedi li effetti de l'  
 signify.PRS3S and DET foot.PL DET effect.PL of DET  
 G  
 animd, così le mani le operazioni umane  
 soul so DET hand<sub>PL</sub> DET action<sub>PL</sub> human  
 significano;  
 signify.PRS3PL  
 μ \$ V W K H K H D G L Q P \ V W L F D O D Q G V  
 and life, and the feet the effects of the soul, so the hands signify h  
 R S H U D W L R Q V ¶  
 (Collenuccio Pandolfi, *Filotimo* 1497)
- b. [Si-come ne-l ricavare la rendita deve  
 So-as in-DET derive<sub>INF</sub> DET income must<sub>PRS3SG</sub>  
 considerarsi ogni sorta di frutto], così  
 consider<sub>INF-CL</sub> every sort of profit so  
 nelle deduzioni non deve lasciarsene alcuna.  
 in-DET deduction<sub>PL</sub> NEG must<sub>PRS3SG</sub> leave<sub>CL-CL</sub> any  
 As in calculating the income all sorts of profits must be considered  
 so in deductions none must be left behind  
 (Einaudi Luigi, *La terra e l'imposta* 2; 1942)

Although a full discussion on resumption is outside the scope of this paper, we tested a correlation. If causal and comparative clauses have the same syntax in Stage 2 as we proposed, they are both merged to the right of the host clause. Hence, the left positioning of either comparative or causal CPs should involve a similar amount of resumption in both comparative and causal CPs. Conversely, in Stage 3 causal CPs merged in the CP and, thus, precede the host clause. Hence, we expect the proportion of resumption in causal and comparative CPs to differ: more resumptives are expected in comparative than in causal CPs. The prediction is borne out. We looked at those occurrences in which both causal and comparative clauses were placed to the left of the main clause. We calculated how many times a resumptive was present or absent in the main clause. In Stage 2 both comparative and causal CPs are resumed by an adverb in the matrix clause with a similar frequency, when they appear to the left of the matrix clause. From 1300 to 1600, the percentages of a resumptive in the main clause are the

following: causal clauses 1300=15%, 1400=50%, 1500=55%, 1600=45%; comparative clauses 1300=19%, 1400=47,5%, 1500=56%, 1600=43%. Example (32a) illustrates a comparative clause from Stage 2 resumed by the adverb *adunque* while (30) shows a causal CP always from Stage.2

- (30) *Adunque giusta cosa è che [si-ccome da  
Therefore just thing bePRS3SG that so-as by  
molta gente fu onorato nel mondo  
many people bePST.3SG honored in-DET world  
ingiustamente, così giusta cosa è che da  
unjustly so just thing bePRS3SG that by  
-ccento tanti demonii sia onorato  
hundred many demonPL be.SBJV.PRS3SG honored  
de' nostri onori, cio-è di tutte le  
of-DET our honorPL that-is of all DET  
pene dello -'nferno.  
painPL of-DET hell*  
 μ 7 K H U H I R U H L W L V M X V W W K D W D '  
 people unjustly, so it is just that he should be honored by a hundre  
 demons with our honors, that is, L W K D O O W K H S D L  
 (Filippo degli Agazzari, Assempri, early 15<sup>th</sup> cent.)

Conversely, in Stage 3 causal CPs are usually not associated to a resumptive in the matrix clause, whereas resumptives appear with comparative CPs (29) with the same frequency attested in Stage 2. Put differently, from 1700 the presence of the resumptive is dependent on the clause type: it usually appeared with comparative clauses but not or less so with causal clauses. When the subordinate precedes the main clause, a resumptive is present in the main clause in less than 16% of the occurrences with causal clauses and in more than 53% of the occurrences with comparative clauses: causal clauses 1700=15,8%, 1800=15%, 1900=6%; comparative clauses 1700=53%, 1800=51%, 1900=52%.

## 5. Conclusion

This paper addressed whether adverbial causal clauses are underlyingly relative clauses. By investigating the diachrony of the adverbial clauses introduced by the item *siccome/sì come* (DWR V L Q F H ¶ L Q W K H K L V W R U \ R I , W D O L D Q) for relativization and adverbial causal subordination according to which causal clauses are relative clauses over situations envisaged in § U V H Q (2021) HW e L ü demonstrate that causal *siccome/sì come* develops out of the comparative similative marker along a three-step diachronic process. The change was formally captured by means of type of movement and null classifier-like element paired to the *item*. In the first stage, the comparative phrase is paired to the null classifier

<sup>14</sup> As a reviewer correctly noticed, it would be necessary to provide a diachronic investigation of the item *così/sì* as it may have played a crucial role in the change from comparative to causal adverbial *siccome/sì come* CPs. We leave this for future research.

MANNER/EXTENT and moves from vP/TP to the left periphery. In the second stage, in specific contexts a pragmatic inference is such that the dependent event could be inferred to be causally related to the main event. While the wh-determiner is paired to the null classifier MANNER/EXTENT, the meaning of similarity in the manner/extent in which the events take place has become enriched by the implicature that similar manners/extent involve similarity between situations causally related. The invited and then generalized implicature is computed in the derived position of the wh-phrase, namely in Spec,ForcedP. In the third stage this inference becomes conventionalized with the syntactic reflex that the wh-determiner is now paired to the classifier SITUATION. The conditions licensing the pragmatic inference of causality become relaxed and are eventually lost. Thus, that period two derivations distinguish the comparative and causal adverbial clauses whereas in comparative clauses the wh-phrase moves from the wh-phrase vP/TP to the left periphery, in causal clauses the wh-phrase is externally merged in the left periphery. Although further research is needed, a similar derivation may be extended to other Italian adverbial clauses which encode some sort of causal relation and are diachronically derived from temporal clauses like those introduced by *poichè*, *dal momento che*.

In so doing, our paper extends the relative clause analysis proposed in the theoretical literature for temporal, comparative and conditional clauses to causal clauses. In addition, it uncovers a novel link between comparative and causal markers. Typological studies have indeed showed that causal markers are semantically and diachronically related to relative, temporal and purpose subordinators. Likewise, comparative markers have been argued to develop into temporal markers encoding simultaneity or immediate temporal anteriority. We demonstrated that causal markers may originate from comparative ones. While causality usually arises as a conventionalized implicature from temporal contiguity, our study shows that it also arises from correlation between situations. The change from similative to causal markers is attested in various Indo-European languages and Basque. Future research is needed to establish to what extent the change from comparative to causal marker is a peculiarity of Indo-European languages or is also attested in other typologically and geographically distant languages.

This paper opens new issues. For instance, it leaves unaddressed the role of univerbation and morphological neutralization. In the third stage, comparative and causal derivations are differentiated morphologically. While comparative clauses are introduced by the non-univerbated forms *sì come*, causal clauses exhibit the univerbated form of the subordinator *siccome*. The complete specialization of the two forms can be observed in various Venetan dialects where only causal *come* is followed by the complementizer *che* (Zdzienicka 2023). While in Italian we assist to a polarization of the morphological forms, in French and Spanish causal and comparative relations are morphologically neutralized, being encoded by the same item, i.e., *comme* / *como*. Future research is needed to establish the competition between Italian *siccome* / *sì come* and the simple forms *come* as well as their possible overlaps.

Acknowledgments

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