

The development of adversative connectives: stages and factors at play

Abstract

In this paper we propose a multiple-stage model for the development of interclausal adversative connectives, based on the qualitative and quantitative exam of the three Italian connectives *però*, *tuttavia* and *mentre*. The main purpose of this study is the identification of the respective roles played by frequency, syntax and context in the development of the adversative function. In the analysis of each of the three diachronic paths at issue, we keep the semantic parameters separate from the syntactic ones, monitoring both the semantic (in)compatibility of each occurrence with the source and the target meaning, identifying three macro-types of contexts (incompatible with the target meaning, compatible with both the source and the target meaning, incompatible with the source meaning), and outlining the syntactic features characterizing each context type through the centuries. Our data show that, despite the differences, the three paths show a number of recurrent properties, which underline the central function of frequency in triggering and spreading the change and the importance of constructions as the units that speakers process, elaborate and innovate. Finally, based on the relative frequency of context types over time, we propose a four-stage model that describes the successive steps of development of the adversative function.

1. Introduction: aims and methodology

1.1. Aims of the paper

The aim of this paper is to examine the recurrent factors at play in the development of interclausal adversative connectives, with special focus on the stages attested in the history of the three Italian connectives *però*, *mentre* and *tuttavia*, originally denoting result (‘therefore’), simultaneity (‘while’) and temporal continuity (‘always’) respectively. Despite the attention devoted to the three case studies, the discussion aims to provide a general model for the development of adversative connectives, which may be applicable to further paths in different languages.

By adversative connectives we mean argumentative devices encoding a semantic contrast between two clauses. Adversative connectives encode a clearly procedural meaning, because they provide hearers with instructions on how to interpret and integrate the content of two linked clauses within an evolving mental model of discourse. This property makes adversative connectives especially interesting from a diachronic perspective, because they can be a favored test bed for a number of recent models of change that assign great value to intersubjectivity, dialogicity and more in general the pragmatic context of communication (cf. Traugott and Dasher 2002; Traugott 2003; Visconti 2009).

Adversative connectives signal the presence of a *conflict* either between the connected states of affairs or between one of them and some prior expectations. In both cases, adversative connectives require the hearer to look for some contradictory elements in order to identify the reason for the conflict. Three main types of contrast between clauses are typically identified in the literature: (i) simple opposition (‘X whereas Y’), in which the conflict is symmetric and is generated by the somehow antonymic semantics of the linked clauses, (ii) correction (‘not X, but rather Y’), in which the conflict is generated by the explicit denial of the first element followed by its substitution with the second one, and (iii) denial of an expectation (or *counterexpectative* contrast, ‘X, but Y’), in which the conflict is determined by the denial of some expectation generated by the first clause or

by context (for a detailed discussion of these three types of contrast, see Haspelmath 2007 and Mauri 2008: Ch. 4).

This study takes into account two counterexpectative connectives (*però* and *tuttavia*) and an oppositive one (*mentre*). In the analysis of *però* we will describe a semantic change developing the contrastive value from an original causal one, and we will explain how and why such a semantic reversal from the value 'because of that' to 'despite that' takes place. The discussion on *tuttavia* and *mentre*, on the other hand, will follow the rise of the adversative function out of an original temporal one. In the case of *tuttavia* we will describe how a temporal adverb of continuity roughly meaning 'always' develops into an interclausal connective meaning 'nonetheless', highlighting the stages through which both the semantic and the syntactic change occur. Finally, in the diachronic exam of *mentre*, we will discuss the semantic change from subordinator denoting simultaneity into subordinator denoting opposition (cf. Eng. *while*), also addressing the development of a coordinating adversative function that *mentre* displays in Modern Italian.

The two main questions at issue in the research are whether there are recurrent *patterns* in the development of the adversative function and whether it is possible to identify the *factors* at work in the successive stages of the diachronic paths under examination. Besides a qualitative analysis of texts from the 13th to the 20th century, this study also provides quantitative data, which make it possible to monitor the role of frequency in diachronic change.

Before discussing some preliminary methodological issues, let us systematize the aims of this paper by isolating the three aspects that will receive special attention throughout discussion. First, we will identify the successive stages that spell the three paths of change under examination, in connection to the different types of contexts in which the connectives are attested (cf. Heine 2002 and Diwald 2002). Second, we will consider the respective roles of conversational implicatures and syntax in favoring and reinforcing the reanalysis of the interclausal connectives at issue (cf. Traugott and Dasher 2002; Traugott 2003; Tabor and Traugott 1998). Third, we will discuss the role of frequency in triggering and spreading the diachronic change, based on the quantitative evidence provided by our sample (cf. Bybee 2003, 2006; Diessel 2007; Haspelmath 2008).

The paper is structured as follows. In Sections 1.2 and 1.3 the methodological choices, the sample and the parameters of analysis are discussed. Sections 2.1, 2.2 and 2.3 deal with the development of the adversative function of *però*, *tuttavia* and *mentre* respectively. These three sections are structured along the same scheme: we first describe the properties shown by each connective in Modern Italian, then we present the diachronic change in detail, and finally we go back to the main purpose of the contribution and focus on the factors at play in each path. Section 3 provides a general picture, discussing the factors and stages which characterize the development of adversative connectives in the light of the data presented in the paper. Finally, in Section 4 some conclusive remarks point out the major results of the study and the prospects for future research.

1.2. Methodology and sample

The same sample has been adopted for the three case studies (see Appendix), including texts from the 13th to the 20th century. The sample can be argued to be as balanced as possible under two respects, i.e. at the qualitative and at the quantitative level. In qualitative terms, each century includes a comparable amount of poetry, novels, argumentative texts, scientific texts, and private letters, thus reducing the risk of having the results falsified by an asymmetry in the selection of text types. In quantitative terms, each century includes a comparable total amount of words (min 311.649, max 540.022 words), thus reducing the risk of having the results falsified by a significant size difference among the centuries. This said, our sample only covers a small amount of the texts written between the 13th and the 20th century; as balanced as it may be, it will be thus necessarily biased as a result of the availability of texts in electronic format.

The following procedure has been adopted in the analysis of data. All texts are in .txt format; the occurrences of *però*, *tuttavia* and *mentre* have been electronically retrieved through WordSmith

Tools and have then been stored in Excel sheets. Every occurrence has been classified on the basis of both syntactic and semantic parameters, which have been judged to be relevant to the diachronic path on the basis of a preliminary qualitative exam. The relevant parameters are not identical in the three cases at issue and will be discussed in detail for each path in the following sections. There is however a semantic parameter based on which all three diachronic patterns have been examined, which is the main criterion underlying our analysis: each occurrence has been classified on the basis of its *(in)compatibility* with the original meaning on the one hand, and with the adversative meaning on the other hand. The three possible values are 'compatible with the original meaning only (i.e. incompatible with the target meaning)', 'compatible with both the original and adversative meaning (i.e. dual compatibility)', 'compatible with the adversative meaning only (i.e. incompatible with the source meaning)', roughly corresponding to what are commonly referred to as original contexts, ambiguous contexts between the original and the new meaning (or 'bridging contexts', see Heine 2002), and contexts with the new meaning respectively. Further discussion on the parameters of analysis is provided in the next section.

The final step of our research concerns the quantitative side of the analysis. Once all occurrences were classified, the relative and absolute percentages for the relevant parameters were computed for each century and monitored in their change over time (see figures throughout the paper).

1.3. *A multiple-stage model and the crucial role of context: parameters of analysis*

The present research moves from the assumption that diachronic processes are gradual and can be analyzed in successive stages, identified on the basis of the types of contexts in which the form under examination occurs. This perspective is widely shared within the framework of grammaticalization studies, and is at the basis of most recent constructional approaches to language change (see Traugott 2003; Diewald 2006; Bergs and Diewald 2008; Traugott and Trousdale 2010). Before discussing the parameters we employed in the exploration of context types, let us briefly examine the two models proposed by Diewald (2002) and Heine (2002), which constitute the two major systematic analyses of language change where the identification of the successive diachronic stages rests upon the characterization of the context type.

Diewald (2002) identifies a first stage associated with *untypical* contexts, namely contexts in which the form was not attested before and that are characterized by some ambiguity between the original and the target meaning – an ambiguity that may arise as a conversational implicature. The second stage is associated with *critical* contexts, characterized by both semantic and structural ambiguity between the alternative readings, triggering the process of grammaticalization proper. Finally, the third stage is associated with *isolating* contexts for both the original and the new meaning, namely 'specific linguistic contexts that favor one reading to the exclusion of the other' (Diewald 2002: 103), thus showing the completion of the grammaticalization process.

A similar analysis in three successive stages is proposed by Heine (2002), who distinguishes between three different kinds of contexts: *bridging* contexts, *switch* contexts, and contexts during the stage of *conventionalization*. Bridging contexts are characterized by semantic ambiguity between the original and the target meaning. Switch contexts roughly correspond to Diewald's isolating contexts, since they are clearly incompatible with the original meaning but still associate the new value to a set of specific contextual properties. Finally, in the stage of conventionalization, the form with the new meaning may occur in new contexts and becomes independent from contextual restrictions.

The crucial difference between these two models lies in the characterization of the contexts in which the change occurs. According to Diewald, such contexts have to be ambiguous at two levels, namely syntax and semantics, while Heine only speaks about semantic ambiguity. Neither of the two, however, provides a clear and structured methodology to separate and monitor the two dimensions, which certainly are closely intertwined in triggering the change but do play different roles. Furthermore, both scholars address the presence of two possible readings (the source and the

target one) in terms of ‘ambiguity’, as if speakers were not certain about the value that should be assigned to the specific occurrence.

In normal speech, however, it is frequently the case that speakers are aware of their communicative intentions and typically do not choose to be ambiguous on purpose (except in particular situations) - although their communication might be perceived by hearers as compatible with more than one interpretation. What typically happens is that hearers, provided with the context of discourse, attempt to interpret the message in the most relevant way, enriching it with pragmatic inferences (cf. Hopper and Traugott 2003: 76, 79; Sperber and Wilson 1995). Therefore, if context is compatible with a contrastive interpretation, hearers are likely to interpret the message as expressing a conflict, *besides* a temporal, causal, etc. relation. In this way, a new layer of meaning is added. Enriching a message with further compatible interpretations is in our view rather different from perceiving it as ambiguous, because the term ambiguity implies an absence of clarity that does not necessarily characterize critical and bridging contexts, which may instead simply allow a multilayered reading. For this reason, in this paper we will talk about ‘dual compatibility’ with both the source and the target values, rather than use the term ‘ambiguity’.

In this work, we follow both Heine and Diewald in the analysis of diachronic change as the result of successive stages and in assigning a central role to context. However, we will refrain from strictly conforming to their models and will rather keep the semantic and pragmatic properties of context separate from the morphosyntactic ones, aiming at a distinct characterization at the semantic and the syntactic level of the successive stages and of the different context types.

On purely semantic grounds, we identify contexts that are (i) incompatible with the target value (i.e. compatible with the source value only), (ii) compatible with both the source and the target value and (iii) incompatible with the source value (i.e. compatible with the target value only). Compatibility is valued on the basis of contextual clues. For instance, an occurrence where *mentre*, whose original meaning is that of temporal simultaneity, links two clauses that are overtly located at two different moments in time (e.g. by means of opposite temporal adverbs such as *ieri* ‘yesterday’ and *domani* ‘tomorrow’) can be safely classified as incompatible with the original value, because the presence of the two temporal adverbs excludes a simultaneity reading. Conversely, an occurrence where *però*, whose original meaning is that of result, links two states of affairs standing in causal relation can be safely classified as incompatible with the target meaning, which consists instead of the denial of such causality. In cases where neither the source nor the target meaning can be excluded the context is classified as having dual compatibility; it is in the last type of contexts that the beginning of the diachronic change is to be searched for.

Furthermore, for each of the three context types we take into account the morphosyntactic properties that they may show, by selecting some relevant features, mainly distributional in nature, that the connective may display. We focus on the cooccurrence of the form with further overt indications of contrast (other adversative markers or concessive clauses), the cooccurrence of the form with further linguistic elements that might play a role in the process of reanalysis (e.g. negative particles, further connectives), and the position of the form with respect to the linked clauses, in order to see whether certain positions are favored in triggering the development of the adversative function.

Through a qualitative analysis of data we identified the specific parameters that proved to be relevant in each path. In the case of *però*, the parameters that play a role are the presence of a negation having scope over the connective, the clause initial vs. clause internal position of the connective, the presence of a clause initial *e* ‘and’, and the overt reinforcement of the notion of contrast by means of *ma* or of a concessive clause. In the exploration of *tuttavia*, on the other hand, the parameters considered are limited to the clause initial, clause internal and/or postverbal position of the connective and the presence of *ma* or of a concessive clause reinforcing the contrastive reading. The cooccurrence of further linguistic elements did not seem to be relevant for the path. Finally, in the exam of *mentre* no clear distributional change has been registered, nor do particular distributional properties seem to trigger the semantic change. Therefore, in the analysis of the third

path only semantic parameters were considered, based on the oppositive polarity of the linked clauses and its degree of abstraction and subjectivity.

Basically, we look for those *constructions* in which the change takes place. In this contribution, we mean by construction “any learned pairing of form with semantic or discourse function, including morphemes or words, idioms, partially lexically filled and fully general phrasal patterns” (Goldberg 2006: 5; cf. also Croft 2001), in a perspective where “it’s constructions all the way down” (Goldberg 2006: 18). The notion of construction has recently gained interest in grammaticalization studies, because it offers a systematic description of processes such as reanalysis and extension, which are described respectively in terms of the rise of a new construction and as the extension of existing constructions to new contexts (see Croft 2000; Traugott 2003; Bergs and Diewald 2008). In the exam of the diachronic processes undergone by *però*, *tuttavia* and *mentre*, however, we will not strictly follow any specific constructional approach, and will mainly use the term construction to refer to the association of particular semantic values with particular distributional properties of the connective, showing that phenomena such as pragmatic inferences and form-function reanalysis take place at the level of constructions, and not at the level of the lexical semantics of the connective.

Finally, we will monitor the relative frequency with which specific morphosyntactic features occur in specific context types through the centuries, highlighting the possible preferential association between certain distributional properties and given types of context.

In the following section, the results of our qualitative and quantitative analysis are presented, discussing in detail each of the three paths at issue (Section 2). More general considerations on the factors at play and the properties that recur in the development of the adversative connectives under examination will follow in Section 3.

2. The development of *però*, *tuttavia* and *mentre*: qualitative and quantitative analysis

2.1. From cause to contrast: *però*

As shown in (1), *però* is nowadays used to code a contrast originating from the denial of some expectation and is roughly equivalent to *aber* in German (cf. Scorretti 1988: 230–231).

- (1) Mario gioca bene **però** perde continuamente.
 Mario play:PRS.3SG well **però** lose:PRS.3SG continuously
 “Mario plays well **but** always loses.”

However, the specialization of *però* as an adversative connective is relatively recent. From its earliest occurrences in the 12th century until the end of the 16th century, *però* rather had a causal (*però che* ‘since, because’) or resultative function (*però* ‘therefore’, see examples (2) and (3)). It is only in the 16th century that this marker is attested for the first time with an unambiguously adversative meaning. The evolution of *però* thus shows a functional reversal: whereas in its first occurrences *però* introduced the cause or the result of a causal sequence, now it signals the opposite, namely the denial of an expected causal sequence. The semantic change we are interested in originated from the resultative meaning in very specific contexts, that is, after a negation that had scope over the cause-effect relation.

In the diachronic change leading from the resultative meaning of *però* to its adversative value, we can identify three types of contexts based on their compatibility with the *source value* (i.e. the resultative function ‘therefore’) and the *target value* (i.e. the counterexpectative adversative function ‘however, nonetheless’). Figure 1 shows the frequency of these three types of contexts across the centuries.

As can be observed in Figure 1, until the 14th century contexts that are compatible with the adversative value are almost absent, and the only attested value is the resultative one. In the 15th

century the number of contexts in which *però* is compatible with an adversative reading increases, but such contexts also maintain a clear compatibility with the source value, i.e. both interpretations are possible. During the 16th century the number of contexts that are compatible with both values is roughly equivalent to the number of purely resultative contexts and, surprisingly, also with the number of purely adversative contexts. It is thus at this time that the adversative connective starts to spread. From the 17th century, the number of contexts compatible with both meanings gradually decreases and reaches zero in the 18th century. On the other hand, adversative contexts that are incompatible with the source value keep the same frequency during the 17th century and then rapidly increase from the 18th century on, at the expenses of purely resultative uses, which become rare in the 18th and 19th centuries and disappear in the 20th century.

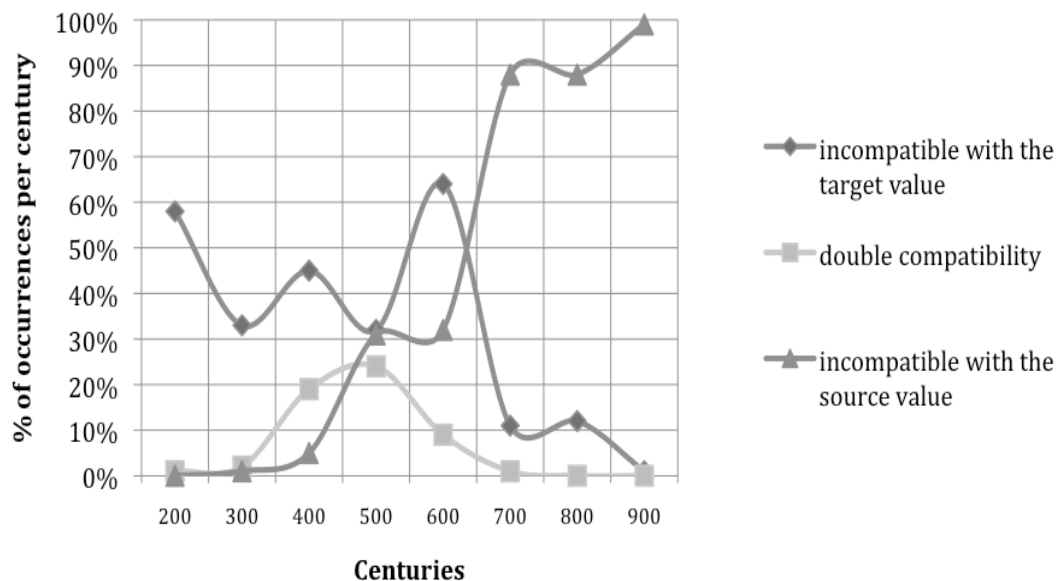


Figure 1. *Però*: context types

Let us now examine in detail the semantic and morphosyntactic properties that each of these three context types may show, in order to identify the factors at work in the diachronic process through which the adversative connective *però* develops. For this path of change, the relevant morphosyntactic features that will be considered are: (i) the position of *però* with respect to the clause in which it occurs, which may be clause initial or postponed to some linguistic element; (ii) in cases where *però* is postponed, we will also examine the linguistic element that precedes it, with special focus on the presence of the conjunctive connective *e* (*e però*) and the presence of a negation (*non però*); (iii) in cases where *però* is postponed to the first constituent of the clause (or to the first and the second constituent), it will be classified as generically occurring in postponed position (without further specifications concerning the nature of the preceding constituents).

2.1.1. Contexts that are incompatible with the target value. As already briefly mentioned, *però* originally had a resultative meaning ‘therefore’, introducing the effect of a causal sequence. It could also be employed with a causal value ‘since’, which was however linked to the specific construction [*però che*] and does not seem to be involved in the development of the adversative function. In the following discussion we will focus on the properties characterizing the contexts in which *però* is only compatible with a resultative meaning, leaving the causal one aside.

Contexts in which the resultative value is the only possible reading are by far the most frequent until the 15th century and remain very frequent until the 17th century. Example (2) shows this use in Dante Alighieri’s *Divina Commedia* :

- (2) Dante Alighieri, *Divina Commedia*, (1305–1321) *Inferno* XXXI, 23–28.

Tu vedrai ben, se tu là ti congiungi, / quanto
 You.SG see:FUT.2SG well if you there CLIT.2SG join:PRS.2SG how much
'l senso s' inganna di lontano; / però alquanto più te stesso
 DEF.M.SG sense REFL deceive:PRS.3SG from faraway **però** rather more yourself
pungi.
 hurry:IMP.2SG
 "[...] Well shalt thou see, if thou arrivest there, / how much the sense deceives itself by distance; / **therefore** (*however) a little faster spur thee on." (Translation by H. W. Longfellow, 1861)

These types of contexts can be further analyzed on the basis of the morphosyntactic (distributional) parameters described above. In purely resultative contexts *però* is systematically associated with clause initial position or postponed position after *e*, while it never occurs after a negation or after the first constituent of the clause. In particular, the *e però* construction remains associated with the source value until the end of the 19th century, while clause initial position at that time gradually starts to be attested also with adversative function, and nowadays characterizes almost 20% of the occurrences of *però*. In Figure 2 at the end of this section the morphosyntactic properties of these types of contexts are represented across the centuries and compared to the properties shown by the other two types of contexts. Example (2) shows the clause initial position of *però*, whereas in example (3) the postponed position after *e* can be observed.

- (3) Agnolo Ambrogini, alias Poliziano, *Deti piacevoli*, 38 (1479)

Messer Rinaldo, io ho inteso che voi / impazzaste
 Sir Rinaldo I AUX.1SG understand.PST.PTCP that you.PL go.mad:PST.PFV.2PL
una volta, e però vi prego / che voi m'
 one time and **però** CLIT.2PL pray: PRS.1SG that you.PL CLIT.1SG
insegnate come voi faceste a guarire [...]
 teach:SUBJ.2PL how you.2PL manage:PST.PFV.2PL to recover
 'Sir Rinaldo, I have heard that you once went mad, and **therefore** (*however) I pray you to teach me how you managed to recover.'

2.1.2. *Contexts that are compatible with both the source and the target value.* The change arguably starts in those contexts where *però* is compatible with both the resultative and the adversative function. Such contexts are characterized by the presence of a negation having scope over the resultative connective *però*, and as a consequence over the interclausal relation that it encodes, thus denying the causal sequence between the linked states of affairs. Consider the example below with a view to formalizing the semantics underlying these types of occurrences.

- (4) Leon Battista Alberti, *I Libri della famiglia*, Libro IV (1433–1441)

[...] bench' io sia, come i' sono, cupido di benificarti,
 although I be.SUBJ.PRS.1SG as I be.PRS.1SG willing.M.SG of help:CLIT.2SG
e tu studiosissimo d' essermi ad utile e onore, non però
 and you.SG eager:SUPERL.M.SG of be:CLIT.1SG to usefulness and honor NEG **però**
fra noi sarebbe ch' io potessi riputarti amico,
 between us be.COND:3SG that I can:SUBJ.1SG consider:CLIT.2SG friend
né tu di me potessi, [...]
 nor you.SG of me can:SUBJ.PST:2SG
 '[...] even if I were as I am, willing to help you, and you were eager to be useful to me and bring me honors, it would **not, for all that**, (/however it would not) be possible for me to consider you as a friend, nor could you consider me such'

Example (4) is characterized by two states of affairs that are normally expected to occur in a cause-effect sequence, which is however overtly denied. The opposition existing between the expectation of a causal chain and its explicit negation results in a contrast that is perceived as central to clause linkage. Yet, the presence of this contrast is still fully compatible with the resultative reading of *però*, in that it is precisely the overt negation of such resultative meaning that generates the conflict (see also Giacalone Ramat and Mauri 2008). Let us schematically summarize the semantics of example (4).

The construction [[clause] [*NEG però*] [clause]] introduces a consequence that does not take place despite expectations, determining a contrast between the cause and the denial of its expected effect. This leads to what we have defined as counterexpectative semantics. The contrast generated by the frustration of the expected cause-effect sequence is not explicitly coded at this stage, but is only *inferred* from the negation of the consequence. In other words, it is the whole construction [[clause] [*NEG però*] [clause]] that may be reinterpreted as contrastive. At this stage, the contrastive interpretation is still fully compatible with a more literal interpretation that assigns to *però* its source meaning.

Given the dual compatibility of these contexts, it can be hypothesized that when *però* is in the scope of negation and a contrastive inference is generated, it can be reanalyzed as the overt indicator of the inferred contrast, i.e. as an adversative connective, and the negation is in turn reinterpreted as having scope only over the second state of affairs. In other words, in these contexts the contrast deriving from the denial of the expected causal sequence becomes so salient to speakers that they look for an overt marker of such contrast, and identify it with *però*.

According to König and Siemund (2000), the connection between two contradictory relations such as causal and concessive (in their work, the label ‘concessive’ is employed in a broad sense also including counterexpectative contrast) is evident from the fact that an external negation that has scope over a causal relation is equivalent to an internal negation in a concessive or adversative linkage. In other words, negated causality [\neg *because of* p, q] is equivalent to a concessive construction containing a negation [*although* p, \neg q] (König and Siemund 2000: 354) and, we may add, to a counterexpectative relation with a negation [p, *however* \neg q].

As far as the morphosyntactic properties of contexts with dual compatibility are concerned, we can observe that *però* shows a highly specific distributional feature, namely it has to be postponed to a negation having scope over the interclausal relation. Occasionally, the inferred contrast may be reinforced by the presence of the adversative connective *ma* ‘but’ or by a concessive subordinate clause explicitly encoding the denial of the expectation, as shown in example (5).

- (5) Giorgio Vasari, *Le Vite de' più eccellenti architetti, pittori, et scultori italiani*, 2nd Part - Antonello da Messina (1550)

Ma benché molti avessino *sostitivamente cerco* di tal cosa,
But although many AUX:SUBJ.PST:3PL *stylishly* look.for.PTCP.PST of such thing
non però avevano trovato *modi [...]*
 NEG **però** AUX:PST.IPFV:3PL find.PTCP.PST way:PL

‘But although many had tried sophisticated ways to obtain it, they did **not, for all that,** (/however they did **not**) find out how to make it [...]

In these dual compatibility contexts *però* never occurs in initial position, postponed to *e* or postponed to other constituents in the clause. As can be observed in Figure 3 at the end of this section, contexts that are compatible with both the source and the target value are first attested during the 14th century, but are still extremely rare. They then become increasingly frequent during the 15th and 16th centuries, reaching the 25% of the total amount of occurrences for *però*. Such a peak frequency of dual compatibility contexts makes it plausible to identify these centuries as the period in time in which the reanalysis of *però* from resultative to adversative occurs. Contexts of this type gradually disappear during the 17th and 18th centuries. In the 19th century we found no occurrence of *però* that is compatible with *both* the source and the target value: some occurrences in

which the source reading is the only one available are still attested, though sporadically, but no dual compatibility contexts were found. This indicates that the process of reanalysis was completed and the source values attested are probably to be analyzed as archaisms.

2.1.3. *Contexts that are incompatible with the source value.* In the 15th century, the first rare occurrences of *però* in contexts that are only compatible with an adversative reading are found. From the 16th century this third type of contexts becomes increasingly frequent and is nowadays the only context in which the connective is attested (see Figure 4 at the end of the section). These contexts are incompatible with a resultative reading of *però* and are characterized by a clearly counterexpectative semantics, as shown by example (6).

- (6) Alessandro Manzoni, *Fermo e Lucia*, Tomo 1, chapter 7 (1823)
- | | | | | | | | |
|--------------------|-------------|-----------------|--------------------------|---------------|-----------------|-------------------------|--------------|
| [...] | <i>e</i> | <i>si</i> | <i>gittò</i> | <i>sul</i> | <i>duro suo</i> | <i>pagliaccio;</i> | <i>più</i> |
| | and | REFL | throw:PST.PFV.3SG | over:DEF.M.SG | hard | his.M.SG straw mattress | more |
| <i>soddisfatto</i> | però | <i>che</i> | <i>se si</i> | <i>fosse</i> | <i>posto</i> | <i>sul</i> | <i>letto</i> |
| satisfied | però | than | if REFL AUX.SUBJ.PST:3SG | put.PTCT.PST | over:DEF.M.SG | bed | |
| <i>il</i> | <i>più</i> | <i>delicato</i> | [...] | | | | |
| DEF.M.SG | more | delicate.M.SG | | | | | |
- ‘[...] and he threw himself over a straw mattress; more satisfied **however** (*therefore) than if he had laid down on the softest bed [...]

The incompatibility with the source value is due to the fact that the two states of affairs cannot be linked in a causal sequence and *però* cannot receive a resultative interpretation. At the syntactic level, these contexts are characterized by the systematic occurrence of *però* in postponed position. *Però* in clause initial position is only rarely attested with an adversative meaning during the 18th and 19th centuries, but it reaches the 18% of the total amount of occurrences in the 20th century. *Però* is instead never attested with an adversative function in postponed position after *e* (if not, only occasionally, in the 20th century). In their first occurrences, these contexts are characterized by the presence of a negation, as a residue of the dual compatibility stage. However, this time the scope of the negation does not include the interclausal relation and only covers the state of affairs referred to in the second clause: ([NEG] *però* [clause]) = (*però* [NEG clause]), as shown by example (7).

- (7) Vittorio Alfieri, *Vita*, chapter 23 (1790–1803)
- | | | | | | | | | |
|----------------|-----------------|------------------|------------------|-------------|------------------|-------------|-------------|-------------|
| [le | due | traduzioni... | il | Terenzio | e | l' | Eneide] | nel |
| DEF.F.PL | two | translation:PL | DEF.M.SG | Terentius | and | DEF.M.SG | Aeneid | in.DEF.M.SG |
| <i>segunte</i> | <i>anno '93</i> | <i>le</i> | <i>portai</i> | <i>al</i> | <i>fine, non</i> | però | | |
| following | year '93 | CLIT.3PL.F | take.PST.PFV:1SG | to.DEF.M.SG | aim | NEG | però | |
| <i>limate,</i> | <i>né</i> | <i>perfette.</i> | | | | | | |
| revised:F.PL | nor | perfect:F.PL | | | | | | |
- [the two translations...Terentius and the Aeneid] in the following year '93 I brought them to an end, **neither** revised, **however**, nor perfect (= however [not revised, nor perfect]).

However, the distributional feature that is most systematically associated with contexts that are incompatible with the source value is the occurrence of *però* in postponed position after at least the first constituent of the clause. In (8), for instance, *però* occurs at the end of the second clause.

- (8) *Esci* *pure,* *devi* *stare attento* **però.**
- | | | | | | |
|----------------|--------|--------------|------|--------------|-------------|
| Go.out.IMP.2SG | please | must.PRS.2SG | stay | careful.M.SG | però |
|----------------|--------|--------------|------|--------------|-------------|
- “You may go out, you must be careful, **though**.” (De Mauro – Dizionario della Lingua Italiana: *però*)

2.1.4. *Conclusions*. Going back now to the main purpose of this study, let us focus on the factors that seem to play a role in the development of *però* from resultative to adversative connective. Special attention will be now given to frequency and syntax, since the role of context and constructions has been already discussed in detail throughout the section.

As far as the role of frequency is concerned, our data appear to be rather clear and show a neat correlation between a peak frequency of dual compatibility contexts and the triggering of the reanalysis of *però* as an adversative connective (see Figures 1 and 3). As already pointed out, this context type appears in the 14th century, increases significantly during the 15th and the 16th centuries, then decreases and disappears in the 18th century. We can thus identify a *restricted critical period* during which contexts that are compatible with both the source and the target one are frequent and reach the 25% of the total amount of occurrences. Moreover, we can observe that this critical period is directly followed by the gradual increase of the contexts that are only compatible with the adversative function. In other words, the high frequency of dual compatibility contexts seems to be a prerequisite for the construction [NEG *però*] to be processed as a single unit and to be reinterpreted as having an adversative function, thus allowing for the reanalysis of *però* as an adversative connective (cf. Bybee 2003, 2006).

Let us now consider the role played by syntax in the path just described. The data we discussed and presented above clearly point to systematic associations between particular types of contexts and particular morphosyntactic distributional features of *però*. We have seen that contexts that are only compatible with the source value tend to associate with *però* in clause initial position or postponed after *e*; dual compatibility contexts associate with the occurrence of *però* in postponed position after negation; contexts that are only compatible with the adversative function associate with the occurrence of the connective in postponed position after negation or after at least the first constituent of the clause. Only lately do they also associate with clause initial position. There is however a further respect under which the syntactic behavior of *però* seems to be relevant.

The peak frequency of dual compatibility contexts is followed by a period of time (17th–18th centuries) in which the source and the target meaning coexist in *complementary syntactic distribution*, being systematically associated with different distributional features (cf. also Giacalone Ramat and Mauri 2008; cf. Diwald 2002 for the notion of *isolating contexts*). During this period dual compatibility contexts are rather infrequent and the occurrences of *però* are more or less neatly divided between contexts that are only compatible with the source value and contexts that are only compatible with the adversative value. Purely resultative contexts are characterized by *però* in clause initial position and postponed after ‘*e*’ (e.g. (9)), whereas contexts that are only compatible with the adversative function are characterized by *però* postponed after negation or after at least the first constituent of the clause (e.g. (10)). The two following examples are intentionally chosen from the same author, Vincenzo Monti, in order to show how the same author seems to be aware of the syntactic specialization of the two uses of *però*.

- (9) Vincenzo Monti, Epistolario, (“A Girolamo Ferri— Longiano”, 9 August 1774)
- | | | | | | | | |
|--------------|--------------|---------------------------|-----------------|-----------------|----------------|---------------|-------------|
| <i>Ella</i> | <i>forse</i> | <i>può</i> | <i>essere</i> | <i>a giorno</i> | <i>del</i> | <i>prezzo</i> | <i>che</i> |
| You.POL | maybe | can.PRS.3SG | be | at day | of:DEF.M.SG | price | that |
| <i>ha</i> | <i>al</i> | <i>presente questo</i> | <i>libro, e</i> | <i>però</i> | <i>la</i> | <i>prego</i> | <i>aver</i> |
| have.PRS.3SG | DEF.M.SG | present this | book and | però | CLIT.2SG.F.POL | pray:1SG | have |
| <i>la</i> | <i>bontà</i> | <i>di avvisarmi [...]</i> | | | | | |
| DEF.F.SG | kindness | of warn:CLIT.1SG | | | | | |
- ‘You (POLITE) may perhaps be well informed on the price that this book has at the moment, and **therefore** (*however) I ask you to be so kind as to let me know [...]

From cause to contrast: *però*

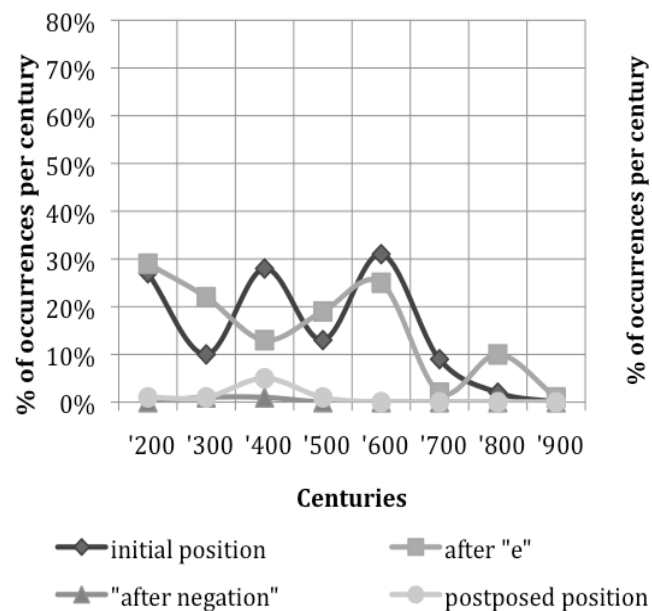


Figure 2. Contexts incompatible with the target value: morphosyntactic properties

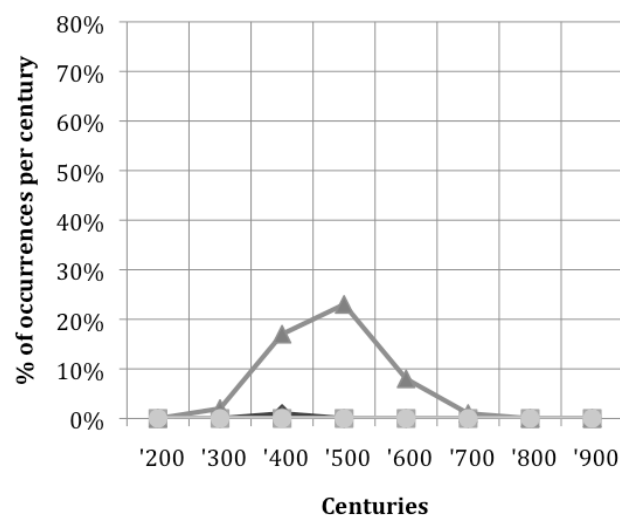


Figure 3. Contexts with dual compatibility: morphosyntactic properties.

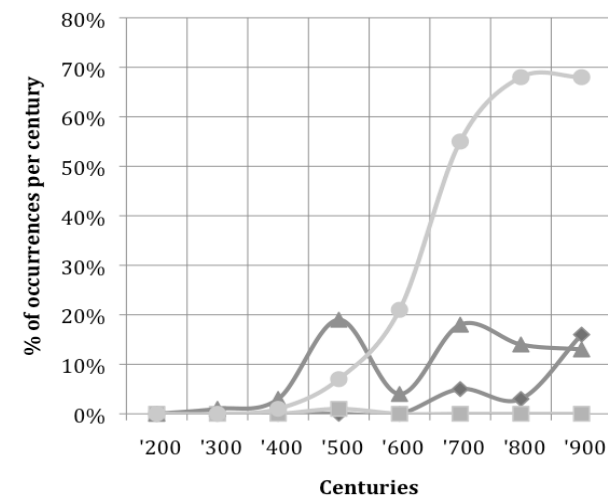


Figure 4. Contexts incompatible with the source value: morphosyntactic properties

- (10) Vincenzo Monti, Epistolario, (“All’ab. [Cesare Monti] — [Fusignano]”, 15 September 1790)
Non sono solito di scrivervi mai le nuove di Roma; questa volta
 NEG be.PRS.1SG used of write:CLIT.2PL never DEF.F.PL news of Rome this time
però ve ne voglio dare una che non è
però CLIT.2PL CLIT.3SG want.PRS.1SG give INDEF.F.SG that NEG be.PRS.3SG
piccola
 small.F.SG
 ‘I’m not used to writing to you news from Rome; this time **however** (*therefore) I want to tell you one that is not little.’

2.2 From temporal continuity to contrast: *tuttavia*

In contemporary Italian, *tuttavia* has a counterexpectative meaning roughly equivalent to *però* and may also occur with anaphoric value after a concessive clause, even though more rarely, to reinforce the denial of the expected causal sequence. The two uses of *tuttavia* are exemplified in (11):

- (11) a. *Non gli rimprovero nulla, tuttavia poteva darmi*
 NEG CLIT.3SG blame:PRS.1SG nothing **tuttavia** can.PST.IPFV:3SG give:CLIT.1SG
qualche spiegazione
 some explanation:PL
 ‘I don’t blame him for anything, **however** he could give me some explanations.’ (De Mauro, Dizionario della Lingua italiana - *tuttavia*)
 b. *Sebbene sia stanca, tuttavia uscirò a fare una*
 Although be.SUBJ.1SG tired:F.SG **tuttavia** go.out:FUT.1SG to do INDEF:F.SG.
passeggiata
 walk
 ‘Even though I am tired, **however** I’ll go out for a walk anyway.’ (De Mauro, Dizionario della Lingua italiana - *tuttavia*)

In its original meaning, however, *tuttavia* was a predicate or sentential adverb meaning ‘always, continuously’, without any connective function. Therefore, its development instantiates both a semantic change from temporal to contrastive value and a syntactic change from adverb to interclausal connective.

As we have seen in the diachronic path of *però*, it is also possible to identify three types of contexts in the development of *tuttavia* based on their compatibility with the *source value* and the *target value*. In the path under examination, the source value coincides with the adverbial function ‘always, continuously’ and the target value coincides with the adversative connective function ‘however, nonetheless’. Figure 5 shows the frequency of the three types of contexts across the centuries.

As can be observed in the figure, contexts that are incompatible with the source value are already attested in the 14th century, but they remain rare until the 16th century. On the other hand, contexts that are incompatible with the target meaning, i.e. adverbial uses, are the majority until the 16th century and then gradually decrease. In the 17th and 18th centuries *tuttavia* is frequently attested also with a different function, namely ‘still, yet’ (cf. example (12)), which is always temporal in meaning but reveals a shift in perspective towards the speaker.

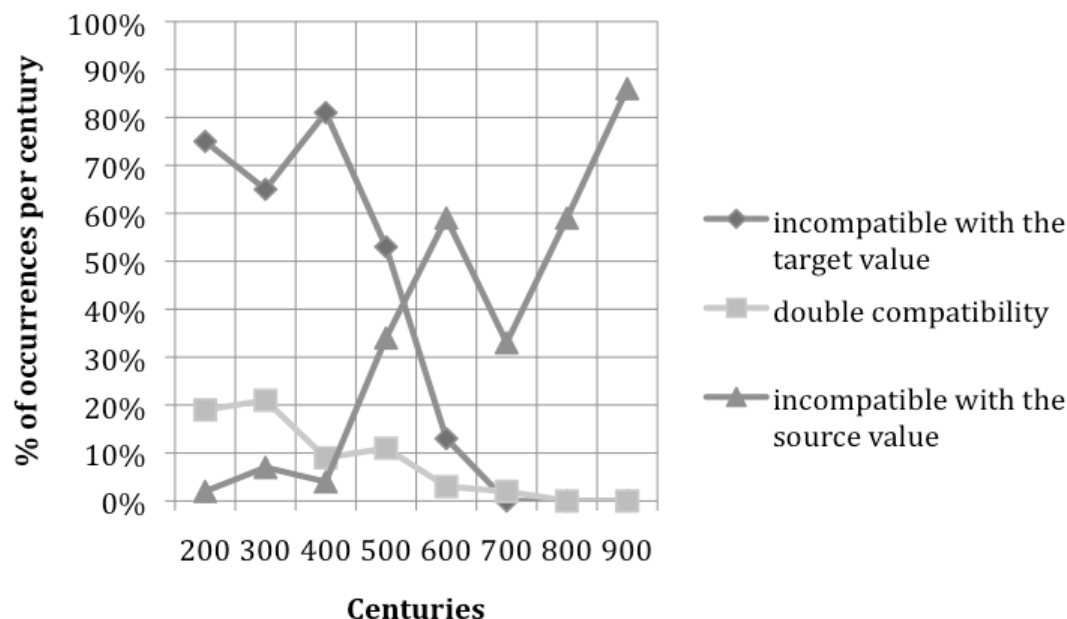


Figure 5. *Tuttavia*: context types

- (12) Alessandro Manzoni, *Promessi Sposi*, Chap. 3 (1842)

Questo termine è rimasto e vive tuttavia, con
 This term AUX.3SG remain.PTCP.PST and live.PSR.3SG **tuttavia** with
significazione più mitigata, nel dialetto [...]
 meaning more mitigated:F.SG in.DEF.M.SG dialect
 This term has remained and is **still** used, with a milder meaning, in the dialect [...]

The presence of occurrences such as the one in (12) explains why, especially during the 18th century, the absolute frequency of both contexts in which *tuttavia* means ‘always’ and contexts with the adversative value is lower than expected. The development from ‘always’ to ‘still, yet’ does not seem to play a role in the diachronic path along which *tuttavia* acquires its adversative function, but rather looks like an independent and parallel path.¹ Therefore, we will not discuss it further in this paper and will not consider this value in our quantitative remarks (cf. also Giacalone Ramat and Mauri 2009 for a detailed discussion). Unlike in the case of *però*, the number of contexts in which *tuttavia* is compatible with both the source and the target value reaches its highest peak very early, i.e. in the 14th century. In other words, at the time of the first documentation on *tuttavia*, the diachronic process under examination is already in progress.

For this path of change, we will consider the following morphosyntactic features as parameters for our diachronic analysis: (i) the position of *tuttavia* with respect to the clause in which it occurs, which may be clause initial or postponed to some linguistic element; (ii) in cases where *tuttavia* is postponed, we will be especially interested in its position with respect to the verb phrase, whether it is postponed or preposed to the verb; (iii) the cooccurrence of *tuttavia* with the general adversative marker *ma* or with a preceding concessive subordinate clause. Based on these parameters, let us now examine in detail the semantic and morphosyntactic properties that the three types of contexts identified in Figure 5 show across the centuries.

2.2.1. *Contexts that are incompatible with the target value.* The original value of *tuttavia* was adverbial, indicating that the state of affairs of the clause in which it occurred has to be intended as taking place ‘always, continuously’. Contexts that are only compatible with such a value of temporal continuity are characterized by relative syntactic mobility in the 13th century (cf. Ricca,

2010: 716, 745): the adverb *tuttavia* may occur clause initially, in preverbal position (e.g. (13)) and in postverbal (e.g. (14)) position. From the 14th century on, however, postverbal position becomes the typical one. The cooccurrence of *tuttavia* with further contrastive strategies, such as *ma*, is extremely rare in these types of contexts, whereas no cases are attested in which the temporal adverb *tuttavia* follows a concessive clause. In these types of contexts, the scope of the adverb is on the clause in which it occurs, i.e. it indicates that a given state of affairs occurs always, continuously.

- (13) Marco Polo, *Il Milione*, chapter 131, 13th century (Tusc. vulg)
 [...] *l' uomo va III giornate ver' mezzodie, tuttavia trovando*
 DEF.M.SG man go.PRS.3SG 3 day:PL around noon **tuttavia** find:GER
città e castella assai [...]
 city.PL and castle:PL a lot
 ‘[...] one walks three days southward, **always** finding towns and many castles [...]

- (14) Brunetto Latini, *Il Tesoretto*, 13th century, chap. 11
 [...] *sì ch' Eufrade passa ver' Babillona [...], e mena*
 so that Euphrates pass: PRS.3SG toward Babylonia and bring: PRS.3SG
tuttavia *le pietre preziose [...]*
tuttavia DEF.F.PL stone:PL precious:F.PL
 ‘[...] so that Euphrates flows towards Babylonia [...], and **always** brings along precious stones [...]

2.2.2. *Contexts that are compatible with both the source and the target value.* Already in the 13th century *tuttavia* is attested in contexts that are compatible with both an adverbial value of temporality and an adversative connective function. When *tuttavia* occurs in clause initial position, it may receive two distinct interpretations. It may be interpreted as referring to the temporal continuity of the specific action or state of affairs described in the clause that follows *tuttavia*, or as referring to a more abstract notion of continuity that involves both clauses, i.e. the second state of affairs *is asserted to continue* during the time in which the first one takes place. In cases where the first state of affairs constitutes an unfavorable circumstance for the second to occur, a conflicting interpretation may arise.

Example (15) provides a clear example of a dual compatibility context. It is taken from a text that is outside our sample, but is nevertheless worth citing for the neat semantic opposition existing between the two clauses.

- (15) Palamedès pis., c. 1300 [Part 2, Chap. 25]
 [...] *chè noi mangiamo sì poveramente in questo luogo, u voi*
 because we eat:PRS.1PL so poorly in this place where you.PL
mi vedete, che a grande pena ne possiamo sostenere
 CLIT.1SG see:PRS.2PL that at big difficulty CLIT.3SG can.PRS:1PL bear
nostra vita; né non 'sciamo giammai di qua entro; tuttavia ci
 our.F.SG life nor NEG go.out:PRS.1PL never from here inside **tuttavia** there
dimoriamo sì come noi lo possiamo fare. [...]
 reside:PRS.1PL so as we CLIT.3SG.M can.PRS:1PL do
 ‘[...] because we eat so poorly in this place, where you see me, that with great difficulty we manage to bear our lives; nor we go out of here; **we continue to live/nonetheless we live** in this place as well as we can.’

Let us now examine the semantics underlying these dual compatibility contexts in detail. In cases where *tuttavia* is located between two conflicting clauses, speakers may operate a conversational

inference of coherence with what precedes, so that the adverb may be interpreted as referring to previous discourse:

- (16) a. [clause *a*], [*tuttavia* clause *b*] =
 [clause *a*], [*always/continuously* → clause *b*]
 → READING: clause internal
- b. [[clause *a*], *tuttavia* [clause *b*]] =
 [clause *a*] ← *continuously, including the circumstance of* [clause *a*] → [clause *b*]
 → READING: interclausal

In the clause internal interpretation schematized in (16a), the speaker is taken to state [clause *a*] and then to add that [clause *b*] is valid/occurs ‘in any possible situation, always, continuously’, without a necessary link between the two states of affairs. In the interclausal interpretation schematized in (16b), conversely, the speaker is taken to state [clause *a*], then to add that [clause *b*] is valid/occurs ‘in any possible situation, always’ and also to imply that the specific situation mentioned in [clause *a*] is included in the set of ‘any possible situation’, even if it is in contrast to [clause *b*]. In other words, *tuttavia* in these contexts acquires an *anaphoric* value, which is characteristic of the connective function.

The dual compatibility that characterizes these contexts is located at two levels, the semantic and the syntactic one. In semantic terms, *tuttavia* may receive a simple temporal interpretation or an anaphoric one; in syntactic terms, it may be interpreted as a clause internal adverb or as an interclausal connective. In the case of an anaphoric reading, the whole construction [[clause *a*] *tuttavia* [clause *b*]] is taken to denote a somehow conflicting situation: even if [clause *a*] and [clause *b*] are not expected to cooccur or, more generally, to be compatible with each other, their cooccurrence is asserted as possible, because [clause *b*] is taken to *always* happen, even in the situation described by [clause *a*]. The contrast deriving from the denial of an expectation, i.e. the expectation of non-cooccurrence of the two states of affairs, becomes more salient to speakers than the temporal notion of continuity, to the point that *tuttavia* undergoes a form-function reanalysis and is reinterpreted as the overt indicator of such a counterexpectative contrast.

Such a semantic change from temporal continuity to counterexpectative contrast is recurrent across languages. English *still* and German *dennoch* (< *noch* ‘still’), for example, instantiate a path similar to that of *tuttavia*, as in all these cases the adversative value is inferred when a situation is asserted to continue in the context of unfavorable circumstances. Yet, these cases differ with respect to the type of temporal continuity that undergoes the semantic change. Both *still* and *noch* are indeed phasal adverbs, indicating that a given situation continues to occur with respect to a specific temporal anchor (which may coincide with the utterance time or with the situation time), and therefore they may be argued to include anaphoric reference to some other state of affairs in their semantics. By contrast, the original meaning of *tuttavia* is ‘always/continuously’, thus referring to an absolute temporal continuity that is not linked to any temporal anchor (in Italian, the phasal adverb corresponding to German *noch* and English *still* is *ancora*);² therefore, anaphoric reference to some other state of affairs was acquired through conversational inferences, as described in (16).

As far as the morphosyntactic properties of dual compatibility contexts are concerned, the feature that is most systematically associated with these contexts is the clause initial position of *tuttavia* (see Figure 7). Further factors reinforcing the adversative reading are the presence of *ma* (example (17)) or of a concessive subordinate clause (example (18)), which both explicitly indicate the presence of an expectation to deny and so invite the speaker’s contrastive inference.

- (17) Marco Polo, Il Milione, chapter 122, 13th century (Tusc. vulg.)
 Gangala è una provincia verso mezzodie che [... il
 Gangala be.PRS.3SG INDEF.F.SG province towards south that DEF.M.SG
 Grande Kane] ancora no l' avea conquistata, ma
 Gran Khan yet NEG CLIT.3SG.F AUX.PST.IPFV.3SG conquer:PTCP.PST but
 tuttavia v' era l' oste e sua gente per

tuttavia there be.PST.IPFV:3SG DEF.M.SG leader and his.F people for
conquistalla.
conquer:CLIT.3SG.F

‘Gangala is a province towards south, which [...the Gran Khan] had not conquered yet, **but nonetheless/always** the leader and his people were there to conquer it.’

- (18) Bono Giamboni, Fiore di Rettorica [58], (1292)

E avegna che lla naturale memoria sia perfettissima
And **although** DEF.F.SG natural memory be.SUBJ.3SG perfect:SUPERL:F.SG
cosa a l' uomo, tuttavia è molto debole e fragile [...]
thing to DEF.M.SG man **tuttavia** be.PRS.3SG very weak and fragile
‘And **although** natural memory is a highly perfect thing for men, **nonetheless /always** it is very weak and fragile [...]

Contexts in which *tuttavia* is compatible with both the source value and the target value have been attested from the very beginning, during the 13th century, and, as far as we can see, their peak frequency is reached across the 13th and the 14th centuries. Some dual compatibility contexts are attested also in the 15th and 16th centuries, but then disappear in the 17th century, leaving only occurrences that are clearly either temporal or adversative.

2.2.3. *Contexts that are incompatible with the source value.* The first occurrences of *tuttavia* in contexts that are incompatible with the source temporal value and can only be interpreted as adversative are attested already in the 13th century, although with a low frequency. This further confirms that the diachronic change of *tuttavia* is already in progress when our linguist-lens examines the first documentation available. Even though they have been attested from the very beginning, these contexts become increasingly frequent only during the 16th century and are the only type of context attested since the 18th century.

These types of contexts are strongly associated with the occurrence of *tuttavia* in clause initial position from the very beginning, as in example (19) from Dante (see also Figure 8 at the end of this section). This example comes from the 13th century; the context is by no means compatible with the source value ‘always’ and can only be interpreted as having adversative meaning.

- (19) Dante, Vita nuova, c. 1292-93 [Chap. 28,1–3]

di ciò, per quello che, trattando, converrebbe essere me
of it for that.M which treat.GER be.convenient:COND:3SG be me
laudatore di me medesimo, la quale cosa è al postutto
praiser of me self which.F.SG thing be.PRS.3SG at.DEF.M.SG completely
biasimevole a chi lo fae; e però lascio cotale
reprehensible to who CLIT.3SG.M do.3SG and therefore leave:PRS.1SG that
trattato ad altro chiosatore. Tuttavia, però che molte volte
discussion to other.M.SG commentator **Tuttavia**, since many.F.PL times
lo numero del nove ha preso luogo tra
DEF.M.SG numer of.DEF.M.SG nine AUX.PRS.3SG take.PTCP.PST place between
le parole dinanzi [...], convenesi di dire quindi alcuna cosa
DEF.F.PL word.PL before be.worth.PRS:IMPERS of say therefore some thing
‘[...] because treating of it would require me to praise myself, which is the most reprehensible thing one can do: and therefore I leave it to be treated of by another commentator. **However** (*always), since the number nine has appeared a number of times in my previous words [...] it is worth saying something [...]’.³

A further, later example of context that is incompatible with the source value and in which *tuttavia* occurs in clause initial position is provided in (20) from Galileo Galilei. From the 16th century on,

this type of context may also be characterized - though more rarely - by the cooccurrence of *tuttavia* with an overt indicator of contrast, such as *ma* or a concessive clause.

- (20) Galileo Galilei, Dialogo Sopra i Massimi sistemi del mondo, Giornata Prima (1624–1630)
Non ha dubbio che questo che voi dite ha assai
 NEG have.PRS.3SG doubt that this that you.PL say:PRS.2PL have.PRS.3SG a.lot
dell' apparente; tuttavia potete vedere come la sensata
 of.DEF.M.SG appearing **tuttavia** can:PRS.2PL see how DEF.F.SG sensible
esperienza mostra il contrario
 experience show:PRS.3SG DEF.M.SG contrary
 'There is no doubt that the things you are saying correspond to what appears: **however**
 (*always) you can see how sensible experience shows the opposite'

From the 18th century on, *tuttavia* with adversative value starts to be attested also in postverbal position, while up until this time such a position was systematically associated with the source value. Example (21) shows an instance of *tuttavia* cooccurring with *ma* and located between the copula and the nominal predicate. This example is taken from the corpus of spoken Italian, the analysis of which reveals an interesting phenomenon: as can also be observed in Figure 8 at the end of this section, whereas postverbal position is rare for these types of contexts until the 18th century, during the 19th century it becomes increasingly frequent, to the point that in the 20th century this position is by far the most frequently attested, especially in spoken discourse. By contrast, the frequency of contexts in which *tuttavia* occurs clause initially gradually decreases from the 18th century on.

- (21) Spoken Italian, XX cent (LIP, N D 10 1 A)
 [...] *naturalmente la cosa non ebbe seguito ma fu*
 obviously DEF.F.SG thing NEG have.PST.PFV.3SG following **but** be.PST.3SG
tuttavia un atto che poteva chiarire alcuni sospetti [...]
tuttavia INDEF.M.SG act that can:PST.IPFV:3SG clarify certain:M.PL doubt:PL
 '[...] Obviously, the thing didn't have a follow-up **but** it was **anyway** an act that could clarify certain doubts [...]

2.2.4. *Conclusions.* Going back now to the main purpose of this contribution, let us examine the factors that are central in the development of *tuttavia* from temporal adverb of continuity to adversative interclausal connective. In particular, as we saw in the case of *però*, we will focus on the roles played by frequency and syntax in this diachronic pattern, because the role of inferential processes in particular contexts has been already discussed and exemplified.

As far as frequency is concerned, the development of *tuttavia* confirms that dual compatibility contexts, i.e. those in which reanalysis occurs, decrease and disappear after a peak frequency, in which such contexts reach the 20% of the total amount of occurrences. The fact that such a peak is followed by a gradual increase of contexts that are incompatible with the source value and only allow an adversative reading is further proof of the crucial role played by frequency in triggering the change and its extension in the language. In the path under examination, however, the frequency of dual compatibility contexts is visible only in its second decreasing stage, because the change probably started in a period in time that is not documented in the texts we have access to (for a critical discussion on documentation and its consequences on diachronic methodology, see Giacalone Ramat and Mauri, *fc.*).

Although the process started before we can actually see it, it is plausible to hypothesize a restricted critical period for the reanalysis of *tuttavia*, which is a prerequisite for the construction [[clause *a*] *tuttavia* [clause *b*]], where *tuttavia* is located between the two linked clauses, to be reinterpreted as adversative, leaving the temporal continuity value in the background.

The path just described also confirms the role of a second factor, namely syntax. As in the case of *però*, also in the development of *tuttavia* we can observe systematic associations between particular types of contexts and particular morphosyntactic distributional features of *tuttavia*. Contexts that are only compatible with the source value tend to associate with postverbal position, while clause initial position is systematically found in dual compatibility contexts, often in cooccurrence with *ma* and with a concessive clause. Contexts that are only compatible with the target value basically show the same morphosyntactic features as dual compatibility contexts, eventually extending also to postverbal position more recently.

It is indeed possible to identify a stage of *syntactic specialization* across the 16th and 17th centuries, during which contexts that are only compatible with the source value are in complementary syntactic distribution with contexts that are only compatible with the target value (dual compatibility contexts start to be extremely rare). In particular, in postverbal position *tuttavia* is associated with the source value ‘always, continuously’, as shown in example (22), while clause initial position and the cooccurrence with *ma* or with a concessive clause are associated with the target connective function ‘however, nonetheless’, as in (23).

- (22) Ludovico Ariosto, Orlando Furioso, Canto XIX (1532)

[...] *capitò* *sopra quel monte* [...]; *tenendo* **tuttavia** *volta*
 come:PST.PFV.3SG over that.M hill keep:GER **tuttavia** turn.PTCP.PST
la fronte verso là dove il sol ne viene
 DEF.F.SG forehead towards there where DEF.M.SG sun CLIT.3 AUX.PRS:3SG
estinto [...]
 extinguish:PTCP.PST

‘[...] found himself on the top of that hill [...]; **always** (*however) keeping his forehead towards the direction where the sun sets (lit. gets extinguished) [...]’

- (23) Galileo Galilei, Dialogo Sopra i Massimi sistemi del mondo, Second Day (1624-1630)

anco la vostra sia totalmente vera, non ne son
 even DEF.F.SG your.F.SG be.SUBJ:3SG completely true:F.SG NEG CLIT.3 be.PRS.1SG
ben capace: tuttavia la credo, poiché voi risolutamente
 well able **tuttavia** CLIT.3SG.F believe:PRS.1SG since you.PL steadily
l' affermate
 CLIT.3SG assert:2PL

‘even if your [idea] was completely true, I have not fully understood it: **however** (*always) I believe in it, because you steadily assert it.’

Before moving on to the analysis of the third path under examination, a final remark is worth being made. The qualitative analysis of the occurrences in which *tuttavia* is only compatible with the target value revealed that argumentative texts and dialogical situations (i.e. situations in which at least two different points of view are contrasted and compared, cf. Traugott *fc.*) seem to be the most innovative environments for the extension of the adversative connective value of *tuttavia* (cf. e.g. (19) from Dante, and (20), (23) from Galileo). In these texts the occurrences of *tuttavia* with the new target value are more frequent than in poetry and narrative contexts.

A possible explanation for such a distribution is that, in dialogical contexts, speakers are more prone to foreground the conflicting elements characterizing the linked clauses, at the expenses of the temporal relation. In situations where different points of view are presented, the speakers’ attention is already set to focus on the differences, and a reinterpretation of a construction as adversative is thus more likely. Likewise, argumentative texts are usually marked by the contraposition of several possible perspectives on the same issue, thus showing a high degree of dialogicity. Furthermore, argumentative texts are usually characterized by a high number of

From temporal continuity to contrast: *tuttavia*

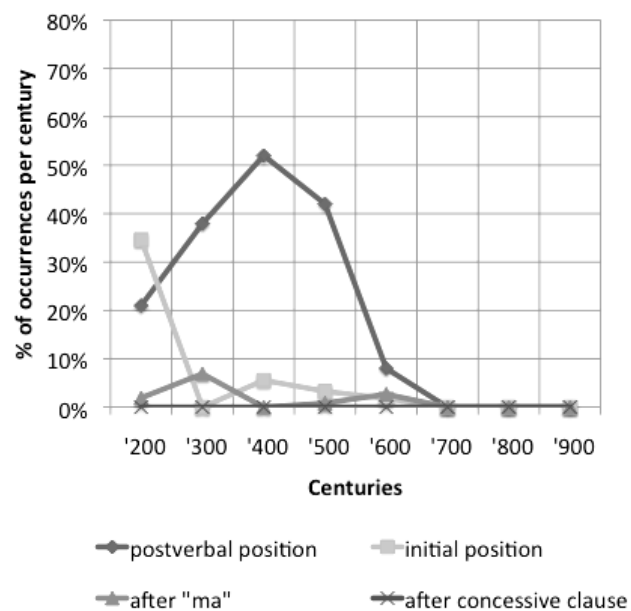


Figure 6. Contexts incompatible with the target value: morphosyntactic properties

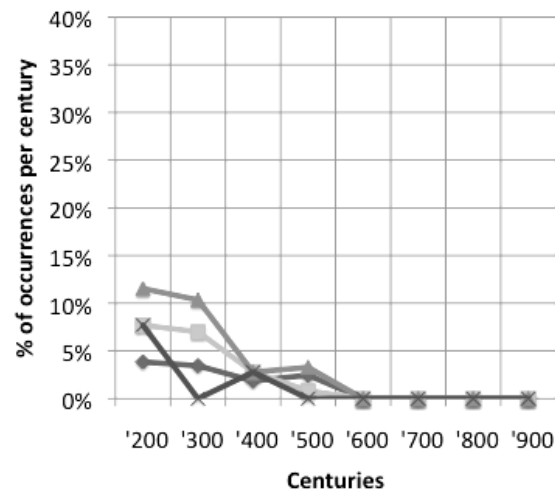


Figure 7. Contexts with dual compatibility: morphosyntactic properties.

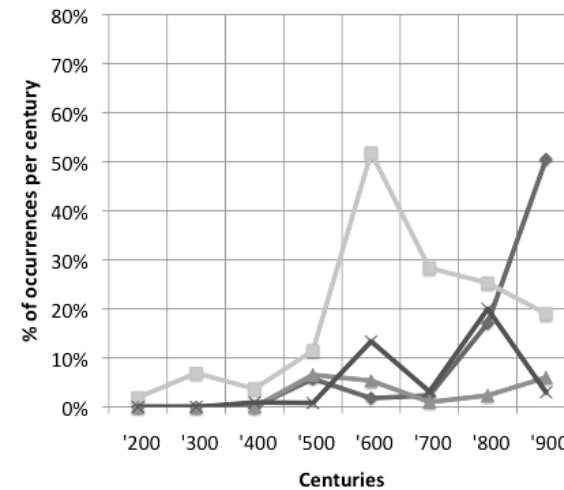


Figure 8. Contexts incompatible with the source value: morphosyntactic properties

argumentative devices helping the reader to follow the line of reasoning: this feature might be a further boost for speakers to look for overt connectives where they do not find any, thus triggering the form-function reanalysis of particular linguistic elements in particular contexts as adversative markers.

2.3 From temporal simultaneity to contrast: *mentre*

Let us now analyze the third diachronic path under examination, namely the one that derives the adversative value of *mentre* from an original simultaneity meaning. In contemporary Italian, *mentre* can be used with two different functions: it may introduce a subordinate temporal clause which is simultaneous to the main clause (e.g. (24a)) or it may signal an opposition between two clauses. In the latter case *mentre* behaves as an adversative connective and may either introduce a subordinate clause (e.g. (24b)) or may link two coordinate clauses (e.g. (24c)).

The type of contrast coded by *mentre* does not imply the denial of an expectation and is thus different from *però* and *tuttavia*: *mentre* indicates that the two linked clauses are characterized by some antonymic features, on the basis of which speakers perceive them as opposite (cf. English *while*). The contrast conveyed by *mentre* remains oppositive also in its subordinating uses, as in (24b). Although in the literature it is usually discussed together with concessive subordination (cf. Hopper and Traugott 2003; König 1988), its semantics does not entail the denial of any causal sequence, but simply establishes an opposition.

- (24) a. **Mentre** *parte, dal finestrino ti fa "io mi*
mentre leave:PRS.3SG from:DEF.M.SG window CLIT.2SG do.3SG I CLIT.1SG
fermo a Mestre"
 stop:PRS.1SG in Mestre
 'While leaving, from the window he goes 'I'll stop in Mestre'
- b. **Mentre** (**però, *tuttavia*) *la sua opinione su Lidia era*
mentre DEF.F.SG her.F.SG opinion on Lidia be.PST.IPFV:3SG
oscillante, spesso contraddittoria, non aveva dubbi sul
 uncertain often contradictory:F.SG. NEG have.PST.IPFV:3SG doubt:PLon:DEF.M.SG
misticismo dell' arabo [...] (da *L'isola e il vento*, cap. 7, Giulio Querini, 2004.)
 mysticism of:DEF.M.SG Arabic
 "While his opinion on Lidia was uncertain, often contradictory, he had no doubt on the
 mysticism of the Arabic man [...]"
- c. *Un tempo si cavalcavano i cavalli per necessità*
 INDEF.M.SG time IMPERS ride:PST.IPFV:3PL DEF.M.PL horse:PL for necessity
mentre (**però, *tuttavia*) *oggi si va a cavallo solo per hobby*
mentre today IMPERS go:PRS.3PL at horse only for hobby
 "In the old days people used to ride horses because they needed to **while** nowadays people
 ride horses just as a hobby"

In Old Italian the clause introduced by *mentre* could only have temporal value and could only be subordinate, in keeping with its etymological origin from Latin *dum interim*. In Modern Italian, on the other hand, the temporal construction with *mentre* is still a subordinating one (cf. (24a), but the adversative construction with *mentre* may either be a coordinating or a subordinating one (cf. (24b) and (24c), although the coordinating one is apparently more frequent, cf. Scorretti 1988: 238). Therefore, the development of the oppositive value of *mentre* is a later phenomenon and is

accompanied by the syntactic change of the whole construction towards coordination. Before moving on to the detailed analysis of the successive stages through which *mentre* acquired an adversative function, let us briefly discuss the coordinating vs. subordinating status of adversative *mentre*.⁴

As argued by Mauri (2008: Ch.1), coordination is characterized by conceptual and pragmatic *symmetry*, such that both clauses are characterized by the presence of illocutionary force. On the other hand, subordination is characterized by conceptual and pragmatic *asymmetry*, such that the subordinate clause does not have autonomous illocutionary force (cf. Foley and Van Valin 1984: 239–44; Cristofaro 2003: 29–50). There are a number of ways to distinguish between coordination and subordination (cf. Haspelmath 2007; Mauri 2008: Ch.2), but one particular test seems to be especially suitable to identify the presence of illocutionary force in both the linked clauses - and hence to verify the coordinating status of a construction: the so-called *assertivity test*, carried out by means of tag questions and clausal negation (see Cristofaro 2003: 32–48; Mauri 2008: 37–44 for a detailed exemplification of this test applied to subordination and coordination respectively). Given a complex sentence, if the tag question and clausal negation challenge both the linked clauses, this means that both have illocutionary force and the construction is thus a coordinating one. By contrast, if only one of the two linked clauses is challenged we are dealing with a subordinating construction in which the challenged clause is the main one.

Examples (25)–(27) illustrate the application of the assertivity test to the three sentences already presented in (24), with the aim of showing the subordinating and coordinating functions of *mentre* (for glosses refer to example (24)). In (25) it can be observed that the temporal value of *mentre* occurs in a subordinating construction, because only the second clause is challenged by the assertivity test and has thus illocutionary force (the challenged clause is indicated in square brackets), while the first clause is not challenged. The assertivity test reveals the subordinating status also of (26), where only the second clause is challenged and shows the presence of illocutionary force, while the first one is subordinate. This occurrence of *mentre* can therefore be argued to have a *subordinating oppositive* value. Finally, (27) instantiates the *coordinating* use of oppositive *mentre*: both clauses are challenged by the assertivity test and therefore they both show the presence of illocutionary force.

- (25) *Mentre parte, dal finestrino ti fa “io mi fermo a Mestre”*
 ‘While leaving, from the window he goes ‘I’ll stop in Mestre’

1. TAG QUESTION: *Mentre parte, [dal finestrino ti fa “io mi fermo a Mestre”], giusto?*

‘While leaving, [from the window he goes ‘I’ll stop in Mestre’], isn’t it?’

2. CLAUSAL NEGATION: **Non è vero che, mentre parte, [dal finestrino ti fa “io mi fermo a Mestre”]**

‘It is not the case that, while leaving, [from the window he goes ‘I’ll stop in Mestre’]’

- (26) ***Mentre la sua opinione su Lidia era oscillante, spesso contraddittoria, non aveva dubbi sul misticismo dell’arabo [...]***

‘While his opinion on Lidia was uncertain, often contradictory, he had no doubt on the mysticism of the Arabic man [...].’

1. TAG QUESTION: *Mentre la sua opinione su Lidia era oscillante, spesso contraddittoria, [non aveva dubbi sul misticismo dell’arabo], vero?*

‘While his opinion on Lidia was uncertain, often contradictory, [he had no doubt on the mysticism of the Arabic man], isn’t it?’

2. CLAUSAL NEGATION: **Non è vero che, mentre la sua opinione su Lidia era oscillante, spesso contraddittoria, [non aveva dubbi sul misticismo dell’arabo].**

‘It is not the case that, while his opinion on Lidia was uncertain, often contradictory, [he had

no doubt on the mysticism of the Arabic man]’

- (27) *Un tempo si cavalcavano i cavalli per necessità mentre oggi si va a cavallo solo per hobby*
 “In the old days people used to ride horses because they needed to **whereas** nowadays people ride horses just as a hobby”

1. TAG QUESTION: [*Un tempo si cavalcavano i cavalli per necessità mentre oggi si va a cavallo solo per hobby*], **vero?**

‘[In the old days people used to ride horses because they needed to whereas nowadays people ride horses just as a hobby], isn’t it?’

2. CLAUSAL NEGATION: **Non è vero che** [*un tempo si cavalcavano i cavalli per necessità mentre oggi si va a cavallo solo per hobby*], ‘It is not the case that [in the old days people used to ride horses because they needed to whereas nowadays people ride horses just as a hobby]’

As noted by Kortmann (1997: 56), many lexical items serving the function of adverbial subordinators may also serve other syntactic functions, such as coordinating clauses: this is the case of German *weil* ‘because’ which can be used also for *asserting* the reasons for the preceding clause, in a non-subordinating structure.⁵ For the aims of this paper we will focus on the semantic change undergone by *mentre*, leaving the syntactic change from subordinator to coordinator aside for future research. The reason for this choice is that such a study would require a broader discussion on the evolution of subordinators into coordinators and vice versa, which is an extremely interesting topic but goes beyond the scope of this paper. More importantly, we do not have clear evidence that such a syntactic change does indeed have a role in the evolution of the adversative function.

As we have seen in the diachronic paths of *però* and *tuttavia*, also in the case of *mentre* we have identified three types of contexts based on their compatibility with the *source value* and the *target value*. In the diachronic pattern under examination, the source value coincides with the temporal subordinating function of simultaneity ‘while’ and the target value coincides with the adversative connective function ‘whereas’, which establishes a symmetric opposition between the linked clauses. In Figure 9 the relative frequency of these three types of contexts can be monitored and observed through the centuries.

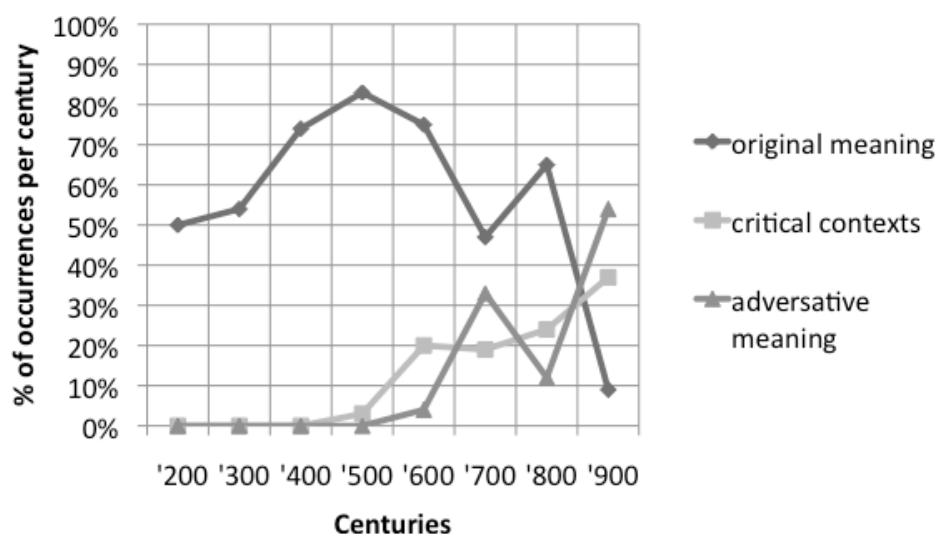


Figure 9. *Mentre*: context types.

As can be observed in Figure 9, the first contexts that are compatible with an oppositive value appear in the 16th century (although some extremely rare occurrences are also attested in the 14th and 15th centuries, see example (32)), and start to become significantly frequent during the 17th and 18th centuries. In particular, contexts that are incompatible with the original simultaneous value spread only in the last three centuries, and nowadays constitute more than 50% of the total amount of occurrences. Contexts in which *mentre* is only compatible with a temporal value, conversely, remain frequent until the 19th century and, despite a lower rate of occurrence, are commonly found also in contemporary Italian, as already exemplified. In other words, as the right hand part of Figure 9 shows, we are now in a situation of *layering*, in which both the original and the target value are attested in the use of *mentre*, with a relatively high number of occurrences that are compatible with both readings (cf. e.g. (28), where speakers may conceive clause linkage as motivated by both the simultaneity of and the opposition between the two states of affairs).

- (28) *Israele dovrà ritirare le sue truppe dal Libano*
 Israel must:FUT:3SG withdraw DEF.F:PL its:F.PL troops from:DEF.M.SG Lebanon
sud mentre nella regione si dispiegherà l' esercito regolare
 South mentre in:DEF.F.SG region REFL deploy:FUT:3SG DEF.M.SG army regular
libanese [...] (La Repubblica – 12/08/2006, page 1)
 Lebanese
 “Israel will have to withdraw its troops from Southern Lebanon **while** the regular Lebanese army will be deployed throughout the region [...]”

The parameters that will be considered in the discussion of this path of change are mainly semantic in nature, and this for two main reasons. First of all, the syntactic change attested in this pattern does not concern the position of *mentre* with respect to the clause in which it occurs (it has always occurred in clause initial position since the 13th century) nor its cooccurrence with further linguistic elements, such as negation or *ma*; rather, it concerns a change of the whole construction from subordinating to coordinating. However, as argued above, a thorough exam of such a change would require a theoretical and empirical study that goes beyond the scope of this paper. Secondly, the syntactic properties of *mentre* do not seem to play a role in the semantic change from simultaneity to oppositive contrast: *mentre* retains its syntactic function of interclausal connective along the whole path, and data seem to show that it first develops its adversative function in subordinating constructions and only lately also acquires a coordinating function. In other words, the change from subordination to coordination seems a rather late phenomenon that does not interfere with the development of the adversative value.

Two main features will be considered: (i) the presence of a polar opposition in the semantics of the linked clauses, i.e. whether it is possible to identify two elements that stand in antonymic relation, and (ii) in cases of polar opposition, the objective vs. subjective level on which the opposition is established, i.e. whether the antonymic relation is based on parameters that are independent of the speaker’s perspective (e.g. quantity ‘one vs. many’, size ‘tall vs. short’, etc...) or rather dependent on the speaker’s point of view and expectations (e.g. evaluation ‘right vs. wrong’, belief ‘false vs. true’, intention ‘aim vs. opposite result’). Let us now analyze the three types of contexts identified in Figure 9 on the basis of these two parameters.

2.3.1. *Contexts that are incompatible with the target value.* In its first occurrences, *mentre* was attested with two main temporal values: a (coextensive and non-coextensive) *terminus ad quem* value ‘until, as long as’ (e.g. (29), (30)), and a *simultaneity overlap* value ‘while’ (e.g. (31)). The former was frequent until the 14th century and then started to decrease gradually, as shown in Figure 10. In the 18th century, no occurrences of *mentre* with *terminus ad quem* value are attested.

- (29) Franco Sacchetti, *Trecentonovelle*, Novella 144 (14th century)

[...] *e mentre che quella festa durò, ebbono gran piacere*
 and **mentre** that that:F.SG party last:PST.PFV.3SG have:PST.PFV:3PL big pleasure
 '[...] and **as long as** the feast went on, they enjoyed themselves a lot'

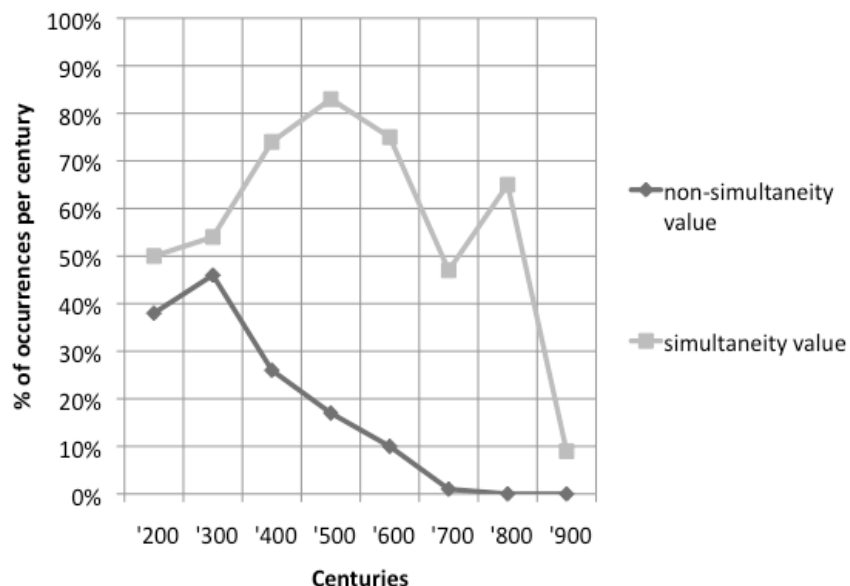


Figure 10. Contexts incompatible with the target value: temporal meanings.

(30) Dante, *Inf.*13,18 (1304–1321)

sappi che se' nel secondo girone [...] e sarai
 Know:IMP:2SG that be.PRS.2SG in.DEF.M.SG second:M.SG ring and be.FUT:2SG
mentre che tu verrai ne l' orribil sabbione.
mentre that you.SG come.FUT:2SG in DEF.M.SG horrible sand
 'know that now you are within the second ring and shall be here **until** you reach the horrid sand.' (translated by A. Mandelbaum)

(31) Giovanni Boccaccio, *Decameron* [I, 4], (1370)

E mentre che egli [...] men cautamente con le' scherzava,
 And **mentre** that he less cautiously with her joke:PST.IPFV:3SG
avvenne che l' abate [...] sentio lo schiamazzio
 occur:PST.PFV:3SG that DEF.M.SG abbot hear:PST.PFV:3SG DEF.SG:M racket
 'And **while** he [...] was less cautiously joking with her, it occurred that the abbot [...] heard the racket'

In these types of contexts *mentre* always introduces a subordinate clause and is often followed by the general subordinator *che*. In its simultaneity overlap value, the state of affairs introduced by *mentre* is typically durative, while in the 'terminus ad quem' meaning it can be either durative or punctual. The semantic change from temporal to adversative undergone by *mentre* takes its start from contexts in which *mentre* has a simultaneity value, as the one exemplified in (31). Non-simultaneity contexts, on the other hand, decrease significantly right before the new adversative function begins to gain in frequency.

During the 17th century, that is when the occurrences of *mentre* with an oppositive value start to be attested with significant frequency, the 'until' meaning of *mentre* is attested in less than 10% of the total amount of occurrences (cf. Figure 10). In other words, it seems that the gradual loss of the

terminus ad quem value precedes (and prepares?) the semantic change, or, in reverse terms, quantitative data seem to show that in the period of time during which the first reinterpretations of *mentre* occurred, the simultaneity value was by far the most frequent and widespread use of *mentre*. We leave further considerations on the role of frequency to the conclusive part of this section; for now, suffice it to point out the temporal coincidence (16th and 17th centuries) of the following three phenomena: (i) contexts in which *mentre* has a non-simultaneity value are extremely rare, (ii) contexts in which *mentre* has a simultaneity value are extremely frequent, (iii) contexts in which *mentre* has a simultaneity value start to be compatible also with an oppositive reading.

2.3.2. *Contexts that are compatible with both the source and the target value.* Contexts where *mentre* has a *simultaneity overlap* value may also be characterized by the presence of somehow antonymic elements, on the basis of which speakers may identify a *polar opposition* between the linked states of affairs, besides their temporal relation. In such contexts, the interpretation of clause linkage is compatible with both the source and the target value. Frequently, opposition is identified as a consequence of the simultaneity overlap itself: given two simultaneous states of affairs, they tend to be perceived as symmetric facets of the same scene, which are compared on the basis of their differences rather than their similarities. The coexistence of the two values is evident from example (32), which instantiates one of the very first occurrences of dual compatibility contexts: in this sentence, the opposition existing between the two states of affairs is motivated (i) by the fact that they are simultaneous and (ii) by the fact that ‘flood everywhere’ stands in antonymic relation with ‘not one drop on them’. If the simultaneity value was canceled, the opposition would be less effective.

- (32) Leggenda Aurea⁶, XIV sm. (fior.) [Chap. 108, S. Domenico]
 [...] **mentre** TUTTA la terra era inondata d' acqua, UNA
mentre all:F.SG DEF.F.SG earth be.PST.IPFV:3SG flood:PTCP.PST of water one.F
SOLA gocciola NON li toccò [...]
 single:F drop NEG CLIT.3PL touch:PST.PFV.3SG
 ‘ [...] **while** THE WHOLE earth was flooded with water, NOT ONE drop touched them [...]’

The polar opposition, as already briefly mentioned, can be established at different levels: it can be based on objective properties, such as quantity (one vs. many, cf. (32)) or size (big vs. small), or it may be based on the speaker’s perspective, involving for instance the speaker’s beliefs (false vs. true, cf. (33)) and expectations (fulfilled vs. failed expectation, cf. (34)), or subjective evaluation (right vs. wrong).

Figure 11 represents the objective-subjective continuum along which the different types of polar opposition can be arranged, with the more objective types being located at the left-hand side and the more subjective types being located at the right-hand side of the figure. The more the polar opposition is established on a subjective level, the more the temporal reading is *backgrounded*, and the focus on the opposition between the two events is *foregrounded*.

<u>dual compatibility with temporal and oppositive value</u>		<u>contrastive</u>
objective ----- >> ----- >> -----		subjective
quantification (one vs. many), distribution (one vs. the other)	belief (false vs. true) effort (aim vs. opposite result)	expectation (fulfilled vs. denied) evaluation (right vs. wrong)

Figure 11. Types of polar oppositions along the objective---subjective continuum.

In other words, the development of the oppositive value of *mentre* out of an original simultaneity value is an issue of emphasis on one aspect at the expenses of the other: once the whole construction is conceived in both its temporal meaning and in the antonymic differences existing

between the linked states of affairs, speakers may decide which of the two aspects they perceive as central. It is often context that favors one reading over the other. Yet, it is possible to identify a tendency, based on the degree to which the opposition is established at the subjective level: the more the polar opposition existing between two simultaneous events involves the speaker's evaluation and beliefs, the more this opposition will be considered communicatively salient and will be foregrounded, at the expenses of the temporal relation.

A possible reason for this is that oppositions based on antonymic feelings, beliefs or expectations require a higher processing charge than oppositions based on objective features, such as size or quantity, in that they imply the activation of the speaker's encyclopedic knowledge of the world. As a consequence, the speaker's effort will be more focused on identifying the conflict, rather than on conceiving the two states of affairs as simultaneous. As a result, *mentre* will be gradually associated with a contrastive reading and finally reanalyzed as a connective establishing an oppositive contrast between two clauses.

Example (33) illustrates an instance of a dual compatibility context in which the relation of temporal simultaneity is retained: the act of thinking and the act of taking the wrong direction are simultaneous (there is a concrete reference to a path), and it is possible to identify a polar opposition between a subjective belief ('*e' si crede la sua pigliare*') and an objective state of affairs ('*per quella che porta ad altre strade mettendosi*'), which demonstrates the belief is false. The opposition is further reinforced by the antonymic couple *appressarsi* 'get closer' and *s'allontana* 'gets further away'.

(33) Pietro Bembo, *Gli Asolani* (1505), canto XII

Ma sì come suole alcuna volta del viandante avvenire, il quale
 But so how use:PRS.3SG some:F.SG time of:DEF.M.SG traveller occur who
*alla scielta di due strade pervenuto, **mentre** E' SI CREDE*
 at:DEF.F.SG choice of two streets:PL come:PTCP.PST **mentre** he REFL believe:PRS.3SG
la SUA pigliare, per quella che AD ALTRE CONTRADE il
 DEF.F.SG his:F.SG take for that:F.SG that to other:F.PL regions CLIT.3SG
porta METTENDOSI, quanto egli più al destinato
 bring:PRS.3SG take:GER:REFL how.much he more to:DEF.M.SG supposed:M.SG
luogo s' affretta d' appressarsi, tanto più da esso camminando
 place REFL hurry:PRS.3SG of get.closer:REFL so.much more from it walk:GER
s' allontana [...]
 REFL get.away:PRS.3SG

"Yet, as it may happen to the traveller who comes to a choice between two roads, **while** HE THINKS that he is following HIS way, HE TAKES the road that goes to DIFFERENT DIRECTIONS, the more he hurries to get closer to the intended destination, the more he gets farther away [...]"

Temporal simultaneity is retained also in (34), but on a very abstract level: in this case, the effort is simultaneous with the achievement of the opposite result. In this example, the polar opposition is established at a highly subjective level between an effort towards a specific aim ('*cercate d'atterrarlo*') and an objective opposite achievement ('*i vostri medesimi assalti lo sollevano e l'avvalorano*').

(34) Galileo Galilei, *Dialogo sopra i massimi sistemi*, Day II (1624–1630)

Vedete adunque qual sia la forza del vero, che
 See:PRS.2PL therefore what be.SUBJ:3SG DEF.F.SG power of:DEF.M.SG truth that
***mentre** voi CERCATE D' ATTERRARLO, i vostri medesimi*
mentre you.PL try:PRS.2PL of knock.down:CLIT.3SG DEF.M.PL your:M.PL own:M.PL
assalti LO SOLLEVANO e L' AVVALORANO

attack:PL CLIT.3SG.M raise:PRS.3PL and CLIT.3SG.M enhance:PRS.3PL

“You can thus see what the power of truth is, because **while** you TRY TO KNOCK IT DOWN, your own attacks RAISE IT AND ENHANCE IT.”

Dual compatibility contexts are extremely rare during the 14th and 15th centuries: although we found some instances in our study (cf. example (32)), the quantitative analysis of our sample did not show any occurrences of such contexts until the last decades of the 16th century. During the 17th century dual compatibility contexts become significantly more frequent (around 20% of the total amount of occurrences) and reach their highest frequency in the 20th century. These data might seem striking at first glance, because we could expect to observe a decrease in frequency during the 19th and 20th centuries, rather than an increase. However, one should keep in mind that the temporal and the oppositive value can coexist and even reinforce each other within the same sentence, especially if we consider that the oppositive value develops as a side-effect of the temporal simultaneity of two states of affairs, which are conceived as simultaneous and symmetric facets of the same scene.

2.3.3. *Contexts that are incompatible with the source value.* Let us now examine the contexts where *mentre* is incompatible with a simultaneous overlap value. In such contexts, we either typically find an overt indication of temporal distance (e.g. (37)) or we deal with non-factual events (e.g. (35), (36)), which cannot be located in time and described on the basis of their simultaneity. The opposite polarity characterizing contexts that are incompatible with the source value, however, can be established at any level along the objective-subjective continuum. These types of contexts have been attested since the 17th century and become increasingly frequent from the 18th century on.

Example (35) shows an instance in which the simultaneity value is excluded because one of the linked states of affairs is modalized (*dovrebbero esser diritti*) and hence located outside the time axis: in this case reality is compared to the deontic dimension of ‘how reality should be’.

- (35) Vincenzo Cuoco - Saggio storico sulla rivoluzione napoletana del 1799, XLIX- Persecuzione de’ repubblicani (1801)

[...] *i quali* SI CHIAMANO *quasi in tutta l’ Europa «privilegi»,*
which REFL call:PRS.3PL almost in all DEF.F.SG Europe privilege:PL

mentre DOVREBBERO ESSER *diritti* [...]

mentre should:3PL be right:PL

“[...] which ARE CALLED ‘privileges’ in almost all Europe, **while** THEY SHOULD BE ‘rights’ [...]”

Example (36), on the other hand, shows a case in which the simultaneity value of *mentre* is excluded by the overt indication of temporal distance:

- (36) *Come mai non ricevo OGGI una sola linea da te,*
How never NEG receive:PRS.1SG today one single:F.SG line from 2SG.NSBJ

mentre IERI *è stato operato l’ arresto*

mentre yesterday AUX.PRS.3SG AUX.PTCP.PST complete.PTCP.PST DEF.M.SG arrest
dell’ amico? Mazzini (quoted in Battaglia 1961–2002: *mentre* 42,68)
of.DEF.M.SG friend

‘Why didn’t I receive TODAY a single line from you, while YESTERDAY my friend has been arrested?’

As already pointed out, in Contemporary Italian the original simultaneity value and the new oppositive one coexist in a layering situation (cf. example (28)), and *mentre* can be argued to be polysemous between a temporal and adversative function. However, in spoken Italian adversative

meanings outnumber temporal ones in both the C-ORAL corpus (52% vs. 48% out of a total 117 occurrences) and the LIP corpus (77% vs. 23% out of 151 occurrences).

2.3.4. *Conclusions*. Let us now go back to the exploration of the factors at work in the diachronic change from simultaneity to oppositive contrast undergone by *mentre*.

First of all, frequency seems to play a crucial role, as we saw for *però* and *tuttavia*, although in a slightly different way. Dual compatibility contexts appear in the 14th century, increase significantly during the 17th century and are still attested nowadays. What is interesting is that the increase of dual compatibility contexts in the 17th century is preceded by a decrease of the 'until' value of *mentre*, which determines a situation where the occurrences of *mentre* with a simultaneity overlap value are by far the great majority (cf. Figure 10, increase in relative frequency). In other words, we can observe that the high frequency of contexts with a simultaneity reading and the gradual loss of the *terminus ad quem* contexts seem to be a prerequisite for the semantic change to occur, as if during the 15th and 16th centuries there had been a 'preparatory' stage, characterized by an increase in the relative frequency of those contexts in which dual compatibility was possible.

Whereas in the two diachronic paths of *però* and *tuttavia* we identified a stage of syntactic specialization, in the development of adversative *mentre* syntax cannot be argued to play a central role. We have already discussed the evolution of *mentre* from subordinator to coordinator, but we have no clear diachronic data to argue that such a change favors the development of the adversative function. By contrast, as we observed for *tuttavia*, argumentative texts and dialogical situations confirm to be the most innovative environments, in which the adversative value of *mentre* is particularly frequent (cf. examples (33)–(36)).

3. Stages and factors at play in the development of adversative connectives

The three paths described show a number of crucial differences. First, they are characterized by a different *chronology*. On the one hand, the development of *però* can be followed and studied in all its stages; on the other hand, the development of *tuttavia* and *mentre* can be observed only partially, because *tuttavia* is already undergoing a change when we start to have documentation, and *mentre* is still in a layering situation today.

Second, the three diachronic processes under examination have been analyzed on the basis of slightly different parameters. The relevant parameters in the development of *però* are the presence of a negation having scope over the interclausal relation, the clause initial vs. postponed position of the connective, and the presence of the conjunctive marker *e*. In the case of *tuttavia*, what turned out to be significant was the clause initial vs. postverbal position of the adverb, the presence of *ma* and the presence of a concessive clause. In the development of *mentre* we focused on a semantic aspect, namely the presence of an oppositive polarity, either objective or subjective.

Third, the three connectives at issue are different in the degree to which they undergo a syntactic change. *Però* remains an interclausal connective but modifies its distributional properties; *tuttavia*, besides a change in its distributional properties, undergoes a category change from temporal adverb to interclausal connective; in the development of *mentre*, we observe a change from subordinator to coordinator, which however might not play any role in the rise of the adversative function.

Despite such differences, the three diachronic processes described in the preceding sections also show a number of recurrent properties that allow for a unified discussion of the respective roles that frequency, syntax and context play in the development of adversative connectives. Let us now discuss each of these issues separately.

Frequency turns out to be a crucial factor for two different types of contexts and at two different stages in the development of the adversative connectives under examination. First of all, as pointed out by Bybee (Bybee 2006; cf. also Hopper and Traugott 2003: 126–130), frequency appears to be a central aspect in the critical period during which speakers operate a form-function reanalysis from the source value to the target value. At this stage, we can observe that the frequency of contexts

with dual compatibility significantly increases, reaching at least 20% of the total amount of occurrences. This means that, in order for speakers to reinterpret the meaning of the form, it is necessary that they encounter the type of context in which such reinterpretation occurs with sufficient frequency for the construction to be processed as a single unit, and for the adversative value to be systematically associated with that specific context. Speakers thus reinforce the conception of that context as an adversative one and start to look for a linguistic element encoding the contrast, thus triggering reanalysis.

However, the development of *mentre* shows that frequency plausibly plays a role also in the stage preceding reanalysis. In cases where the form has several original meanings, it seems that the meaning that will be involved in the process, i.e. the source meaning, has to emerge as the most frequent in order for the critical period to start. Such a "preparatory" stage is predictable on the basis of what we argued above: in order for contexts with dual compatibility to reach significant frequency, it is necessary that the source value itself be frequent and be the default interpretation of the form.

These data confirm what is argued by Bybee (2006), namely that repetition and frequency of use have an effect on the cognitive representations that speakers have of language and, more specifically, of particular constructions. The frequent association of a given context to a contrastive meaning is likely to reinforce the conception of that context as an adversative one, thus setting the grounds for the identification of a linguistic element in that context as the overt marker of that contrast.

In cases where the diachronic process involves a syntactic change, as we saw for *però* and *tuttavia*, the peak frequency of critical contexts may be followed by a period of time in which the original meaning and the new one coexist in complementary syntactic distribution (cf. the notion of 'isolating contexts' in Diewald 2002). Such a stage of *syntactic specialization* of the source and the target value points to the role played by syntax in spreading the change. We argued that an increase in frequency of dual compatibility contexts is decisive for the form-function reanalysis operated by speakers. After the reanalysis is complete, however, the new value has to be systematically associated with a particular syntactic context. The extension of the new value to syntactic contexts different from the one in which reanalysis occurred takes place after a period during which speakers consciously employ the form at issue with both the source and the target meaning, though with different distributions.

In other words, if we want to ask ourselves what the role of syntax is in the development of the adversative connectives under examination, the most plausible answer is that it plays a role as far as it is considered within a construction (cf. Croft 2001; Goldberg 2006; Bergs and Diewald 2008), i.e. as the set of distributional and contextual features associated with a given functional value. We do not have evidence to argue that particular syntactic loci, i.e. particular syntactic behaviors, positions or conditions, as such favor the rise of the adversative function - although it can be hypothesized that a linguistic element without an original connective function (such as *tuttavia*) is more likely to acquire anaphoric value in clause initial position, thus favoring its reinterpretation as interclausal connective. Yet, this concerns the development of a connective function as such, and not of an adversative one.

What our data clearly show is that the systematic occurrence of a form in a particular syntactic context in association to a particular meaning, i.e. a construction, is not only what triggers the change, but also what reinforces the new value once reanalysis occurred, during the stage of syntactic specialization. Once the new value is consciously perceived by speakers as (one of) the main one(s) and is solidly rooted in their language use, speakers may start to extend it to further syntactic environments.

All in all, we can argue that the development of the three adversative connectives at issue confirms the central role of context in diachronic change. In particular, we further observed that the adversative value tends to be attested first in dialogical and argumentative contexts, which proved to be the most innovative ones. As highlighted by Traugott (2003), Heine (2002) and Diewald

(2002), the identification of what contexts trigger and reinforce the change allows for an analysis of the process through stages. Yet, in our view, the bare identification of the context type does not exhaust the characterization of each stage, because each of the three context types examined (incompatible with the source value, incompatible with the target value, compatible with both values) may, and does, occur in more than one stage. This is a consequence of the gradualness of change:⁷ although they are presented in temporal sequence, the stages do not follow one another as monolithic blocks, but are rather segments along a continuum. What crucially differentiates the four stages is the relative frequency of the various context types, i.e. the introduction of a quantitative dimension. The diachronic paths examined can be thus described through the four-stage model resumed in Table 1, in which each stage is associated with a particular frequency rate of the contexts attested:

1. Initial stage	2. Pragmatic inference and successive form- function reanalysis	3. Syntactic and semantic specialization	4. Extension and independence from co-textual constraints
Contexts incompatible with the target meaning are highly frequent (with further possible meanings showing decreasing frequency).	Dual compatibility contexts reach a peak frequency. Contexts incompatible with the target meaning are still very frequent.	Contexts incompatible with the target value and contexts incompatible with the source value coexist in complementary syntactic distribution. Dual compatibility contexts become less frequent	Contexts incompatible with the source value are extremely frequent. The other two types of contexts are rare or no longer attested

Table 1: A multiple-stage model for the development of adversative connectives.

The initial stage is the one in which the source meaning emerges as the most frequent with respect to further possible meanings of the form under examination, as we have observed in the analysis of *mentre*. The second stage is the one in which contexts that are compatible with both the source and the target value increase significantly in frequency. In these types of contexts speakers operate a pragmatic inference and conceive the whole construction as characterized by some contrast. The high frequency of dual compatibility contexts favors a unified processing of the construction as having contrastive meaning and triggers the form-function reanalysis of the form as an adversative connective. In the third stage we observe a semantic and syntactic specialization of the two values, which coexist in complementary syntactic distribution. In cases where no clear syntactic differentiation is attested between the two meanings (as in the development of *mentre*), this stage consists of a semantic specialization, whereby it is the semantic context that provides the clues for an unambiguous interpretation of the two values. At this stage dual compatibility contexts may become rarer and speakers start to employ the new meaning with increasing frequency, thus reinforcing the association of the form with the new value. Finally, there may be a last stage in which the source value disappears and the target meaning is the only one attested, independently of the syntactic context. We observed this stage in the diachronic paths of *però* and *tuttavia*, whereas the development of *mentre* never reached it, keeping a layering situation where both the temporal and the adversative meanings are attested and frequent.

4. Conclusions

The model we propose in this paper is based on the qualitative and quantitative examination of

three Italian connectives and aims at the identification of the respective roles of frequency, syntax and context in the development of their adversative function. In order to achieve this aim, we examined the occurrences of *però*, *tuttavia* and *mentre* through the centuries keeping the semantic parameters separate from the syntactic ones. We monitored both (i) the semantic compatibility of each occurrence with the source and the target meaning, identifying three context types, and (ii) the distributional features associated with the different (in)compatibility values.

On the one hand, the qualitative analysis of our data highlighted the crucial role of context in triggering the pragmatic inference underlying the reinterpretation of the form as contrastive. In the three cases under examination it was indeed possible to identify a set of semantic and syntactic features characterizing the occurrences where reanalysis takes place. On the other hand, the quantitative analysis of the relative percentage of occurrence for each context type further pointed to the central function of frequency, both in triggering reanalysis and in the identification of the successive phases of change. As a final result, we identified four stages, described in Table 1, which spell the development of the adversative function of *mentre*, *però* and *tuttavia*.

The results discussed in Section 3 and briefly summarized in the preceding paragraph are based on data from Italian and concern the development of a highly specific function, namely the adversative one. However, diachronic data on equivalent connectives in other languages (Fr. *toutefois*, *pourtant*, Sp. *pero*, *mientras*, En. *while*) seem to confirm our analysis and suggest that our model might be exported to the development of further adversative markers.

Vanderheyden (2003: 472) describes for Fr. *toutefois* a path of change that parallels under many respects the development of *tuttavia*, though with a slightly different chronology (the contrastive value of *toutefois* already prevails in the 14th century, thus showing a different pace from Italian, see Soutet 1992: 11 and Vanderheyden 2003: 472). Significantly, the distributional properties of the connective played the same role as in Italian: *toutes voies* with temporal meaning 'always, continuously' tended to be associated with post-verbal position, while in clause initial position, possibly following further contrastive markers, it acquired adversative value. The development of Sp. *todavía* is examined by Morera Pérez (1999: 515–16), who shows that the meaning of temporal continuity developed into a phasal value 'still', which is the usual meaning in Modern Spanish. Despite the difference in the path of semantic change followed by Spanish, the analysis of Morera Pérez is fully compatible with our multiple-stage model.

Marchello Nizia (2008, 2009) takes into account the development of Fr. *pourtant* and identifies a path of change going from cause to contrast that shows a high number of similarities with the development of *però*. A parallel path is hypothesized by Corominas and Pascual (1997) also for Sp. *pero*. Both in French and Spanish, the contexts in which the change from the original resultative function to the adversative one is triggered are argued to be characterized by the presence of a negation having scope over the interclausal relation, as we discussed in detail for Italian. Finally, the development of the adversative function of *mentre* is at least partially paralleled by the diachronic path followed by En. *while* (cf. Hopper and Traugott 2003: 90–91) and by the development of Sp. *mientras* (Corominas and Pascual 1997), where the adversative function arises out of an original simultaneity meaning in subordinating constructions.

The studies cited above all highlight the crucial role of context and identify specific constructions as the locus of reanalysis, but do not provide any quantitative data that could deny or confirm our claims on the role of frequency. Yet, as widely discussed by Bybee (2003, 2006), frequency and repetition plausibly play a role in the great majority of diachronic changes, leading to different degrees of grammaticalization depending on the lower or higher frequency of the construction (whereby higher levels of grammaticalization tend to correspond to higher frequency, cf. also Laury 1997 on the rise of a definite article in Finnish).

In addition to the comparison with different languages, it would also be interesting to widen the scope of the analysis, so as to verify whether the factors at play and the stages identified in this paper can also be retrievable in the development of further argumentative devices. It might well be the case that the rise of constructions occurring in highly dialogical contexts and connecting

Mauri, C. and Giacalone Ramat, A.

‘The development of adversative connectives: stages and factors at play’. To appear in *Linguistics*.

successive arguments is characterized by a set of recurrent properties, linked to their general argumentative function. Both the applicability of our model to the development of adversative connectives in different languages and the inclusion of non-adversative argumentative connectives in the study are two challenging directions for future research.

Appendix: Corpus

12th century: the earliest stages of the development of *mentre*, *tuttavia* and *però* have been thoroughly examined in the corpus Opera del Vocabolario Italiano (OVI).

13th – 20th centuries: selection of texts from the Letteratura Italiana Zanichelli (LIZ 2004) and the digital library BibIt (<http://www.bibliotecaitaliana.it>).

13th century:	TOT = 311.649 words
<i>Ritmo di Sant'Alessio</i>	1.283
<i>Proverbia que dicuntur super natura feminarum</i>	6.534
<i>Novellino</i>	39.336
Brunetto Latini – <i>Il Tesoretto</i>	12.216
Dante Alighieri – <i>Vita Nuova</i>	18.465
Marco Polo – <i>Il Milione</i>	58.215
Guido Cavalcanti – <i>Rime</i>	7.976
Bono Giamboni – <i>Fiore di Rettorica</i>	39.363
Bono Giamboni – <i>Trattato de' vizi e delle virtù</i>	10.627
<i>Cronica Roncioniana</i>	13.859
Total occurrences of:	<i>però</i> = 284 <i>tuttavia</i> = 52 <i>mentre</i> = 8

14th century:	TOT = 514.660 words
<i>Cronica di Pisa</i>	65.887
Dante Alighieri – <i>Commedia</i>	96.439
Giovanni Boccaccio – <i>Decameron (I and II day)</i>	63.226
Francesco Sacchetti – <i>Trecentonovelle</i>	182.293
Dino Frescobaldi – <i>Viaggio in Terrasanta</i>	24.441
Francesco Datini – <i>Lettere alla moglie Margherita</i>	82.374
Total occurrences of:	<i>però</i> = 798 <i>tuttavia</i> = 29 <i>mentre</i> = 89

15th century:	TOT = 438.874 words
Luigi Pulci – <i>Il Morgante (first 20 canti)</i>	115.323
Angelo Poliziano – <i>Stanze per la giostra</i>	9.562
Giovanni Sabadino degli Arienti – <i>Novelle porretane</i>	131.219
Leon Battista Alberti – <i>I Libri della Famiglia</i>	116.998
Leonardo Da Vinci – <i>Trattato della Pittura</i>	111.166
Alessandra Macinighi Strozzi – <i>Lettere</i>	71.608
Total occurrences of:	<i>però</i> = 508 <i>tuttavia</i> = 108 <i>mentre</i> = 104

16th century:	TOT = 443.597 words
Pietro Vasari – <i>Le Vite de' più eccellenti architetti, pittori, et scultori italiani (Intro, 1st and 2nd part)</i>	160.237
Ludovico Ariosto – <i>Orlando Furioso (first 30 canti)</i>	173.296
Pietro Bembo – <i>Gli Asolani</i>	58.207
Pietro Aretino – <i>La cortigiana</i>	24.000
Niccolò Machiavelli – <i>Il Principe</i>	27.857
Total occurrences of:	<i>però</i> = 217 <i>tuttavia</i> = 122 <i>mentre</i> = 194

17th century:	TOT = 516.067 words
Galileo Galilei – <i>Dialogo sopra i due massimi sistemi del mondo</i>	177.821

Mauri, C. and Giacalone Ramat, A.

‘The development of adversative connectives: stages and factors at play’. To appear in *Linguistics*.

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Galielo Galilei – <i>Lettere</i>	77.484
Paolo Sarpi – <i>Istoria del Concilio tridentino (first 3 books)</i>	165.884
Giovambattista Marino – <i>Adone (first 7 canti)</i>	80.349
Tommaso Campanella – <i>La città del sole</i>	14.529
Tommaso Campanella – <i>Le lettere</i>	12.243

Total occurrences of: *però* = 813 *tuttavia* = 112 *mentre* = 383

18th century:

TOT = 528.874 words

Vittorio Alfieri – <i>Vita</i>	112.285
Giambattista Vico – <i>Principi di scienza nuova</i>	150.586
Vincenzo Monti – <i>Epistolario (letters from 1771 to 1799)</i>	211.601
Giuseppe Parini – <i>Odi</i>	13.489
Saverio Bettinelli – <i>Lettere inglesi</i>	34.716

Total occurrences of: *però* = 339 *tuttavia* = 127 *mentre* = 72

19th century:

TOT = 540.022 words

Vincenzo Cuoco – <i>Saggio storico sulla rivoluzione napoletana</i>	71.634
Alessandro Manzoni – <i>Fermo e Lucia (first 2 books)</i>	105.940
Giacomo Leopardi – <i>Zibaldone di pensieri (1- 456)</i>	121.482
Lorenzo Da Ponte – <i>Memorie</i>	136.951
Carlo Dossi – <i>La desinenza in A</i>	61.404
Gabriele D’Annunzio – <i>Canto Nuovo</i>	42.611

Total occurrences of: *però* = 514 *tuttavia* = 170 *mentre* = 249

20th century (1900–1950):

TOT = 357.230 words

Italo Svevo – <i>La Coscienza di Zeno</i>	142.372
Ludovico Limentani – <i>La previsione dei fatti sociali</i>	103.799
Ernesto Bonaiuti – <i>Lettere di un prete modernista</i>	62.860
Federigo Tozzi – <i>L’Amore: novelle</i>	29.055
Luigi Pirandello – <i>Sei personaggi in cerca d’autore</i>	19.144

Total occurrences of: *però* = 158 *tuttavia* = 200 *mentre* = 239

20th – 21st centuries (1950-2008):

The exam of *mentre*, *tuttavia* and *però* in Modern Italian is based on the following corpora:

Corpus LIP of spoken Italian (<http://languageserver.uni-graz.at/badip/badip/home.php>); online archive of the newspapers «Corriere della Sera» (1992-now) and «Repubblica» (1984-now); electronic survey of the following narrative texts (retrieved through *Primo Tesoro della Lingua Letteraria Italiana del Novecento*, ed. Tullio De Mauro, 2007, Torino: UTET): Elio Vittorini (*Le donne di Messina*, 1949), Alberto Moravia (*Il conformista*, 1951), Carlo Emilio Gadda (*Novelle dal ducato in fiamme*, 1953), Dino Buzzati (*Sessanta racconti*, 1958), Carlo Cassola (*La ragazza di Bube*, 1960), Primo Levi (*La chiave a stella*, 1979), Lalla Romano (*Le parole tra noi leggere*, 1969), Tommaso Landolfi (*A caso*, 1975), Umberto Eco (*Il nome della rosa*, 1981), Claudio Magris (*Danubio*, 1985), Maria Teresa Di Lascia (*Passaggio in ombra*, 1995), Domenico Starnone (*Via Gemito*, 2001), Ermanno Rea (*La dismissione*, 2002), Margaret Mazzantini (*Non ti muovere*, 2002), Melania Gaia Mazzucco (*Vita*, 2003), Maurizio Maggiani (*Il viaggiatore notturno*, 2005), Sandro Veronesi (*Caos Calmo*, 2006).

List of abbreviations

AUX=auxiliary; CLIT=clitic; COND=conditional; DEF=definite; F=feminine; FUT=future; GER=gerundive; IMP=imperative; IMPERS=impersonal marker; IPFV=imperfective; INDEF= indefinite; M=masculine; NEG=negation; PFV=perfective; PL=plural; POL=polite; PRS=present; PST=past; PTCP=participle; REFL=reflexive marker; SG=singular; SUBJ=subjunctive; SUPERL=superlative.

Notes

¹ The path developing the value of ‘still, yet’ from an adverb meaning ‘always’ is attested in other languages,

such as Spanish (see Morera Pérez 1999).

² As already pointed out at the beginning of this section, *tuttavia* also developed a phasal value, exemplified in (12), but our data show that such a diachronic path is independent from the development of the adversative function.

³ In this example, the two original values of *però* are also worth mentioning, as resultative connective after *e* (*e però* ‘and therefore’) and as causal subordinator, followed by *che* (*però che* ‘since’). See the preceding section for a discussion on these constructions.

⁴ This topic is widely ignored in traditional grammars, where *mentre* is only analyzed with respect to its subordinating values, with the exception of Scorretti (1988).

⁵ There is, however, no directionality in this change: the reverse situation, a coordinating conjunction introducing an undoubtedly subordinate clause, is well known in Celtic languages (*agus* ‘and’ and *ach* ‘but’) and in Basque (*eta* ‘and’) (Kortmann 1997: 56). The case of German *trotzdem* is also interesting: originally a connective adverb ‘notwithstanding, however’ (*Er fühlte sich krank. Trotzdem ging er zur Arbeit*), it developed an additional use as adverbial subordinator ‘even if, obwohl’ in the 19th century (*Trotzdem er sich krank fühlte, ging er zur Arbeit* Kortmann 1997: 63).

⁶ Although the text *Leggenda Aurea* is not part of our sample, we came across this occurrence in our study and decided to include it in the paper because we considered it particularly clear and because it represents one of the first occurrences of dual compatibility contexts.

⁷ For a detailed discussion on the relationship between synchronic gradience and the apparent gradualness of linguistic change, see Traugott and Trousdale (2010).

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