

MONOSYNDETIC AND BISYNDETIC CONJUNCTION IN GIZEY

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Previous studies on Gizey (glottocode: gize1234, Masa < Chadic < Afroasiatic) have treated the monosyndetic and bisyndetic uses of the conjunction *māj/mēj* as semantically equivalent. This paper challenges that view, presenting novel evidence that these two forms of conjunction cannot always be equated. We argue that the distributional differences between monosyndetic and bisyndetic conjunction can be better understood by considering how they contribute to the coherence of the discourse that contain them. Using *Segmented Discourse Representation Theory* (SDRT), we show that monosyndetic and bisyndetic conjunction are compatible with coordinating discourse relations (e.g. RESULT, NARRATION, PARALLEL, CONTRAST) and are congruently incompatible with subordinating discourse relations (e.g. ELABORATION, EXPLANATION). Furthermore, whereas monosyndetic conjunction can appear with all coordinating relations, bisyndetic conjunction is restricted to the structural discourse relations, namely PARALLEL and CONTRAST.

Keywords: conjunction, doubling, discourse relations, discourse structure, SDRT, Gizey

1. Introduction

This paper examines clausal coordination in Gizey with the conjunction *mēj/māj* (mostly written *mēj* hereinafter).¹ This conjunction can be realised once (monosyndetic use) or it can be doubled (bisyndetic use), and may be translated as ‘too’, ‘and’, and ‘but’ (see, e.g., Ajello & Melis 2008; Guitang 2024). In prior description of Gizey, monosyndetic and bisyndetic occurrences of *mēj* are thought to make no interpretative differences (see, e.g., Guitang 2024). For example, (1) and (2) are assumed to express identical content, whether *mēj* is used once (as in 1) or twice (as in 2).

- (1) gùréjn k=ɔk dòògò ʔàn gùréjn k=ɔn dòòk mēj.
children with=2SF ten 1s children with=1s ten CONJ
‘You have ten children; (and) I have ten children.’
- (2) gùréjn k=ɔk dòòk mēj ʔàn gùréjn k=ɔn dòòk mēj.
children with=2SF ten CONJ 1s children with=1s ten CONJ
‘You have ten children; (and) I have ten children.’

Both (1) and (2) establish a kind of parallelism between two discourse units: [*x* has ten children] and [*y* has ten children]. Such coordinate constructions are semantically symmetrical as change in the linear order does not impact interpretation (Carston 1993; Mayr & Schmitt 2017; Schmerling 1975).

Now, consider the discourse in (3), which involves the clauses *lɛkɛ hɛlā* (‘the cock crowed’) and *Victor ʔùmū* (‘Victor hit it’) in a paratactic (asyndetic) configuration, without any occurrences of *mēj*.

- (3) lɛk=ɛ hɛlā Victor ʔ=ùmū.
cock=DET crow.PFV Victor hit.PFV=3SM
‘The cock crowed; Victor hit it.’

There are at least two ways to interpret the discourse in (3):

- (4) a. The cock crowed, AND AS A RESULT, Victor hit it.
b. Victor hit the cock, AND AS A RESULT, it crowed.

¹ We find potential cognates of *mēj* in Masana (*māj*) and Musey (*lāj/māj*) in the Northern branch of Masa and Peve (*bāj*) in the Southern branch. In the Northern branch, these potential cognates can be used mono- and bisyndetically, while the Peve form seems to be used monosyndetically.

While the first interpretation tends to be more salient, both interpretations are available to speakers, and determined pragmatically. Interestingly, this flexibility of interpretation is not possible when *mēj* is used. As shown in (5), only one of the two readings is accepted with a single *mēj*, namely, (4a). And as shown in (6), double *mēj* is not possible in this construction altogether.

- (5) lēk=ŋ hēlā Victor ʃ=ūm mēj.
 cock=DET crow.PFV Victor hit.PFV=3SM CONJ
 ‘The cock crowed AND AS A RESULT Victor hit it.’
- (6) #lēk=ŋ hēl mēj Victor ʃ=ūm mēj.
 cock=DET crow.PFV CONJ Victor hit.PFV=3SM CONJ
 ‘The cock crowed AND AS A RESULT Victor hit it.’

What these examples show is that, despite similarity when it comes to semantically symmetrical coordinate structures, single *mēj* and double *mēj* cannot always be equated. To the best of our knowledge, this is a novel observation and requires an explanation. As pointed out above, *mēj* has been translated variably as ‘and’, ‘but’, and ‘too’ and while these translations are helpful, they do not offer full insight into its semantic contribution, especially given the distributional difference just pointed out. In this paper, we present an analysis of *mēj* which accounts for the distributional difference we observe. Key to our analysis is the following hypothesis, which builds on Txurruka’s (2003) influential analysis of *and* in English:

- (7) **Hypothesis:** The observed differences in the distribution of single and double *mēj* can be explained if one factors how their meanings contribute to the *coherence* of the discourse that contains them.

The goal of this paper is to motivate the hypothesis in (7) through the lens of *Segmented Discourse Representation Theory* (SDRT), which is the leading formal theory of discourse coherence (Asher 1993; Asher & Lascarides 2003; Hunter, Asher & Lascarides 2018).

The paper proceeds as follows. In the next section, we provide a brief background on Gizey and then, in Section 3, we describe the basic tenets of SDRT, particularly focusing on the difference between *discourse subordination* and *discourse coordination* (Asher & Vieu 2005). This dichotomy will be crucial to our analysis of the differences between single *mēj* and double *mēj* in Gizey, which we offer in Section 4. We conclude in Section 5 by highlighting some outstanding questions concerning the prospect of giving a compositional semantic analysis for the bisyndetic use of *mēj*.

2. Background on Gizey

Gizey is a Chadic languoid belonging to the Masa branch (Newman 2013; Melis 2019). It is spoken by 12000 – 19000 speakers across North-Eastern Cameroon and South-Western Chad (Gaffuri & Melis 2018). Its homeland comprises 23 villages (Figure 1), three of which span the Cameroon-Chad border (Kouma, Dahay, Boura) and one of which is within Chad (Weyta). Gizey forms a lectal continuum with Wina. This latter variety is spoken by a group of people, the Wina, who live in the eponym administrative subdivision in Cameroon, in the western part of Lake Fianga. The New Testament has been translated in Gizey; however, only limited number of texts are available (Melis 2024). Studies of specific features or domains have been published (e.g., Ajello 2006, 2007, 2011; De Dominicis 2006a, 2006b, 2008), and Roberto Ajello and Antonino Melis have compiled a dictionary (Ajello & Melis 2008).

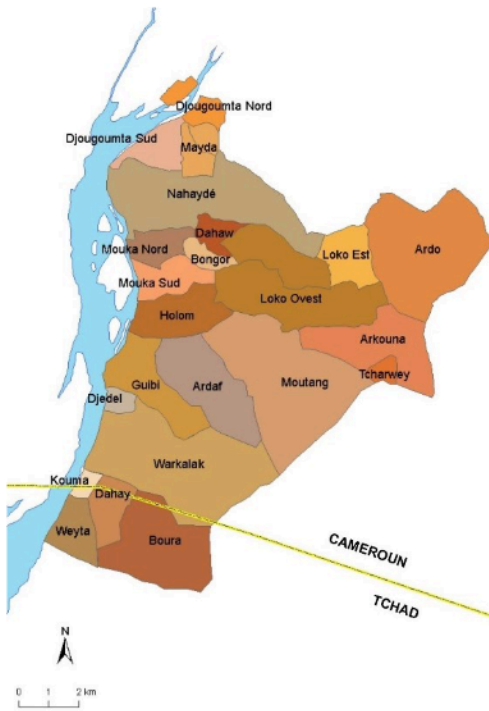


Figure 1: Gizey villages in Cameroon and Chad (D'Ascenzo 2019)

Gizey is an SVO language with very limited inflectional and derivational morphology. In addition to *mēj*, Gizey uses other conjunctions. Coordination can be realised elsewhere with either *dāw* or *hìn*. *dāw* is used to introduce disjunction in alternative interrogatives, i.e., questions presenting an interlocutor with two alternatives to select from (see, e.g., (8)).

- (8) mǐ mǐn dāw mǐn dī zū?
 3SM like.IPFV CONJ like.IPFV NEG Q
 'He wants (it) or not?'

The form *hìn* is used with nominals only. Elsewhere in Gizey, it is used as a comitative or instrumental preposition; and the comitative reading is available when *hìn* conjoins two NPs, as shown in (9).

- (9) fǐj fǐn ʒó tí fú=n kúf tǔwzǐjà.
 Squirrel with Zlo eat.IPFV fufu=DET with themselves
 'Squirrel and (with) Zlo (they) eat food together.'

In subordination context, the adverbial clause (Ground), which prototypically precedes the main clause (Figure), is generally followed by some lexical or grammatical element hosting the enclitic demonstrative =*ni*. The demonstrative usually combines with the configurational adverb *kěj/kàj* 'in_hands' (or other members of the configurational adverb set), see, e.g., (10).²

² Configurational adverbs constitute a closed subset of the adverb class to be used as determiners, predicate modifiers, and predicate. They provide information about vertical/horizontal stance, static/dynamic motion, proximal/distal position.

- (10) Ø gòl ʔà=àʔ sú kúl **kèjní** vù mār díj kúl wān.
 PRO look.IPFV eye=3SF ITV up DEM thing DET SEQ up DEM
 ‘As she looks up, there was something up.’

Interestingly, *mēj* is amongst the elements that can become host to =*ni*. In this context, the adverbial clause provides an explanation for the eventuality described in the main clause, as illustrated in (11).

- (11) Oxpecker’s in-law has died. He practices a funeral song with his friends.
 ʔééřī kùn=òm=bī **mēj=n**, nàm ĩ đir tǐj=nā.
 Oxpecker in-law=3SM=DET CONJ=DEM 3SM take.PFV bottom funeral=DET
 ‘Since it was his in-law, Oxpecker led the funeral song.’

Explanation can also be introduced by *kàj má là* ‘because’. In this case, the main clause precedes the adverbial clause (see, e.g.,(12)).

- (12) ʔàn dǔóp fiàn in gòr màán ɲòllà **kàj má là**
 1S asked DEM COP child mine eldest because
 ‘It is to my eldest child that I asked (next) because
- gún méj ká k=òm đī// ʔéđ méj sij đī.
 wood NEG cut by=3SM NEG axe NEG teeth NEG
 ‘(he) (the other child) could not cut down the tree. The axe did not have a sharp blade.’

Conditionals are generally expressed with a bipartite structure involving a preverbal marker and *ni* occurring between the protasis and the apodosis, as in (13).

- (13) nèj **lèj** kál hèj tòkkà **nì** nèj ɲàr dèwl=èj
 1PL COND leave.IPFV inside meeting DEM 1PL match.IPFV voice=1PL
 ‘If we are going to the meeting, we rehearse.’

Moreover, as can be seen in (14), counterfactuals use a similar construction, but with *ni* being followed by the complex *kún (nàl) (kèjn)*, which involves another realisation of *ni*.

- (14) mì lè hùròkà nì kùn nàl màjt máj l=úm đī.
 3SM COND cultivate.PFV DEM COND hunger NEG do.IPFV=3SM NEG
 ‘If he had farmed, then he would not have suffered from hunger.’
 (Ajello & Melis 2008: 75)

Finally, the substitutive semantic relation (“instead of”) between two described events is marked by *á*, which precedes the adverbial clause. Example (15) illustrates this relation.

- (15) ʔi=ti ǔó **á** nàʔ t=áʔ gù pètè=nì
 woman=DET Zlo instead.of 3SF eat.IPFV=3SF rev all=DEM
 ‘Zlo’s wife, instead of eating it all,
- hìn tàr k=òʔ nèèđā mì dǔùf=òʔ-ò
 let.PFV INDF.SF with=3SF small to husband=3SF-FV
 ‘(she) left some for her husband.’

Apart from its functions to be discussed in this paper, *mēj* is also used to conjoin NPs. When there are two conjuncts, NP coordination mostly involves double *mēj* as shown in (16). Note that in the case of conjoined objects, only *hìn* can be used, as in (17) ; *mēj* is not an option. With more than two

NP conjuncts, only one final *mēj* is used, as shown in (18). VP coordination does not seem to be possible with *mēj*. Speakers may resort to French *et* ‘and’ to conjoin VPs as shown in (19).

- (16) bāk=ŋ *mēj* ʒó *mēj* kāl wī ɲàv-á.
 leather=DET CONJ Zlo CONJ leave.PFV COMPL wrestle.IPFV-FV
 ‘Leather and Zlo went to fight.’
- (17) kùlumbī dʒār dījn fiin virrà.
 horse between dog with monkey
 ‘The horse is between the dog and the monkey.’
- (18) zinillà ʒúnà ɲòrèjt *mēj* sí bàj gùrúnā.
 Leopard Lion Hyena CONJ 3PL herd.ipfv pen
 ‘Leopard, Lion, and Hyena, they herd.’
- (19) ʃit zúd-ā è ʃī Damsu.
 woman push.PFV-FV and hit.PFV Damsu
 ‘The woman pushed and beat Damsu.’

While we focus in this paper on coordination with *mēj*, it is worth noting that Gizey texts include many juxtaposed clauses (lacking *mēj*) that lend themselves to interpretation as coordinated discourse units. Examples include the following symmetrical constructions that emphasise contrast between two described eventualities:

- (20) sin ká gúnā ʃit gò nijnā.
 man cut.IPFV wood woman draw.IPFV water
 ‘The man chops wood; (and) the woman draws water.’
- (21) Thomas póm k=3m híndi William vù máj k=3m dī.
 Thomas apple with=3SM three William thing NEG with=3SM NEG
 ‘Thomas has three apples, William has nothing.’

In (20), the speaker describes the actions of two topical characters in the same spatial and temporal location; and contrast is established between [*X* CUTTING WOOD] and [*Y* DRAWING WATER]. And in (21), the speaker describes two states, and contrast is made between Thomas having three apples and William having none.

Serial verb constructions also appear as translation equivalents of conjunction. For example, (22) expresses motion-for-purpose by serialising three verbs, and its translational equivalent involves conjunction with ‘and’.

- (22) They say if he wants to seduce her...
 mì kāl tùd dʒòp mùl gúru=nà.
 3SM leave.IRR walk.IRR ask.IRR chief pen=DET
 ‘He should go and ask (permission from) the chief of the pen.’

To sum up, Gizey uses different strategies to mark coordination or subordination. *Mēj*, the focus of this paper, is one such strategy. Generally, *mēj* is used to conjoin coordinate clauses and NPs (but not VPs). It is also used in subordination contexts where the adverbial clause provides the reason for the occurrence of the event in the main clause. The various uses of *mēj* have distinct properties, not all of which will be covered in this paper. Instead, we focus on the monosyndetic and bisyndetic uses of *mēj* (i.e., single and double *mēj*, respectively) in the context of clause coordination. We provide data to motivate the novel observation that differences in their distribution can be explained if one

considers how they contribute to discourse coherence. We will leave the question of how to give a compositional semantic analysis of *mēj*, particularly the non-iconic nature of its bisyndetic use (and challenges thereof), for future work.

3. Theory of discourse relations

Discourse relations are functions that one linguistic expression (or larger stretch of text) fulfils with respect to another (Grimes 1975; Halliday & Hasan 1976; Hobbs 1979). For example, one clause may describe a situation that explains another situation described by the subsequent clause, as in the following discourse from Hobbs (1979):

- (23) John took a train from Paris to Istanbul...
 a. ...He has family there.
 b. ...??He likes spinach.

Observe that, regardless of the continuation in (23a) or (23b), no one would understand the discourse as listing two random facts about John. Instead, one would understand these discourses are conveying that John took a train from Paris to Istanbul *because* of what is described by the second sentence. While having family in Istanbul is a good reason for John to go there, the same cannot be said about his affection for spinach. Without further context, the comprehender may be left wondering whether Istanbul has good spinach, Paris has bad spinach, or whether spinach is served on trains to Istanbul. As noted by Hobbs (1979: 67):

the very fact that one is driven to such explanations indicates that some desire for coherence is operating, which is deeper than the notion of a discourse just being 'about' some set of entities.

In order to explain what this desire for coherence amounts to, Hobbs (1985) cites David Hume's proposal that our ideas are associated according to three fundamental principles, namely *Resemblance*, *Contiguity in time or place*, and *Cause or Effect* (Hume 1748). The major contribution by Hobbs was to apply these three principles to natural language discourse, resulting in groundbreaking research on discourse interpretation and discourse structure.

Sasaki & Altshuler (2025) outline two key notions that lie at the heart of this enterprise:

- Coherence inferencing is guided by a combination of linguistic cues and world knowledge.
- Armed with a limited set of discourse relations,³ we can produce and interpret discourses of any length, across a variety of contexts or genres and also across media.

From this shared foundation, various theories of discourse coherence emerge. In this section, we provide an overview of some components of one theory in particular, namely *Segmented Discourse Representation Theory* (SDRT, Lascarides & Asher 1993; Asher & Lascarides 2003), which is a formal theory of discourse relations that we think best allows us to explain the use of monosyndetic and bisyndetic conjunction in Gizey.⁴ We concentrate on two key properties of discourse relations: (i) *coordinating* vs. *subordinating* (Section 3.1) and (ii) *structural* and *non-structural* (Section 3.2).

³ Ranging among extant proposals from two (Grosz & Sidner 1986) to seventy (Hovy & Maier 1992), but usually ranging from approximately 12-30 (Asher & Lascarides 2003; Hobbs 1985; Kehler 2002).

⁴ For more comprehensive overviews, see, e.g., Lascarides & Asher (2008), Altshuler & Schlöder (2019), Altshuler & Truswell (2022: chap. 6).

3.1 Coordinating vs. subordinating discourse relations. We begin our brief overview with examples of discourse relations from SDRT that we will use in our characterization of conjunction in Gizey. The six examples below include a schema from Sasaki & Altshuler (forthcoming) with discourse marker(s) in English that cue a particular discourse relation, as well as its temporal import (if any) and an illustrating example. We follow Duff (2023) in calling the first argument of a discourse relation its *head*, and the second argument its *tail*. For instance, in (23), *John took a train from Paris to Istanbul* is the head of EXPLANATION, and *He has family there* is the tail.

- (24) **EXPLANATION:** tail causes head
 • **Schema:** *head* BECAUSE *tail*
 • **Temporal import:** entails temporal backshift
 • **Example:** *Noah cheered. Naomi (had) scored a goal.*
- (25) **RESULT:** head causes tail
 • **Schema:** *head* SO / THEREFORE/AS A RESULT *tail*
 • **Temporal import:** entails temporal progression
 • **Example:** *Naomi scored a goal. Noah cheered.*
- (26) **NARRATION:** head enables the tail, and they share a contingent, common topic
 • **Schema:** *head* THEN *tail*
 • **Temporal import:** entails temporal progression
 • **Example:** *Naomi sat down. She sipped her coffee.*
- (27) **ELABORATION:** tail provides more information about the eventuality described by the head
 • **Schema:** *head* <colon> *tail*
 • **Temporal import:** entails no temporal progression
 • **Example:** *Naomi made lots of food. She made soup, risotto and tiramisu.*
- (28) **PARALLEL:** the tail and head are similar in content and thematic structure.
 • **Schema:** *head* AND *tail*
 • **Temporal import:** entails no temporal progression
 • **Example:** *Naomi read The Castle. Noah read The Trial.*
- (29) **CONTRAST:** the tail and head have similar thematic structure, but contrast in content.
 • **Schema:** *head* BUT *tail*
 • **Temporal import:** entails no temporal progression
 • **Example:** *Noami loves football. Noah hates it.*

A property of discourse relations that will assume central importance when we turn to conjunction in Gizey is the distinction between coordination and subordination. These are meant as technical terms in SDRT.⁵ Figure 2 below, from Altshuler & Schlöder (2019), provides an intuitive way of illustrating this distinction: coordinating relations change the scene, and hence move forward the narrative (see the horizontal move below), while subordinating relations detail the scene, and thereby deepen the narrative (see the vertical move below):

⁵ As noted by Altshuler & Truswell (2022), many researchers have used “subordination” and “coordination” to describe distinct discourse phenomena, including various properties of discourse relations. For example, according to Hobbs (1979 & 1985) and Mann & Thompson (1987), a discourse relation is coordinating if the head and the tail are on equal footing in terms of what they contribute to a given proposition; a discourse relation is subordinating if there is an asymmetry between the head and the tail, i.e., the content of one of the arguments contributes more to a given proposition than the other. This is crucially not what we mean here by a subordinating and a coordinating coherence relation.

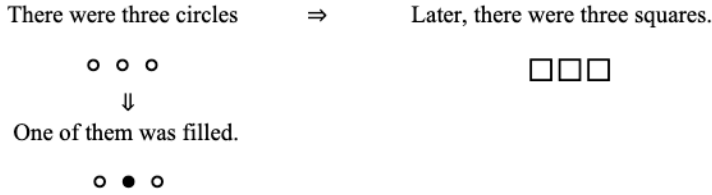
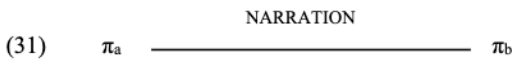


Figure 2: Coordinating vs. Subordinating discourse moves

The distinction between coordination and subordination is often visible in patterns of anaphora resolution. Since coordinating coherence relations change the scene while subordinating coherence relations deepen the description of the scene, only subordination keeps the things we talk about around, and hence available for anaphora. Put differently, we cannot detail scenes that have been changed. Hence, coordinating discourse moves block accessibility for anaphora. In SDRT, this blocking effect is described in graph-theoretic terms: the anaphora-accessible referents are on the rightmost branch of the graph. This generalization is known as the *Right Frontier Constraint* (Polanyi 1985; Polanyi 1988), which amounts in informal terms to ‘look left one step only or look up’. To illustrate this constraint, Altshuler & Truswell (2022) consider the example in (30):

- (30) a. John dropped off his car for repairs.
- b. Then he got a rental.

Here we infer NARRATION, cued by *then*, represented as in (31), where π_a corresponds to (30a) and is the head of NARRATION and π_b corresponds to (30b) and is the tail of NARRATION. Notice that only π_b is on the right edge of the graph. This is because we have changed the scene from π_a to π_b with NARRATION, which is the prototypical coordinating relation (Asher & Lascarides 2003).



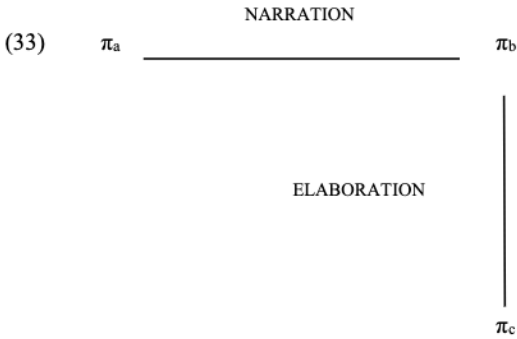
As such, if were to continue (30) with *It had a broken fuel pump*, as in (32), then the pronoun *it* could only refer to the rental car described in (32b), and not John’s car described in (32a), which would be a more likely interpretation given world knowledge. That is, rather than understanding John to have gotten a rental because it had a broken fuel pump, we understand John to have gotten a damaged rental car.

- (32) a. John dropped off his car for repairs.
- b. Then he got a rental.
- c. It had a broken fuel pump.

The graph representation below makes it clear how the Right Frontier Constraint ensures that (32) receives this less likely interpretation. π_c attaches to π_a with ELABORATION and not to π_a with EXPLANATION, because only π_b is on the rightmost branch of the graph. As such, it is resolved to the rental, and not John’s car.⁶

⁶ Unlike third person pronouns, definite descriptions and demonstratives can sometimes override the Right Frontier Constraint due to the way they accommodate presuppositions. The accommodation is sometimes cued by phrases like *by the way*:

- (i) a. John dropped off his car for repairs.
- b. Then he got a rental.
- c. The car had a broken fuel pump (by the way).



In sum, the distinction between coordination and subordination is motivated through intuitive semantic features (“changing/detailing the scene”) and in terms of a linguistic diagnostic, namely anaphora resolution of third person pronouns, which is sensitive to the Right Frontier Constraint. In what follows, we will adopt the independently motivated characterization of discourse relations below, from the SDRT literature.⁷ Note we include only those discourse relations listed at the outset of this section since these are the relations that will be relevant to our characterization of monosyndetic and bisyndetic conjunction in Gizey in Section 4.

- **Coordinating relations:** result, narration, parallel, contrast
- **Subordinating relations:** explanation, elaboration

3.2 Structural vs. non-structural discourse relations. As outlined by Altshuler & Truswell (2022), a central hypothesis of SDRT is that there are hidden elements of discourse structure which augment the discourse relations between overtly expressed heads and tails, and without which the discourse is incoherent, or less coherent. While certain discourse relations require a partial isomorphism between the head and the tail, known as a *common theme*, others require a particular relation to a discourse topic. This means that only a few discourse relations require an explicit representation of discourse topics in the discourse structure; discourse topics are not a ubiquitous organizing principle of discourse structures, but rather an occasional presence. In this subsection, we outline those discourse relations requiring a discourse topic (NARRATION), those requiring common themes (PARALLEL and CONTRAST), and those without either requirement (ELABORATION, EXPLANATION and RESULT). Throughout, we follow closely the overview of SDRT by Altshuler & Truswell (2022: chap. 6).

Discourse relations requiring a discourse topic: NARRATION is the quintessential coherence relation that requires an explicit representation of a discourse topic. Here is how Asher (2004) spells out its discourse structural contribution (cited in Altshuler & Truswell 2022):

(34) If NARRATION(α , β) then $\exists \pi$.ELABORATION($[\alpha$, $\beta]$, π), where π is a topic for $[\alpha$, $\beta]$.

According to (34), if a NARRATION holds between a head α and a tail β , then both α and β elaborate on a discourse topic π . This condition can be paraphrased in terms of events: the event described by the head and the event described by tail are both parts of a topical event described by the discourse topic. As such, NARRATION is *veridical*: it composes to content that entails its parts.

⁷ For more discussion and examples, see, e.g., Asher & Vieu (2005); Altshuler & Truswell (2022); Hunter & Thompson (2022).

In addition to the requirement above, NARRATION imposes the condition $post(e_\alpha) \approx pre(e_\beta)$ which should be understood as follows: the post-state of the event described by a head α constitutes the pre-state of the event described by the tail β . This can be illustrated through the discourse in (35), where the post-state of Naomi sitting down, i.e. Naomi being in a seated position, is understood to be a nontrivial precondition for the pre-state of her tying her shoes, since it is presumably easier to reach one's shoes in a seated position. Note that the discourse topic for (35) would include the agent of the topic event, namely Naomi, and its location, namely the chair, since the agent and location is common to both (35a) and (35b). The head and the tail elaborate on this topic by providing more information about the described events (sitting down and tying shoes, respectively).

- (35) a. Naomi sat down on the chair.
b. She tied her shoes.

Structural relations: Let us now consider PARALLEL and CONTRAST, two coherence relations whose interpretation involves some shared semantic material. Asher, Hardt & Busquets (1997); Asher & Lascarides (2003) refer to this as a *common theme* and those relations that require a common theme are called *structural* (all other discourse relations are called *non-structural*). As noted by Altshuler & Truswell (2022) a major difference between a theme and a topic is that the former is not explicitly represented in the discourse structure. There is no sense, then, in which the head and the tail of PARALLEL or CONTRAST are explicitly represented as, for instance, elaborations of their theme (as in the case of NARRATION). Instead, PARALLEL and CONTRAST entail that such a theme exists, and the quality of these relations is determined by the richness of the common theme inferable from the head and the tail.

As an illustration of PARALLEL, consider (36)

- (36) [[Noah greeted Naomi] and [Nira greeted her too]].

According to the algorithm in Asher, Hardt & Busquets (1997), the common theme of the head and the tail is the information that someone greeted Naomi. The algorithm can be seen as a partial isomorphism between aspects of (36), with PARALLEL telling us that the nonidentical elements (here Noah and Nira) are similar, e.g., they are both agents of a greeting event.

Similar considerations apply in cases where different predicates appear in the different conjuncts. Altshuler & Truswell (2022) consider an example in which the speaker is describing what happened in a game of poker and says:

- (37) ??[[Teia had a high card] and [Ava had a great hand too]] (Julian Schlöder, p.c.)

According to Altshuler & Truswell (2022), either one finds this discourse odd, or one attributes to the speaker the erroneous belief that having a high card constitutes a good hand. This is because, relative to the common theme (possession of a poker hand), Teia and Ava are plausibly similar, as required by PARALLEL, but high card and great hand are dissimilar. The use of *too* in (37) presupposes that PARALLEL holds, but a suitably rich common theme for PARALLEL would require that a high card and a great hand are similar, and knowledge of poker hands blocks accommodation of that presupposition.

CONTRAST is like PARALLEL with one crucial difference: while PARALLEL emphasizes the similarity of the elements excluded from the common theme, CONTRAST emphasizes the dissimilarity (Asher & Lascarides 2003; Hobbs 1985; Kehler 2002). Altshuler & Truswell (2022) illustrate this idea by comparing (37) to (38), where *but* is a cue for CONTRAST.

(38) [[Teia had a high card], but [Ava had a great hand]]!

As noted by Altshuler & Truswell (2022), this example is felicitous because the dissimilarity of a high card and a great hand is now emphasized, relative to the same common theme (possession of a poker hand).

Coherence relations without discourse topics/common themes: At the outset of this subsection, we discussed ELABORATION in connection to NARRATION: a coherent NARRATION is an elaboration of a discourse topic. However, ELABORATION itself does not impose any constraints on discourse topics. According to SDRT, ELABORATION is inferred when the head and the tail describe the same event (with the tail possibly adding additional information about the event).

Other discourse relations that don't impose any constraints on discourse topics are the causal relations, RESULT and EXPLANATION (Asher & Lascarides 2003; Asher 2004). Rather, these relations guarantee coherence by the causal relation that holds between the eventualities described by the head and the tail. More precisely, RESULT(α, β) and EXPLANATION(α, β) contribute the following information (Altshuler & Truswell 2022: chap. 6):

(39)

e_π (RESULT = cause-effect)
cause(e_α, e_β)
\neg before(e_β, e_α)
$e_\pi = e_\alpha + e_\beta$

(40)

e_π (EXPLANATION = effect-cause)
cause(e_β, e_α)
\neg before(e_α, e_β)
$e_\pi = e_\alpha + e_\beta$

According to the first condition, an event described by α causes an event described by β . According to the second condition, which follows from commonsense understanding of causation, an event described by β does not occur before its causing event. And, finally, according to the third condition, e_π is the event recording the causative effect of e_α on e_β .

Summary: In sum, this section has provided an overview of discourse relations. We concentrated on two key properties of discourse relations: (i) *coordinating* vs. *subordinating* and (ii) *structural* and *non-structural*. Below we provide an overview of the discourse relations we discussed with their key properties.

Table 1: Some discourse relations and their key properties

Discourse Relation	Coordinating or Subordinating?	Discourse topic?	Common theme (i.e. structural)?
EXPLANATION	Subordinating	No	No
RESULT	Coordinating	No	No
NARRATION	Coordinating	Yes	No
ELABORATION	Subordinating	No	No
PARALLEL	Coordinating	Yes	Yes
CONTRAST	Coordinating	Yes	Yes

In the next section, we argue that monosyndetic and bisyndetic conjunction in Gizey is sensitive to these natural classes of discourse relations.

4. Novel empirical generalisations

An outstanding question in research on conjunction is whether causal and temporal inferences that arise with *and* can be derived solely by appealing pragmatic rules (see, e.g., Bar-Lev & Palacas 1980; Blakemore & Carston 1999; Carston 1993; Grice 1975). In a landmark paper, Txurruka (2003) argues against this approach, proposing instead that as a matter of its semantics, *and* is a marker of discourse coordination, i.e., it semantically requires a coordinating discourse relation. One piece of evidence for this view comes from comparing discourses with *and* to sequences of finite clauses. Compare (41) with (42):

- (41) a. I had a great meal last week. I went to Burger King. (ELABORATION)
- b. I had a great meal last week and I went to Burger King. (NARRATION, CONTRAST)

- (42) a. Emar bought many things at the fish market in Groningen. For example, he bought smoked eel. (ELABORATION)
- b. ??Emar bought many things at the fish market in Groningen and, for example, he bought smoked eel. (ELABORATION)

As noted by AnderBois & Altshuler (2022), while *and* in (41b) forces a coordinating discourse relation to be inferred in an otherwise subordinating coherence context, it triggers infelicity in (42b) because the subordinating coherence context is maintained.

Building on this insight, this section motivates the following generalisations about conjunction in Gizey:

- I. Single $m\bar{e}j$ and double $m\bar{e}j$ are only compatible with coordinating discourse relations; they are incompatible with subordinating discourse relations.
- II. Single $m\bar{e}j$ is compatible with all coordinating discourse relations (RESULT, NARRATION, PARALLEL, and CONTRAST), while double $m\bar{e}j$ requires those coordinating discourse relations which are structural (PARALLEL and CONTRAST).

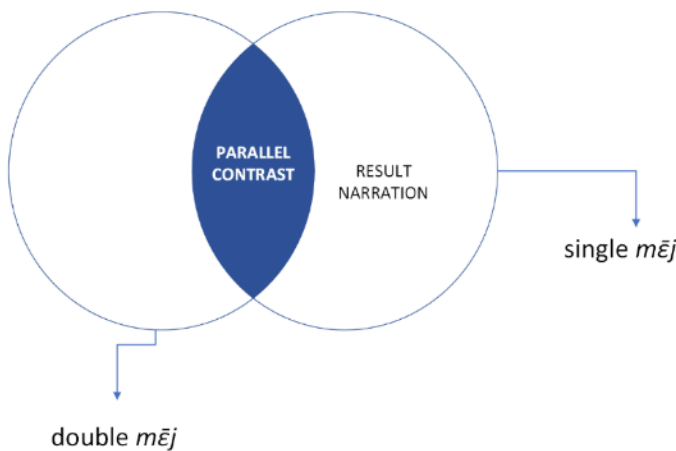


Figure 3: Discourse relations compatible with single and double $m\bar{e}j$. Both conjunctions are only compatible with coordinating discourse relations, not subordinating relations. Double $m\bar{e}j$ is limited to PARALLEL & CONTRAST.

Crucially, recall the counterpart of (43) with single *mēj*, repeated below in (46). The key interpretative difference is that only one of the two readings is accepted, namely, the one represented in (44), which involves the coordinating discourse relation RESULT. Native speakers reject the use of (46) on the reading in (45), which involves the subordinating relation, EXPLANATION.

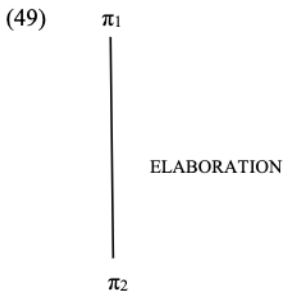
- (46) lēk=ɨ hēlā Victor ʃ=ūm mēj.
 cock=DET crow.PFV Victor hit.PFV=3SM CONJ
 ‘The cock crowed AND AS A RESULT Victor hit it.’

Now recall the counterpart of (43) with double *mēj* repeated below in (47). Native speakers find this example infelicitous, on both the RESULT and EXPLANATION readings. The fact that it is not possible to infer RESULT here aligns with our observation that double *mēj* selects only a subset of the coordinating discourse relations. As we shall see in Section 4.0, double *mēj* only allows structural relations, namely PARALLEL and CONTRAST, which are not supported in (47) given world knowledge.

- (47) #lēk=ɨ hēl mēj Victor ʃ=ūm mēj.
 cock=DET crow.PFV CONJ Victor hit.PFV=3SM CONJ
 ‘The cock crowed AND AS A RESULT Victor hit it.’

Let’s now consider discourse that exemplifies ELABORATION. AS illustrated in (48), the head of this relation (π_1), which corresponds to *Zlo ʃt mēédā* (‘Zlo killed the goat’) and the tail (π_2), which corresponds to *nàm ʃ=āʔ hìn kēw=tā* (‘He killed it with a knife’), both describes parts of the same event, namely the killing of the goat, with the tail also providing more thematic information, namely the instrument of the event was a knife. The graph structure of this discourse is provided in (49).

- (48) a. Zlo ʃt mēédā.
 Zlo kill.PFV goat=DET
 ‘Zlo killed the goat.’
 b. nàm ʃ=āʔ hìn kēw=tā.
 3SM kill.PFV=3SF with knife=DET
 ‘He killed it with a knife.’



Since ELABORATION is a subordinating discourse relation, we expect (48) to be odd with single or double *mēj*. And this hypothesis is confirmed by native speakers, who judge (50) to be odd regardless of whether a single or double *mēj* is used.

not occur before the event described by the head, i.e., $\neg\text{before}(e_\beta, e_\alpha)$ holds. This interpretation is summarised in (56)

- (55) Fitā zúd=únū àn nī gàngī mēj.
 Fita push.PFV=1S 1s fall.PFV down CONJ
 ‘Fita pushed me, I fell.’

(56)

e_π (result = cause-effect)
cause(e_α, e_β)
$\neg\text{before}(e_\beta, e_\alpha)$
$e_\pi = e_\alpha + e_\beta$

In contrast to (55) with single *mēj*, (57) is infelicitous with double *mēj*:

- (57) #Fitā zūd=ūn mēj àn nī gàngī mēj.
 Fita push.PFV=1S CONJ 1s fall.PFV down CONJ
 ‘Fita pushed me, I fell.’

Double *mēj* is also not compatible with NARRATION. Recall that for NARRATION to be inferred between two discourse units, the post-state of the event described by the head must be understood as being contingently linked to the pre-state of the event described by the tail. NARRATION is exemplified in (58) and (59). In (58), the killing event is understood to be contingent on the killer being able to catch the victim. And in (59), the drinking event is understood to be contingent on Zlo having found something to drink (here, water). Crucially observe that in both these discourses, single *mēj* is allowed, while double *mēj* is rejected.

- (58) v=ā? kēj (#mēj) vād=ā? vāt mēj.
 catch.PFV in_hands CONJ finish.PFV=3SF finish CONJ
 ‘(She) caught her and finished (killed) her.’

- (59) a. Zlo fāl nij=n(ā) (*mēj)
 Zlo find.PFV water=DET CONJ
 ‘Zlo found the water.’
 b. nàm ʃ=ūm mēj
 3SM drink.PFV CONJ
 ‘He drank it.’

To sum up, we have established that single *mēj* is compatible with a larger set of the coordinating discourse relations (RESULT, NARRATION, PARALLEL and CONTRAST), while double *mēj* requires only those coordinating discourse relations which are structural (PARALLEL and CONTRAST). In this way, we have validated our novel generalizations introduced at the beginning of this section.

5. Conclusion

This paper has shown that monosyndetic use of conjunction in Gizey cannot be semantically equated with the bisyndetic use. Our method for explaining this novel observation was to build on Txurruka's (2003) influential analysis of *and* in English, according to which *and* is sensitive to structural properties of discourse relations. More concretely, we provided evidence for the following empirical generalization:

- I. Single *mēj* and double *mēj* are only compatible with coordinating discourse relations; they are incompatible with subordinating discourse relations.
- II. Single *mēj* is compatible with all coordinating discourse relations (RESULT, NARRATION, PARALLEL, and CONTRAST), while double *mēj* requires those coordinating discourse relations which are structural (PARALLEL and CONTRAST).

Our evidence amounted to using minimal pairs to isolate our hypothesized discourse factors driving the use of single *mēj* and double *mēj*. An outstanding question concerns the prospect of giving a compositional semantic analysis for the bisyndetic use of *mēj* and, more generally, the status of non-iconic doubling in semantic theorizing. As is well known, repetition in language is often equated with iconicity: more of the same form is more of the same content, e.g., “very very hot” = “extremely hot”. But, as we have seen with conjunct doubling in Gizey, things are far less clear: how does “and” + “and” = “but” or “too”? In SDRT terms, we can ask why doubling a requirement for coordinating discourse relations equates in a requirement for structural similarity. This question poses a difficult challenge for an analyst seeking to give a compositional analysis of doubling. We hope to address this challenge in future research.

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