Coherence markers in political debates: Do speakers differ in connective use when arguing against or in favour of a topic?

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Abstract

Connectives make the relations within discourse explicit. Not only can connective use vary across different purposes and topics, the perceived effect of connectives also depends on type of connective and the audience attitude towards the topic. This study set out to evaluate the connective use of politicians in (vice-) presidential debates when politicians argue in favour of their own view or against the opposing view. A corpus of six debates was composed and connective categories were annotated according to The Penn Discourse Tree Bank (Prasad et al., 2007). Arguments in favour used more connectives per number of words than arguments opposing a topic. Additionally, politicians arguing in favour of a topic were found to use more EXPANSION connectives compared to when they were arguing against an opposing view. In contrast, politicians arguing against a topic were found to use more TEMPORAL and COMPARISON connectives than when they argued in favour. Speakers and listeners are aware of the persuasive qualities of certain connectives and this may build resistance in an audience (Kamalski, Lentz, & Sanders, 2008). While arguments in favour appear to be more inward focussed with a number additive connectives, which focusses more on argument content rather than structure, arguments against a viewpoint use stronger connectives to show contrast. Audience involvement can determine the effect of subjective connectives in an argument.

Key words: Coherence relations, argumentation, for and against, political discourse

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"Vote for me because I'm going to win!" This request and persuasion attempt may seem unusual as it consists of circular reasoning and does not give an actual argument. While the second clause does not add any strength of argument, its mere existence and illusion of argument makes the request more persuasive (Langer et al., 1978). Additionally, the inclusion of the connective 'because' facilitates the comprehension of the request by the audience (Sanders et al., 2007). By using the objective form of causality (*because*) as opposed to the subjective form (*since*), the speaker does not indicate a subjective persuasion but an objective one and is likely to be more persuasive in their goal (Kamalski et al., 2008). Although the request may seem rude or illogical at best, through its formation and word choice, the requester might actually increase their chance of reaching their goal. This illustrates that discourse markers, and more specifically connectives, are a crucial part of discourse and persuasion.

Connectives are words that connect two or more phrases or discourse segments and signal a coherence relation. The primary function of connectives is to form a coherent structure that allows a reader or hearer to understand the "inner relationships between individual parts of the discourse" (Martinková, 2019). Research has shown that both highly and lowly educated readers significantly benefit from explicit use of connectives and connective use increases comprehension (Sanders et al., 2007). Thus connectives play a crucial part in the purpose of discourse, but different connectives do not affect understanding, meaning, and influence of the discourse in the same manner. Firstly, adults do not understand frequently used and less frequently used connectives equally well (Zufferey & Gygax, 2020). Secondly, cohesion is marked differently across various registers such as spoken and written discourse (Louwerse et al., 2004). Finally, connectives within argumentative discourse may have different strengths and persuasive effects (Heller & Areni, 2004; Kamalski et al., 2008).

Persuasion has been researched with regard to connectives, but no research been done into the different connective uses in arguments in against or in favour of a topic. Nevertheless, research suggests that different discourse markers are used for discussing views that align with the speaker than opposing views (Fleckenstein, 2019). Persuasive language could impact the beliefs of an audience, especially in the event of presidential debate. Political discourse forms the public mind (van Dijk, 1997) and eventually public actions like voting. Public opinion eventually influences political decisions and societal consequences. Political discourse can therefore have imminent and widespread effects This study aims to explore the

language use of politicians during those presidential debates and whether politicians use different connectives when they intend to persuade in favour or against a topic.

Causal and additive connectives

Because of its prominent role within discourse, connectives have been a long and commonly researched topic within linguistics. The function of connectives can be divided in three units: markers that guide the organization of the discourse (e.g. *for example*), markers that show a relation between two acts (e.g. *before*), and markers that show an interactive relation between (counter) argument and main act or a reformulation (e.g. *because*, *but*, *moreover*) (Roulet et al., 1985, as cited in Tseronis, 2011). Since they mark interactive functions and serve to articulate the discourse units, the latter two categories are categorized as pragmatic connectives.

The pragmatic connectives can be divided into two categories: causal and additive. Sanders, Spooren, and Noordman (1992) further researched the pragmatic use of connectives and formulated a taxonomy of primitives of coherence relations necessary to form a coherent discourse representation. They constructed a theoretical account of links that make discourse coherent, namely connectives. The authors identify the basic function of connectives as causal, strongly connected, or additive, weakly connected. Accordingly, all connectives can be divided into one of these two categories, as the authors argue that for example temporal relations belong to additive connectives.

Following research has also used the primary distinctions between causal and additive connections as a means to categorize connectives and investigate the effect of each type. Zufferey and Gygax researched the comprehension of connectives, measuring causal and additive relations based on the model by Sanders et al. (2018). Additive relations are easier to understand than causal relations and cognitively the simplest kind. Causality was measured by three subcategories; consequence, causal, and concessive relations, of which the latter has the highest degree of cognitive complexity. Evidently, the dichotomy of Sanders and colleagues (1992) by distinguishing between strong and weak coherence distinctions serves research into further functions and uses of connectives well.

Coherence in arguments

Research has explored the linguistic realization of argumentative moves in order to reach a better understanding of how people use language to argue (Tseronis, 2011). Coherence markers do not create a relationship between two elements but rather make explicit what that relationship is. Causal relations such as causality, explanation, and justification can imply an intentional element, or implicit judgment (Nielsen, 1996). Within argumentation,

connectives can also aid coherence in the form of supporting a statement as a consequence or result (Tseronis, 2011):

> (1) Covid19 is a highly contagious and dangerous disease. It is *therefore* imminent that the spread is reduced as much as possible.

However, they can also have a weaker, more connecting function:

> (2) It seems to us that social distance increases isolation *and* that more social interaction should be pursued on other platforms.

This distinction displays both the difference between weak (1) and strong (2) connectives within an argument. Speakers consider the different functions for types of connectives when they choose a connective to use (Spooren et al. 2015) and hearers recognise the function of the connectives when they respond to the discourse (Kamalski et al. 2008). Despite the fact that argumentative utterances do not require connectives and the observation that connectives are only a part of argumentative markers, connectives facilitate argumentation and its persuasive effect.

Connectives are purposefully adjusted to accommodate to its surrounding factors. Variation in cohesion across twenty-three registers was broadly investigated by Louwerse et al. (2008), who reported that frequencies of cohesion features do not only vary across medium and content, variations were also found across purpose (informative vs. declarative), manner (elaborative vs. constrained), situational, and narrative versus non-narrative dimensions. Accommodation can lead to influencing and across genres, argumentative reasoning might be the category most intended on reaching its purpose though discourse.

Connectives and context

Despite the clear documentation that connective use is determined by the communicative context, there is no conclusive research as to why speakers distribute their connectives across discourse in the manner that they display. Further research has explored the kind of variation in cohesion across discourse registers and causes that can explain this phenomenon (Louwerse et al., 2004; Sanders & Spooren, 2015). Sanders and Spooren (2015) researched the link between causality and subjectivity. Subjective statements can only be interpreted with a *subject of conscience* (Hoek et al., *forthcoming*) while objective statements can be uttered by a person but interpreted on its own. Sanders and Spooren (2015) argue that subjectivity can explain why people distinguish between certain types of causality, suggesting

cognitive categorization of causality. For example, the Dutch *want* is more subjective than *omdat.* Remarkably, certain connectives are used more to support a judgement and express subjective relations than others. Judgement is a frequent element of persuasion as it can distinguish an argumentative statement from an informative statement. The link between subjectivity and causality (Sanders & Spooren, 2015) was partly corroborated by Hoek, Sanders, and Spooren (Hoek et al., *forthcoming*). The subjectivity theory remains robust across genres and can be used to explain systematic differences between causal connectives.

Connectives do not only portray a different strength of link but also complexity. When Zuffrerey and Gygax (2019) researched the use and understanding of connectives, they focussed on how connectives facilitate text comprehension for readers. They showed that some adults may have difficulties distinguishing between correct and incorrect uses of connectives. Additionally, some adults have a lower understandability of the less frequently used connectives from the written mode than more frequently used, depending on their exposure to print. Categories of connectives display significant variation across spoken and written registers (Louwerse et al., 2004). In speech, few connectives are often used for a range of functions. Contrasting this, written texts contain a large variety of connectives with more specific purposes. Prepared speeches form an interesting interaction between this as the speaker has ample time to prepare intricately coherent text, but hearers have little time to digest or oversee the discourse. Intricate relations between arguments in speeches might have to be marked more explicitly with connectives than a written argument. The speeches in this corpus are highly prepared due to their prominence but also have to appeal to a broad audience of highly and lowly educated voters.

Political discourse

Research into the composition of argumentative reasoning is valuable for political discourse. United States presidential debates essentially decide the arguably most powerful ruler for the next four years. Presidential debates are shown to polarize the audience (Warner & McKinney, 2013) and impact undecided voters (Schill & Kirk, 2014), which could alter the course of outcome.

Because of their argument richness, high pressure environment, and public quality, political debates have been a rich source of research (Visser et al., 2019). Van Dijk also highlights the importance of political discourse because "who controls the public discourse, at least partly controls the public mind" (van Dijk, 1997). Discourse markers within political speeches have been shown to aim at influencing a nation (Ismail, 2012) but little extensive research has been conducted on how certain discourse markers are used to persuade in

political debate. An analysis of the 2016 United States presidential debates analysed the use of discourse markers and revealed that they are frequently used by politicians in debates (Wang & Guo, 2018). Additionally, some research has covered the function of discourse markers in debate (Martinková, 2019), but more research is needed into specifically connectives, which constitute such a vital part of text coherence on comprehension.

Persuasive discourse

The effect of connectives in persuasive communication has interested research, but has only been skimming the surface. Heller and Areni (2004) conducted research into the different persuasive strengths of connectives as they tested their effect on comprehension and acceptance of advertisements. Within the research, they differentiated between causal, contrary and neutral indicators. Causal indicators, such as *because*, imply a causal relationship and the acceptance of one part would correlate with acceptance of the other part. Contrary connectives, such as *but*, have the opposite function as they portray a negative relation between two clauses and the acceptance of one part makes the other less plausible. Lastly, neutral connectors, such as *and*, link two clauses that do not affect each other. Contrary to expectations, Heller and Areni (2004) found that causal indicators did not enhance acceptance of the argument compared to contrary and neutral indicators.

Interestingly, the findings of Heller and Areni (2004) also seem to contradict the earlier mentioned findings of Langer et al. (1978) where the use of *because*, regardless of reason, elicited positive responses. In their experiment, the researchers asked subjects whether they could print a certain number of pages ahead of them. By simply adding *because*, the request was granted more often, regardless of argument strength. However, when the request became bigger and more consequential, the argument strength of the reason after the *because* became more important to the listener. Heller and Areni (2004) used a written advertising stimulus with a questionnaire to measure the influence of connectives on the persuasiveness of the argument. The students were specifically asked to rate argument strength, which might have shifted the attention from the connective use to the evaluation in the argument. The study itself confirms that the high level involvement task probably inhibited the effect.

The difference in connective strength of these causal connectives could partly be accredited to the involvement theory (Hoeken, Hornikx & Hustinx, 2017). When a consequence is immediate or concerning the audience, the audience is more involved and therefore puts less emphasis on the external characteristics and more on the internal message. Similarly, a less involved audience responds more to the external characteristics of a message. High level of involvement is a necessary condition for argument quality to affect persuasion

(Heller & Areni, 2004). For instance, a politician arguing about a low-level involvement issue, such as the climate change consequences in a hundred years, can persuade by the structure of the text. This can be with external cues like quoting an expert or even discourse markers. However, a politician arguing about a high-level involvement issue, such as tax breaks, can only persuade by the content of the text.

High-level involvement can be a situation where the consequence would be within the next year. The effects would be immediate and the audience would process the argument more deeply instead of basing their judgement on heuristic cues. Within this concept, an audience would also focus more on the content of the argument about their ethnical group in contrast to another ethnical group. Relations made explicit by connectives could more easily be adapted without scrutiny and have more effect if the audience was not personally evolved and the effects are not immediate. Research into persuasive strength reveals the influence of a topic and the audience on the persuasive strength of the argument structure.

Connective in persuasion

While persuasive strength of connectives is relative, different connectives used within persuasion do evoke different reactions. Kamalski, Lentz, and Sanders (2008) conducted an experiment to analyse the influence of coherence markers on persuasive texts and to identify the possible 'forewarning' effect of coherence markers. According to the authors, coherence markers are words with an argumentative purpose and could be classified under the category of "linguistic argumentative operators". This would mean that studying connectives is valuable in argumentation and persuasion research. Kamalski and colleagues (2004) show that objective marking, known for improving integration of information, may be more persuasive than subjective marking, which can make readers more easily aware of the authors intent. Statements connected by objective connectives such as *omdat* are perceived as more factual and less of a persuasive act than stating the same statements connected with a subjective counter form such as *want*. In a debate, the marking of the argument may depend on whether the intent is to argue in favour of what is believed to be true or to argue against the opposition. Persuasion aims at establishing a point as objective or true while maintaining that the opposite is misguided or even subjective to that person. If a statement is perceived as a persuasive act, it is resisted more. Debaters familiar with this information can subtly use subjective language to argue against a topic to steer away from the opposition's reasoning without tangible arguments that can be countered. Consequently, different connectives used in persuasion evoke different reactions within the same context.

A recent study by Fleckenstein found that discourse markers, a category including but not limited to connectives, within political argumentation are also used as a stance-taking resource (2019). They researched the use of discourse markers in a debate for and against abortion and found that discourse markers act as a resource for positioning and identity management. Speakers used different speech to evaluate groups or topics that they opposed to (or outgroups) compared to views that they aligned with (or ingroups). This is a strategy that reinforces the positive connotation with one's own view and a negative connotation of the opposing view, essentially creating more distance and less connection as well as persuasion of opposing groups. Contrary to expectation, there was no difference found between groups that argued in favour or against abortion. The difference was only exhibited when talking about one's own view and the opposing view. Politicians on each side used similar discourse markers across the debate, but all politicians used different discourse markers to argue against a topic than when they were arguing in favour. While the discourse markers evaluated by Fleckenstein (2019) were not just connectives, they showed a variation between language use on stances. It appears that connective use between the arguing positions has not been studied extensively.

Arguing a certain stance inherently contains subjectivity since an objective statement would hardly merit an argument. Evaluations prominently manifest themselves through judgement, such as 'very much x' (Sanders & Spooren, 2015). Judgements are often subjective and are supported more by subjective connectives, such as *want,* than objective connectives, such as *omdat.* Subjective and judgement statements use different connective than neutral statements, but arguing against a topic and arguing in favour of a topic also uses different discourse markers (Fleckenstein, 2019). This would suggest that connectives might be used differently to argue for one's own view or against another's opposing view.

Purpose

To date, little research has been conducted into the use of connectives within stance-taking. Political debates combine the verbal quality of a speech mixed with the written preparations and display a mixed genre with the content of written text delivered with the characteristics of verbal communication. Due to the public relevance and the findings that connectives vary between speech and written discourse, this mixed genre requires further research.

Connectives are used differently between style and genres of discourse. They contribute a vital part to the structure and purpose of a text. Understanding their function in argumentative discourse can aid the understanding of an argument, stance, and structure of

persuasive communication. Public speakers generally engage in persuasive speech and while research has shown that connectives differ between genres, no research has been conducted into the difference between connectives used to argue against or in favour of a topic. Political speech partially determines the course of a nation and a better insight into the language used to persuade voters is beneficial. For that purpose, this research will investigate this phenomenon guided by the following questions:

RQ1: To what extent do politicians differ in the frequency of connectives they use to argue against or in favour of a topic?

RQ2: To what extent do politicians use different connectives when they intend to persuade in favour or against a topic in a presidential candidate debate?

RQ2a: What kind of connectives do they use to persuade in favour of a topic?

RQ2b: What kind of connectives do they use to persuade against a topic?

Method

Corpus

This study analysed a corpus of (vice-) presidential debates from the United States Election, ranging from 2004 till 2016. Six debates (Table 1), three vice-presidential and three presidential, were analysed. In an effort to ensure speaker variety, no debates were chosen from 2008 as these debates also feature Obama and Biden, already evaluated in 2012. The corpus is selected from the database of the Commission on Presidential Debates (CPD), which has transcribed all verbal interaction between the leading democratic and republican candidates as well as the host of the United States (vice-) presidential debates ("CPD: Debate Transcripts", 2020).

Table 1.

Debates analysed for corpus with debate number, date, and candidates

Debate number	Date	Democrat Candidate	Republican Candidate
1	26-09-2016	Hillary Clinton	Donald Trump
2	04-10-2016	Tim Kain	Mike Pence
3	03-10-2012	Barack Obama	Mitt Romney
4	11-10-2012	Joe Biden	Paul Ryan
5	09-30-2004	John Kerry	George Bush
6	05-10-2004	John Edwards	Dick Cheney

Procedure

Five researchers coded all connectives of both politicians' contributions and not the mediator's statements. Each statement of speaker that was separated within the transcript was regarded as a speech act. Usually these were a couple sentences closely related to (part of) a viewpoint. Speech acts were used as a medium to separate the text but do no not contribute significantly to the analysis as they are arbitrary notation of the transcript. The following example illustrates five average consecutive speech acts by the candidate Barack Obama that were separated and individually analysed:

> *Well, first of all, I think Governor Romney's going to have a busy first day, because he's also going to repeal Obamacare, which will not be very popular among Democrats as you're sitting down with them.*

> *But, look, my philosophy has been, I will take ideas from anybody, Democrat or Republican, as long as they're advancing the cause of making middle-class families stronger and giving ladders of opportunity to the middle class. That's how we cut taxes for middle- class families and small businesses. That's how we cut a trillion dollars of spending that wasn't advancing that cause. That's how we signed three trade deals into law that are helping us to double our exports and sell more American products around the world. That's how we repealed "don't ask/don't tell." That's how we ended the war in Iraq, as I promised, and that's how we're going to wind down the war in Afghanistan. That's how we went after Al Qaida and bin Laden.*

> *So we've — we've seen progress even under Republican control of the House of Representatives. But, ultimately, part of being principled, part of being a leader is, A, being able to describe exactly what it is that you intend to do, not just saying, "I'll sit down," but you have to have a plan.*

> *Number two, what's important is occasionally you've got to say no, to — to — to folks both in your own party and in the other party. And, you know, yes, have we had some fights between me and the Republicans when — when they fought back against us reining in the excesses of Wall Street? Absolutely, because that was a fight that needed to be had.*

> *When — when we were fighting about whether or not we were going to make sure that Americans had more security with their health insurance and they said no, yes, that was a fight that we needed to have.* ("CPD: Debate Transcripts", 2020)

The demographical statistics were *date* of the debate, *name* of politician (Table 1), and political *party*, democratic or republican. The corpus was coded for the topic, stance of the politician (against, neutral or in favour), type of connective, and the connective itself.

The corpus was coded by a team of five coders, which are all students of the bachelor International Business Communication at Radboud University, Nijmegen. Coding took into account whether a possible connective was used for coherence purposes. The connective *and*, for instance, was recorded when it functioned as a connective by linking two clauses, but not when it was used as a conjunction in the phrase 'men *and* women'. Some connectives could

function within two different categories and the coders also took into account whether overlapping connectives fit into a certain category. For instance, the connective *meanwhile* could function as a temporal connective by signalling synchronous relationship. However, *meanwhile* could also be used as an expansion connective by signalling a conjunction. Every connective with multiple categories was individually considered by the coders and double coded by another coder within the group for consistency. All debates were coded by a first coder except for the chronologically last debate, which was coded by the whole group. The first five debates were partially double coded by an independent second annotator, to ensure intercoder reliability. Each coder recoded the 70 first speech acts of the next chronological debate and the intercoder reliability for all coders was satisfactory (κ's > .71)(Table 2).

Table 2.

Cohen's Kappa for first 70 speech acts for all double coded debates

First coder	Second coder	Debate	Cohen's Kappa
1	2	2	$\kappa = .711$
2	3	3	$\kappa = .825$
3	4	4	$\kappa = .766$
4	5	5	$\kappa = .749$
5	1	1	$\kappa = .807$

Coding of the connective categories was based on the Penn Discourse Treebank (PDTB), which is a substantial corpus with annotated discourse relations (Prasad et al., 2007). The annotation includes explicit and implicit relations labelled according to the hierarchy of senses (Figure 1). Prasad et al. (2017) annotated the natural language within a Wall Street Journal (WSJ) corpus and documented the connectives used as well as their categories. The categories were categorized hierarchically (see Figure 1).

The top level, or class level, consists of four major semantic classes: TEMPORAL, CONTINGENCY, COMPARISON, and EXPANSION. According to the overview of the taxonomy and prototypical relations of Sanders et al. (1992), TEMPORAL and EXPANSION connectives mark the weaker, additive relations. Additionally, CONTINGENCY and COMPARISON connectives would be regarded as the markers of stronger, causal relations. Each class is further refined by a second level of types. For example, TEMPORAL has two types Synchronous and Asynchronous. Finally, a third level details the specific semantic contribution of each argument.

The corpus in this study only included explicit connectives and the labels are only specified according to the first and second level. Categories in the third level were labelled

with the encompassing second level category. Prasad et al. (2017) produced a list of explicit connectives and counted their frequency in the corpus. Based on the combined judgement of the researchers in this study, the most frequent categories were assigned for each connective to facilitate statistical treatments (see Appendix A). The debates were annotated for explicit connectives and whether they functioned as a connective as well as the category that would apply.

Figure 1.

Hierarchy of sense tags (Prasad et al., 2007)
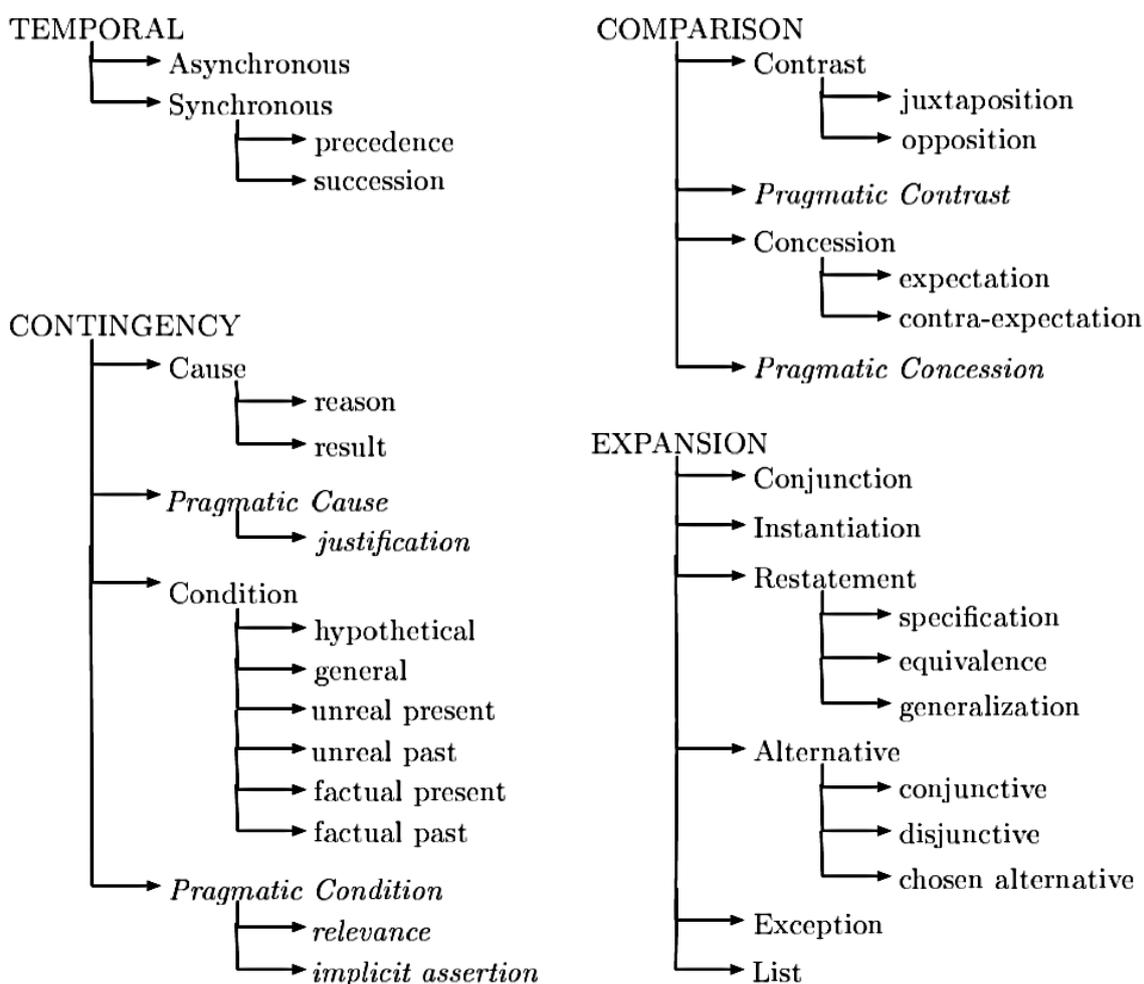
For the purpose of this study, only the for and against arguments of the candidates were analysed. This included a total of 770 speech acts in favour, containing 1707 connectives, and 1032 speech acts against, containing 2006 connectives.

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Results

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This study set out to compare the connective use of politicians persuading in favour or against a topic during (vice-) presidential debates. By counting the number of words in a speech act and the number of connectives per speech act, a percentage of connectives per 100 words was calculated. An independent samples t-test (Table 3) showed a significant

difference in the relative number of connectives politicians used to argue in favour and argue against an issue (t (1674.75) = 2.76, p = .006). The politicians used relatively more connectives when they were arguing in favour of their view (M = 4.90, SD = 4.32) than when they were arguing against the opposing view (M = 4.33, SD = 4.41).

Table 3

Means, standard deviation and n for the percentage of connectives per word in function of arguing position

	For			Against		
	M	*SD*	*n*	*M*	*SD*	*n*
Relative connectives	4.90	4.32	770	4.33	4.41	1032

A Chi-square test (Table 4) showed a significant relation between whether a politician was arguing in favour or not and the class of connective that was used ($\chi^2(3)$ = 21.34, $p <$ .001). Politicians persuading in favour of their view used fewer TEMPORAL (14.1%) and COMPARISON (11.4%) connectives than when they when they were persuading against the opposing view (TEMPORAL = 18.4%; COMPARISON = 14.3%). However, politicians persuading in favour of their view used more EXPANSION connectives (50.6%) than when they were persuading against the opposing view (44.3%). There was no difference between the use of CONTINGENCY connectives when the politicians argued against or in favour of the topic.

Table 4

Frequency and standardized residuals for the Crosstabulation of arguing position and connective class.

	Arguing position		
	For	Against	χ^2
Temporal	**218**	**311**	21.33*
	(-2.2)	**(2.1)**	
Contingency	368	390	
	(0.3)	(-0.3)	
Comparison	**176**	**241**	
	(-1.6)	(1.6)	
Expansion	**782**	**748**	
	(1.9)	(-1.8)	

Note. * = p < .001. Frequencies in bold are significantly different and residuals in bold contribute to the significant effect.

A variable contributes to the relationship when the Standardized Residual is greater than 1.96 (Hendriks, 2019). Due to the low standardized residuals for both COMPARISON and EXPANSION connectives, the differences found between arguing positions are not considered significant enough to contribute to the significant relationship.

For a closer look at the exact connectives used between categories, all connectives with more than ten counts across the corpus were compared. A Chi-square test of all connectives (Table 5) showed a significant relation between whether a politician was arguing in favour or not and the connective that was used ($\chi^2(68) = 170.30$, $p < .001$). Politicians arguing in favour of a topic used relatively more connectives such as *also*, *and*, *as well*, *so*, and *so that* than politicians who argued against the opposition. In contrast, politicians arguing in favour of a topic used relatively fewer connectives such as *instead, when*, and *while* than politicians who argued against the opposition did. Only *also* and *and* had standardized residuals great enough to contribute to the main effect. The other connectives in the table did not have a significant difference between whether the politician was arguing in favour or not.

Table 5.

Frequency and standardized residuals for the Crosstabulation of arguing position and connectives that were used more than ten times

| Connectives | Arguing position | | | | χ^2 |
	For		Against		
After	12	(0.6)	10	(-.05)	170.30*
Also	**58**	**(2.7)**	**31**	**(-2.5)**	
And	**642**	**(2.8)**	**610**	**(-2.6)**	
As	30	(0.0)	35	(0.0)	
As well	**9**	(1.5)	**3**	(-1.4)	
Because	85	(-0.3)	105	(0.2)	
Before	17	(-0.5)	25	(0.5)	
But	155	(-1.1)	214	(1.0)	
For	95	(-0,3)	119	(0,3)	
If	77	(-0,1)	93	(0,1)	
If…then	4	(-0,5)	7	(0,4)	
In fact	15	(0,7)	12	(-0,7)	
Instead	**4**	(-1,5)	**14**	(1,4)	
Next	12	(0,9)	8	(-0,9)	

Once	4	(-0,5)	7	(0,4)
Or	30	(0,7)	27	(-0,7)
Rather	6	(0,4)	5	(-0,4)
So	**88**	**(2,2)**	**63**	**(-2,1)**
So that	**12**	(1,9)	**3**	(-1,8)
Still	6	(-1,2)	15	(1,1)
Then	30	(-0,3)	39	(0,3)
When	**84**	**(-2,0)**	**143**	(1,8)
While	**1**	**(-2,0)**	**12**	(1,9)
Yet	6	(0,4)	5	(-0,4)

Note. * = $p < .001$. Adjusted standardized residuals appear beside the frequencies. Frequencies in bold are significantly different and residuals in bold contribute to the significant effect.

Discussion/Conclusion

This study set out to investigate the connectives used by politicians during the (vice-) presidential debates. Debates portray the practical realization of argumentation and the focus of the corpus analysis was the difference between the connectives used to argue for or against a topic.

Connective frequency

Firstly, this study looked at whether there was a difference between the number of connectives used in arguing for or against an issue. Within the corpus, there were more connectives used when politicians were arguing against a topic than when they were arguing in favour of a topic. However, arguing against an opposing view used fewer connectives per words than arguing in favour of one's own view. Connectives vitally contribute to a persuasive intend. Politicians were essentially using more time to argue against the opponent but used relatively more connectives when persuading in favour of their own view. While it may seem like the politicians use fewer connectives and are possibly less focussed on persuading against another view than in favour of their own, the connectives used to argue against the opposing view uses stronger relations, such as COMPARISON connectives marking causal relations (Sanders et al., 1992). More weaker, additive connectives used to argue in favour.

Connective category

Secondly, this study looked at whether there was a difference between the types of connectives used in arguing in favour of or against an issue. While there are similarities between connective use in arguing position, politicians use more TEMPORAL and COMPARISON connectives when they were arguing against a topic than when they were in favour. The latter could suggest that the arguing against does not often emerge and exists alone but rather is in relation to another argument. Strikingly, politicians arguing in favour did use more EXPANSION connectives such as *and* or lists than when arguing against. This reinforces the idea that arguments made in favour of the topic are often more inwardly focussed and portray a relation of addition or expansion within the argument.

A lack of contrasting connectives combined with an overwhelming amount of EXPANSION connectives might make the arguments in favour seem less persuasive due to the weaker relations, however, this also pre-empts the forewarning effect (Kamalski et al., 2008). The audience might feel less of an attempt of persuasion and therefore resist the information less. On the other side, the frequent use of COMPARISON connectives in the opposing arguments would activate this resistance. However, arguments that the politicians and supporters would oppose could be less applicable or influential for the target audience. For example, an U.S. citizen with a small company might be more involved in the debate about tax breaks than in the debate about a wall on the border. Presumably, supporters agree with the candidate because his campaign promises would benefit rather than hurt them. This suggest that an opposing view could be less applicable to the target audience and involvement theory (Hoeken, Hornikx & Hustinx, 2017) would suggest that if this is the case, the audience would rely more on external argument characteristics, such as connectives.

Politicians arguing in favour of their view use more *as well, and,* and *also*, which are all used as a conjunction, suggesting the succession of the argument. They also used more *so* and *so that*, which are both categorized as causal connectives. Interestingly enough, these were the only causal connectives with a significant difference between the arguing position. Additive or reinforcing connectives and causal connectives reinforce the agreed upon viewpoint and the ingroup of the supporters. Contrasting connectives separate the supporters from the opponents or the outgroup. This corroborates Fleckenstein (2014), who found that politicians use different language to reinforce the ingroup and separate themselves from the outgroup; a persuasive strategy that capitalizes on the human need to belong.

Politicians arguing against the opposing view use the connective *while*, categorized as a contrasting connective, *instead*, categorized as an alternative connective, and *when*,

categorized as a temporal connective. *When* was classified as a temporal connective due to the overwhelming majority of temporal uses in the PDTB (Prasad et al., 2007). However, in this this sentence from the corpus "When Iraq is free, America will be more secure", the use of *when* is very similar to *if*, which is classified as a conditional connective. Overcategorizations like this are a limitation of using only the most common categories for the connectives due to the scope of this study.

Limitations

Besides the limited categories with as limitation overgeneralization, the (vice-) presidential debates also pose a possible restriction on the generalization of the findings. American politics could be considered unusual discourse and might not directly translate to the concept of persuasion across other persuasive attempts. Moreover, the PDBT was based on written text and while political speeches simulate written discourse, debates are closer to spoken discourse due to their spontaneous nature. Connectives make explicit the relations within the discourse but spoken text employs a smaller variety of connectives than written text (Zufferey & Gygax, 2020). A Treebank of similar magnitude based on spoken discourse might portray different categories. Lastly, many differences did not have large enough standardized residuals and a few connectives were not used or only a couple times. This prevents generalization of these findings and encourages future research with a larger scope.

Recommendations

Further research could explore the individual connective uses and other persuasive devises used to argue aligning and opposing views. Additionally, the relation between connective use in persuasion and the involvement of the audience needs more research to investigate further effects. Finally, it would be interesting to measure other aspects in the connective use of politicians during debates as connective structure or category differentiate between genres and debates are a salient genre on its own.

Implications

It appears that politicians do use connectives as a persuasive tool to differentiate between the aligning and opposing view. In the bipartisan political landscape of the United States this would be very influential. While the politicians did use more connectives to argue in favour, they were mostly expansion connectives that were weaker and not overtly extrinsically marking the relation of the argument in the discourse. This evades the forewarning effect of listener resistance against persuasion and emphasises the intrinsic value of the argument, which aligning supporters are more likely to focus on due to the immediate or personal consequences. It would suggest that more connectives or stronger connectives are

not necessarily better to persuade. Statements about the opposed view rely more heavily on external arguments with stronger and more contrasting connectives that have the ability to persuade the audience of the politicians about the opposing side as they are most likely less involved, and has the potential to rally an audience without argument strength. Similarly, this aids in the further separation between the already so divided governing voices.

This study has explored the persuasive discourse of argumentation in favour or against a view. To that end, a corpus of presidential debates was annotated and the differences between connectives used to argue in favour and against a topic were investigated. Politicians arguing in favour use more connectives but tend to mark more additive relations with weaker coherence markers. Politicians arguing against a topic use stronger connectives because the structure may be more influential due to possibly low involvement of the audience. This study has shed light on the differences between arguing stances in political debates in order to reveal the persuasive practise of connectives and motivate further study in this exiting field.

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Appendix A

Explicit connectives categorised by PDTB (Prasad et al., 2017) with the most common category labels.

Connective	Code as:
Accordingly	Cause
Additionally	Conjunction
After	Synchronous
Afterward	Synchronous
Also	Conjunction
Alternatively	Alternative
Although	COMPARISON
And	Conjunction
As	Synchronous
As a result	Cause
As an alternative	Alternative
As if	EXPANSION
As long as	Condition Synchronous
As soon as	Synchronous
As though	Comparison Restatement
As well	Conjunction
Because	Cause
Before	Synchronous
Before and after	Asynchronous
Besides	Conjunction
But	Contrast
By comparison	Contrast
By contrast	Contrast
By then	Synchronous

Consequently	Cause
Conversely	Contrast
Earlier	Synchronous
Either..or	Alternative
Else	Alternative
Except	Exception
Finally	Conjunction Synchronous
For	Cause
For example	Instantiation
For instance	Instantiation
Further	Conjunction
Furthermore	Conjunction
Hence	Cause
However	Contrast
If	Condition
If and when	Condition
If.. then	Condition
In addition	Conjunction
In contrast	Contrast
In fact	Conjunction Restatement
In other words	Restatement
In particular	Instantiation Restatement
In short	Restatement
In sum	Restatement
In the end	EXPANSION
In turn	Synchronous

Indeed	Conjunction Restatement
Insofar as	Cause
Instead	Alternative
Later	Synchronous
Lest	Alternative Condition
Likewise	Conjunction
Meantime	Synchronous
Meanwhile	Conjunction Synchronous
Moreover	Conjunction
Much as	COMPARISON
Neither...nor	EXPANSION
Nevertheless	COMPARISON
Next	Synchronous
Nonetheless	COMPARISON
Nor	Conjunction
Now that	Cause
On the contrary	Contrast
On the one hand...on the other hand	Contrast
On the other hand	Contrast
Once	Synchronous
Or	Alternative
Otherwise	Alternative
Overall	Restatement
Plus	Conjunction
Previously	Synchronous
Rather	EXPANSION

	Contrast
Regardless	Concession
Separately	Conjunction
Similarly	Conjunction
Simultaneous	Synchronous
Since	Cause Synchronous
So	Cause
So that	Cause
Specifically	Restatement
Still	COMPARISON TEMPORAL
Then	Synchronous
Thereafter	Synchronous
Thereby	Cause
Therefore	Cause
Though	COMPARISON
Thus	Cause
Till	Synchronous
Ultimately	Synchronous
Unless	Alternative
Until	Synchronous
When	Synchronous
When and if	Condition Synchronous
Whereas	Contrast
While	Contrast Synchronous
Yet	COMPARISON TEMPORAL

CIW English

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