Contextualizing frames in political discourse: using semantic network analysis to investigate political parties' framing strategies in the Dutch EU referendum campaign

Baden, C.

[Link to publication](#)

CONTEXTUALIZING FRAMES IN POLITICAL DISCOURSE

USING SEMANTIC NETWORK ANALYSIS TO INVESTIGATE POLITICAL PARTIES' FRAMING

STRATEGIES IN THE DUTCH EU REFERENDUM CAMPAIGN

Christian Baden

Amsterdam School of Communications Research (ASCoR)

University of Amsterdam

&

Institute for Communication Science and Media Research (IfKW)

Ludwig Maximilians University Munich

Abstract

Frames do not naturally occur on their own, they are embedded in wider, often strategically crafted narratives. This paper proposes a conceptualization which contextualizes frames, highlighting functional relations, semantic coherence, and compositional overlaps between frames. It criticizes existing frame-analytic methodologies based on their preoccupation with the individual, artificially isolated frame, and suggests an alternative approach that retains the context of frames. Implementing this approach using techniques adapted from the semantic network analysis (SNA) of discourse, the paper investigates the framing strategies advanced by Dutch political parties in the EU constitutional referendum campaign. The analysis finds a differentiated center-periphery structure in the alignment of frames in strategic discourse: While the core argument is typically defined by two contrasting, central frames, various peripheral frames further elaborate the core's situation definition and causal explanations. Frames thus react in systematic ways to the discursive environment in which they appear.

When political actors use frames, their purpose is rarely limited to promoting one particular understanding of an issue. Rather, politicians' frames usually come with at least two more or less implicit corollaries: First, politicians frame issues in ways that support their more general definition of the political situation (Triandafyllidou & Fotiou, 1998); and second, politicians' frames are almost inevitably part of a wider narrative arguing that we, the citizens, should vote for a particular candidate, party, or position (de Vreese, 2006; Gamson, 1988). Political frames thus rarely stand alone: They are embedded within narratives, and perform critical functions in argumentative chains[1] that support particular claims (Benford & Snow, 2000).

In order to function within a narrative, frames must be molded to link to other frames presented elsewhere (Johnston, 1995). As a consequence, frames change slightly depending on the context they are used in. Frame analytic techniques that rely on deductive[2] definitions of relatively self-contained, independent and holistically described frames are liable to miss such subtle changes within and interactions between frames (Carragee & Roefs, 2004; Johnston, 1995; van Gorp, 2005). This paper presents an alternative approach to frame analysis that uses semantic network analysis (SNA) (Carley & Kaufer, 1993; van Atteveldt, 2008). Defining frames based on concept association patterns within a discursive context, the introduced approach allows looking both within and beyond the frame in political discourse. Putting the technique to the test, this paper assesses how political actors combine and adapt frames to support their strategic arguments. It inductively identifies frames as cohesive structures in four of the Dutch major parties' campaign discourses on the EU constitutional referendum and investigates their internal composition and external alignment within the respective parties' framing strategies.

THEORY

Frames & Context

Frame definitions typically consider frames as fuzzy, but basically holistic entities; they focus on what the frame does as an independent whole (de Vreese & Semetko, 2004; Entman, 1993; Gamson & Modigliani, 1987). Important as this aspect of framing is, it distracts attention

from the relations between frames and other, larger as well as smaller units in discourse (Triandafyllidou & Fotiou, 1998). Can frames be considered elements of narrative (Nisbet, Brossard, & Kroepsch, 2003)? What elements do frames themselves consist of (Matthes & Kohring, 2008; van Atteveldt, Ruigrok, & Kleinnijenhuis, 2006; van Gorp, 2005)? The label 'frame' is often imposed upon empirically discovered structures in discourse, however, frames are not 'natural' entities: neither discourse producers nor readers readily recognize frames as identifiable wholes. Frame producers, such as politicians, construct narratives and arguments, thereby framing issues 'on the go' (Bennett, 1980). Likewise, publics perceive, use and reproduce frames to relate discrete experiences to their more general understandings of the world (Berinsky & Kinder, 2006; Graber, 2001; Sotirovic, 2003; van Gorp, 2005). In order to relate frames to the contexts in which they appear, it is thus useful to review common definitions of frames and search for bridgeheads that support a conceptualization of frames' embedding in discourse.

Most prominent definitions of frames cite at least two out of the following three defining criteria: First, frames involve *selectively* rendering some aspects of an issue salient; other considerations are omitted, implying their lesser relevance for understanding the issue (Entman, 1993; Gamson & Modigliani, 1987; Matthes & Kohring, 2008; van Gorp, 2005). Second, frames give meaning by following some 'central organizing idea' (Entman, 1993; Gamson & Modigliani, 1987; van Gorp & van der Goot, 2009). Not any set of selected considerations constitutes a frame; There needs to be some kind of semantic *coherence* that renders the set meaningful. Third, and finally, frames perform argumentative *functions*: They help define situations, establish causal chains, provide the evaluative standards against which propositions are evaluated, and chart the options for treatment and action lying ahead (Benford & Snow, 2000; Entman, 1993; Gamson, 1996; Matthes & Kohring, 2008). While not all frames explicitly address all of these functions, to frame is to build an argument: Frames always structure reality in ways that serve some purposes more than others (Berinsky & Kinder, 2006; Carragee & Roefs, 2004). To the degree that framing is strategic, the selection of considerations emphasized follows from the organizing idea

an actor wishes to impose upon reality (Noakes & Johnston, 2005). In the following, I am going to explore in which ways selectivity, coherence, and purpose of frames relate to the discursive context they are embedded in.

Purpose & context

The strategic function of frames has been treated most explicitly in the literature on social movement frames and frame building (Benford & Snow, 2000; Gamson, 1996). Unlike media frames, frames sponsored by social movement organizations (SMOs), or political actors in general, openly serve the purpose of defining situations in ways that rally support for particular claims (Bennett, 1980; Carragee & Roefs, 2004; Gamson, 1988; Triandafyllidou & Fotiou, 1998).[3] Social movement actors strategically develop frames to mobilize consensus and the readiness to take part in political action (Gamson, 1992; Pellow, 1999; Sibley, Liu, & Kirkwood, 2006). Entman (1993) defined the most pertinent functions that frames perform in discourse: Frames define the situation, and identify the most pertinent problem dimensions that need addressing. Such diagnostic frames often are linked to moral evaluation frames that instate consensus about the normative grounds on which the situation as well as permissible solutions are to be judged (Benford & Snow, 2000; Bennett, 1980; Brewer & Gross, 2005). However, pointing at injustice does not suffice to mobilize support. Narratives need to frame the situation as changeable, and present a desirable course of action as means for achieving this aim (Benford & Snow, 2000; Gamson, 1992; Pellow, 1999). In comparison, political parties usually face easier framing tasks: They do not require their supporters to take action beyond voting their way on some rare occasion. Particularly in campaigns, the mobilizing efforts of political frames are mostly focused on voting behavior.

Arguably the most clear-cut setting for purposeful political frame building is a referendum campaign:[4] Even more than in election campaigns, voters are in acute need of interpretations that can guide them in judging the typically complex and far-reaching policies put to the vote (de Vreese & Semetko, 2004; Hobolt, 2007). At the same time, referendum proposals allow a wide

variety of interpretations, precisely because of their complex nature and uncertain implications. This leaves political parties in a privileged role to give meaning to the choice people face (Carragee & Roefs, 2004; Nisbet et al., 2003; Zhou & Moy, 2007): They anchor the new object in the public's prior beliefs emphasizing those aspects that best support the party's endorsement or rejection (Moscovici, 1961; van Gorp, 2007). Politicians thus strategically select and adapt frames to construct elaborate and often multi-faceted accounts which, ultimately, support a binary judgment and treatment recommendation (de Vreese, 2006; Zhou & Moy, 2007). Thus, to investigate political actors' strategic framing activities, referenda such as the Dutch EU constitutional referendum analyzed in this paper offer a clear-cut and socially relevant setup (de Vreese & Semetko, 2004).

Coherence & context

For diverse arrays of frames to mold neatly into a compelling argument, it is not only necessary that frames give meaning to selected aspects of an issue; they also need to make sense taken together (Conover & Feldman, 1984; Fisher, 1997; Noakes & Johnston, 2005; van Gorp, 2007). Coherence of framing in political discourse must be instated on multiple levels at once (Graesser, Bertus, & Magliano, 1995; Scheufele, 2004a). According to Snow and Benford, SMO actors often adhere to wide master frames reflecting ideological convictions about which aspects of reality typically matter most for understanding issues (Fisher, 1997; Snow & Benford, 1992; van Gorp, 2007). The same can be said about political parties (Merelman, 1969): For instance, liberals (in the European sense) tend to relate political choices to ideals of freedom and self-determination, while socialists stress property and labor relations wherever possible. Such master frames pre-select likely considerations an actor might wish to emphasize in defining a situation, signaling the actor's identity and sustaining coherence between a frame and the party's (or SMO's) usual framing strategies (Benford & Snow, 2000; Mitsikopoulou, 2008). However, this coherence is relatively shallow; within the same master frame, different argumentations can be built to support contrary positions (Donati, 1992; Fisher, 1997).

Another kind of coherence has been described by Gerhards and Rucht (1992): Analyzing flyers of protest movements, they detected a center-periphery structure of frames: A complex argumentation is held together by only a limited set of core claims (see also Gamson & Modigliani, 1987; Moloney & Walker, 2002). Noting their overarching, integrative function, they confusingly termed these central structures 'master frames', too (Gerhards & Rucht, 1992); however, they instate much stronger coherence than Snow and Benford's (1992) master frames (Oliver & Johnston, 2005): The central frames define the functional dimensions of the argument and cast actors and issues into the most important narrative roles: they name heroes and villains, define the general situation, set normative standards, and advocate action (Gerhards & Rucht, 1992). Around this central structure, other frames may appear and elaborate on the main argument, adding detail to the narrative (Bennett, 1980; Berinsky & Kinder, 2006; Donati, 1992); These refer to actors, issues or actions defined by the central frame and specify further aspects while obeying the assigned narrative roles and argumentative functions (Nisbet et al., 2003). The better the supporting frames link in with the core frames, the stronger and more coherent is the overall argument (Benford & Snow, 2000); this is particularly true for the evaluative dimension: In order to form persuasive narratives, frames need to agree on the evaluations of issues and actors: Contrasting valences need to be accounted for. For instance, a party may mention both advantages and disadvantages of a referendum proposal as long as one side clearly prevails (depicting a good proposal with minor flaws, or vice versa); if such ambivalence is not resolved, the narrative fails to inform voters which way they are supposed to vote (de Vreese, 2006).

Since the central frames contain the main argument in a nutshell, they function by themselves and can be presented in condensed form – for instance, as soundbites or slogans printed on posters and banners (Delicath & DeLuca, 2003; Noakes & Johnston, 2005). At the same time, they signal and cohere with the actor's master frames, integrate various accounts and enforce coherence among other frames' functional dimensions (Fisher, 1997; Gamson, 1988; Merelman, 1969; Mitsikopoulou, 2008). While master frames limit the repertoire of

considerations likely to be emphasized by frames, core frames thus define the setup of the narrative by constraining the functions in which specific considerations can appear. Within one account, frames utilize and elaborate definitions already established by other frames. The 'central organizing ideas' of frames within a narrative are connected.

Selectivity & Context

For an argument to be convincing, however, frames must not only cohere with one another; They also need to resonate with the electorate's beliefs (Baden, 2009; Edelman, 1971; Gamson & Modigliani, 1987; Rhee, 1997; van Gorp, 2007). Frames primarily selectively emphasize aspects that people actually regularly associate with an issue, as objectified in a society's social representations (Moscovici, 1961; van Gorp, 2007). These social representations are formed through public discourse and already contain a variety of generally familiar frames referring to the issue (Gamson, 1992; Sibley et al., 2006; van Gorp, 2007).

In order to select frames and beliefs suitable to support their argumentation, political actors draw upon at least two kinds of repertoires (Noakes & Johnston, 2005): First, beliefs and convictions shared by most of the electorate – Gamson's popular knowledge (1992) – serve as anchoring points for a political actor's framing strategy (Baden & de Vreese, 2008; Benford & Snow, 2000; Moscovici, 1961; van Gorp, 2007). Grounding their narratives in widely shared belief structures, political framing strategies ensure that their arguments are comprehensible and relevant to all voters (Kim & Rhee, 2009; Price, Tewksbury, & Powers, 1997; Sibley et al., 2006; van Dijk & Kintsch, 1983). The closer arguments cohere with beliefs and frames already familiar to most voters, the easier will they be comprehended and accepted as credible (Noakes & Johnston, 2005). Parties usually avoid openly contradicting societally shared frames, although well-integrated narratives that resonate with some shared frames may distract people from other common beliefs they would not normally disregard (Chong & Druckman, 2007; Gamson, 1992; Price et al., 1997).

Second, most political parties are discursive arenas themselves. Internal discourses preceding a party's opinion formation offer a repository of frames that have been found persuasive and compatible with the party's ways of master-framing issues (Triandafyllidou & Kosic, 2002); aside of integrating a party's organization and supporters, the use of party-typical frames helps associating advanced arguments with the party itself and build support beyond the referendum campaign (Benford & Snow, 2000; Mitsikopoulou, 2008). Which frames will be employed in political framing strategies thus depends mostly on the respective party's stance, its typical master frames and a society's social representations. Even in referendum campaigns, whose indeterminacy and out-of-the-ordinary status offer much freedom to parties in framing the proposal, only relatively few frames are likely to gain wide currency in a party's campaign.

However, parties do not only select, they also alter, amend and fuse frames (Benford & Snow, 2000; Scheufele, 2006; Triandafyllidou & Kosic, 2002); they are selective not only among, but also within frames. This is because the selected frames do not necessarily fully match those functions intended for them by political actors: They need to be adapted to play their parts in a strategically crafted narrative (Johnston, 1995; Sibley et al., 2006). Therefore, frames, as well as the resulting argumentation lines are likely to be diverse nevertheless: While more than one party may find a socially salient frame a useful ingredient for their argumentation, the way in which this frame is integrated into the respective narratives may still entail major shifts. Since frames need not be used in their original, social representations-embedded form by political actors, analytic strategies used to detect frames in discourse should take into account the interactions between the internal composition and external alignment of frames.

Frame analysis & context

The contingency of frames on both their variable internal structure and external alignment entails several implications for the study of frames in political discourse. Particularly when investigating frames in real world settings, it is necessary to pay attention to the purpose, coherence and selectivity of frames in their context of use (Carragee & Roefs, 2004). While the

need for coherence is often not reflected explicitly, most researchers tend to describe frames using labels that can be understood to represent their 'central organizing ideas' (van Gorp, 2007): Among the many implications and associations a frame may hold, there is a set of core components that need to be present for the frame to be recognizable. These core concepts serve to maintain coherence within the frame (Gamson & Modigliani, 1987; Moloney & Walker, 2002). The issue of coherence among multiple frames, however, has hardly been addressed at all. Discourse analysts have noted that inter-frame relations are highly diverse and elude formalization (Donati, 1992). Narrative scholars have developed story schemata which identify some functional and role constraints that link to the described frame functions (Nisbet et al., 2003; Riessman, 1993); however, the relation between narratives and individual frames remains in the dark (Johnson-Cartee, 2004; Kim & Rhee, 2009). Within the framing literature, the focus on episodic media framing and the implicit view that frames represent independent, self-contained entities have deterred researchers from looking beyond the frame (Carragee & Roefs, 2004; however, see Conover & Feldman, 1984 for a study of linkages between cognitive schemata; Gamson, 1992; Nisbet et al., 2003; Noakes & Johnston, 2005 on co-occurring frames). However, at the level of 'central organizing ideas' routinely quoted in frame-analytic code books, it is not necessarily difficult to find links between frames found to co-occur (Nisbet et al., 2003). Unfortunately, frames are often not described in sufficient detail to determine why one pair of frames combines into a coherent narrative, while another pair doesn't. In order to detect those similarities and references between frames that instate coherence, one needs to consider how exactly the organizing principles of frames within discourse link to one another (Nisbet et al., 2003). In order to determine the coherence of a narrative, a useful starting point could be the idea of central frames, which define the overall setup of the narrative (Gamson & Modigliani, 1987; Gerhards & Rucht, 1992). To the degree that frames follow the setup laid out by the central frames, they should form a coherent account. Frames should cohere with one another by expressly relating to each others' central claims:

H1.1: Coherence between frames is established by shared references to one another's central components.

H1.2: Coherence within a narrative is achieved by frames' references to a core frame's central components.

As for the purposes performed by frames, Matthes and Kohring (2008) have operationalized Entman's (1993) definition of frame functions into an analytic strategy. Defining frames as crystallized combination patterns of functional dimensions[5], this strategy allows tracing how exactly these dimensions – problem definitions, causal explanations, moral evaluations and recommended treatments – complement and support one another (van Gorp, 2005). Although designed to assess the purpose of individual frames, the same approach also allows investigating the interactions between frames. Frames may perform similar or complementary functions within a discourse, but they should not usually advance conflicting ideas in corresponding narrative functions (Benford & Snow, 2000; Noakes & Johnston, 2005). Which diagnostic, causal, evaluative and motivational functions are permissible is defined by the central frames. In the binary choice defining a referendum campaign, one would expect that the opposing camps' arguments use frames to perform characteristically different functions, particularly with regard to the evaluative and motivational dimensions:

H2.1: The core frames in Yes/No camp parties' argumentation lines advance predominantly positive/negative evaluations and saliently refer to voting Yes/No as treatment recommendation.

H2.2: Frames outside of the core agree with the functional dimensions proposed by the core.

RQ1: How are frames aligned within a narrative to support the treatment recommendation?

One side effect of the strategy proposed by Matthes and Kohring is that it allows various frames to share common diagnoses, causal explanations, evaluations, and recommendations (Zhou & Moy, 2007). The approach thus enables an analysis of overlaps between as well as changes within frames. For instance, multiple parties may select the same diagnostic frame from mainstream discourse, but associate different evaluations and treatment recommendations with it (Johnston, 1995). Notably, parties should regularly anchor their narratives in common, already salient beliefs about the referendum proposal, establishing similar diagnostic claims. Motivational

and evaluative claims (as well as further diagnostic and causal elaborations) should differ depending on the party's argumentative stance. Parties are thus expected to develop divergent frames from at least partly common starting points:

H3.1: All parties' narratives centrally involve a range of diagnostic beliefs which are societally shared.

RQ2: What kinds of frames and foci within frames do parties select to develop their narratives?

However, analyzing selectivity at the level of functional dimensions is still relatively crude; since frame components closely cohere with one another, altering one functional component will almost necessarily entail changes also in the other elements; if, for instance, more radical treatment is demanded, it is likely that problem descriptions and moral evaluations gain a more dramatic edge to convey an increased sense of urgency. Where different causal narratives and conclusions rest on similar diagnoses, the internal composition of frames should vary accordingly. Therefore, particularly when addressing *RQ2*, it is necessary to look for even lower level components of frames.

Extending Matthes and Kohring's argument, Boudana (2008) seeks to further decompose frames by focusing at their propositional structure (see also Baden & de Vreese, 2008; Kim & Rhee, 2009); distinguishing actors, actions, places and labels, the technique she proposes should pick up subtle changes such as the increased urgency in the above example; however, propositional coding quickly becomes forbiddingly laborious (Scheufele, 2004b). Van Atteveldt et al. (2006) have suggested a similar technique that relies on computer-codeable concept associations in a text. In their view, if propositions systematically co-occur to form frames, so must those concepts required to define them. Thereby, even subtle changes in the internal structure of a frame can be detected (van Atteveldt, 2008); even mere allusions to frames register at the level of concept associations (Donati, 1992; Fisher, 1997).

The approach allows for frames with fuzzy boundaries, offering an alternative route to address the notorious difficulty in delimiting frames: Instead of searching for self-contained wholes that may sometimes not be wholly present – a strategy that both practically and logically

poses more problems than it solves – it looks for patterns of concept associations of variable strength (Donati, 1992; Matthes & Kohring, 2008; van Atteveldt et al., 2006; van Gorp & van der Goot, 2009). The semantic network approach to framing thus circumvents the necessity to know ex ante what elements (or frames) need to be coded and leaves the emergence of structure in discourse entirely to the patterns of language use (Baden & de Vreese, 2008; Johnston, 1995). Frames can be represented as areas of heightened density in a semantic network, while weaker associations may still extend beyond the frame and overlap with related frames. The same analytic techniques can then be used to trace both shifts within the internal composition and differences in the external alignment of frames within discourse.

The main challenge that SNA faces is to demonstrate semantic coherence in systematic collocations of concepts (Matthes & Kohring, 2008; van Atteveldt, 2008); while manual approaches relying on higher level units can always check coherence in the coding process, SNA operates on a level where coherence needs to emerge, and cannot be controlled by the process (van Gorp, 2005). To the degree that systematic collocations of concepts in discourse texts indeed represent semantically coherent 'organizing ideas', however, this approach may liberate framing analyses from their notorious contingency on the researcher's definition of elements and frames (Matthes & Kohring, 2008).

Semantic network analysis & Political framing strategies

In order to put both the theoretical considerations and the proposed methodology to the test, I collected data on the Dutch political parties' campaign discourses in the run-up to the referendum on the EU draft constitution in June 2005. Four major Dutch parties were selected, varying left-right alignment and endorsement vs. rejection of the referendum proposal; in order to maximize the diversity of party discourses included, I decided to drop the largest two parties (CDA and PvdA), which were similarly centrist and pro-referendum. Instead, I focused on the other two major Yes camp parties (the right-liberal VVD and the green party GroenLinks), whose discourses were more distinct. To represent the No campaign, I selected its two largest

parties: the socialist SP and the Christian-conservative ChristenUnie. Reconstructing these four parties' respective discourses in the form of semantic networks, I identified the cohesive structures within these nets. The below analysis reveals not only which frames can be detected, but also how these are connected, support the parties' respective argumentation lines, and rely on different sets of concept associations to achieve their aims.

METHOD

Sample composition

In order to capture the parties' discourse on the EU constitution as exhaustively as possible, I opted for a broad sampling strategy resting on three major sources: First, all materials hosted on the six parties' referendum-dedicated homepages was accessed; if more than 50 documents were available per party, I selected those linked within three clicks from the starting page, and added further documents retrieved by searches for 'EU Constitution' within the website from the top until 50 were complete. Unfortunately, the liberal party (VVD) had already deleted its campaign website at the time of data collection, leaving only a handful of documents available online. Second, all documents referring to the EU Constitutional referendum were retrieved from the DNPP, the Dutch archive for the political parties,[6] which collects everything published on paper by the major Dutch parties. This yielded between five and ten documents per party. Finally, I included all direct statements by Dutch politicians that were published by the major journalistic media in contributions about the constitutional referendum (de Vreese, 2006). Direct quotes and commentaries authored by Dutch politicians were identified within eight major newspapers[7]; likewise, all cases of politicians' direct speech (in interviews, speeches, etc.) were identified and transcribed from the two leading TV news shows as well as three major political talk show formats.[8] In this subsample, the VVD was somewhat overrepresented. When interpreting the data, it should be kept in mind that the VVD's discourse is reconstructed to a larger degree from statements published in (selective) journalistic media (van Gorp, 2005).

Data preparation & modeling considerations

For the automated analysis, visual information was described using keywords, unless it was redundant with the text. Subsequently, the text structure was recognized and a number of tags were added to the raw text (van Atteveldt, 2008), marking syntactic breaks (interpunctation and paragraph breaks), headlines and subheadings (in television broadcasts: inserts or anchor's opening sentences announcing a new item), bullet point lists as well as direct quotes. These tags were needed to model the text's context structure: When reading a text, individuals draw upon information provided elsewhere in the text, which is not necessarily limited to information provided in close succession; also higher level macrostructures are required to build an understanding of the text's meaning (Graesser et al., 1995; Kim & Rhee, 2009; van Dijk, 1985, 2008). Decoding the text's (macro-)syntactic structure is thus necessary for modeling which terms are likely to be related.

For most parts, the probability of two concepts being related is dependent on their distance in the text (Tapiero, van den Broek, & Quintana, 2002; van Dijk, 1985); thus, I opted against more common, unit based approaches, which record co-occurrences of concepts within a sentence, paragraph, or whole article (Donati, 1992; Pan & Kosicki, 1993). In my view, such approaches are implausible: Sentence- or paragraph-bound approaches necessarily assume that contextual relevance does not span unit boundaries – an assumption led ad absurdum by anaphora, which serve to extend semantic contexts across syntactic boundaries (Johnston, 1995; van Dijk, 2008; van Dijk & Kintsch, 1983); article-based approaches, by contrast, assume that the internal structure of the text does not matter at all, and treat all raised concepts as related – which is implausible particularly for longer texts such as interviews spanning different topics. Furthermore, all unit-based measures react strongly to writing style and document types: The length of a text, paragraph or sentence length determines the number of associates a focal concept is likely to co-occur with, and thus of the density of any derived relatedness matrix. In taking a distance based approach, I reflect Kintsch and van Dijk's (1983) argument that much of meaning construction in discourse processing is local; concepts co-occurring in close succession

15

likely refer to related things, whereas distant structures are usually not relevant to comprehending a given proposition.

Within the local context of a focal concept, syntactic breaks structure comprehension (Hellsten, Dawson, & Leydesdorff, forthcoming): concepts within the same paragraph, sentence or clause are more likely to be contextually relevant than those without. However, these syntactic breaks are 'soft boundaries' that can be transgressed (Kintsch, 1998). Implementing this logic, I used a word distance based co-occurrence algorithm, which considers which other concepts occur within 30 words distance[9] of a focal concept. In order to reflect the bias introduced by syntactic breaks, the algorithm applied penalties whenever a clause, sentence or paragraph border is transgressed (i.e., periods, commas etc. count as multiple 'words' in the distance algorithm). Thereby, co-occurring concepts can be separated by relatively many 'real' words if they occur in the same sentence, but each intervening syntactic break diminishes the distance allowed for co-occurrence. Since I could find no theoretical points of reference as to how much of a penalty the different structural breaks should introduce, I used an ordinal approach: I distinguish minor (commas, semicolons, colons), medium (periods, exclamation and question marks) and major breaks (line breaks) and ran a few simulations using different sets of evenly spaced penalty values. The model finally implemented was chosen for its parsimony and the most plausible results, and uses penalties of one, three and five words respectively. Note that, since paragraph breaks are usually preceded by a period, paragraph breaks effectively reduce the distance permitted for co-occurrences by eight words. Given the frequency of commas, periods and paragraph breaks, the algorithm's 30 words distance translates into about 20 'real' words, or even less in relatively dense journalistic writing.

However, not all discourse processing is local. Global thematic information, as well as a text's 'regional' macrostructure also inform comprehension (Graesser et al., 1995; Kim & Rhee, 2009; van Dijk, 1985, 2008). Words in the headline are part of a text's global thematic macrostructure and are therefore relevant context for all propositions within an article.

Subheadings further specify which aspects of this global theme are discussed in the subsequent paragraphs; they thus amend and differentiate the global context model for all subsequent propositions until the next subheading introduces another focus shift (Johnston, 1995; Kintsch, 1998). Bullet point lists enumerate specific aspects of claims that have been introduced before; usually, the sentence preceding a bullet point list informs the reader about what the following points are examples of, or evidence for. Thus, the sentence preceding a bullet point list is included as relevant context for each point in the list. Lastly, the author of a direct quote is part of the relevant context for the whole following turn or statement. In the sketched model, the context relevant to comprehending a concept's meaning thus comprises the text's global (headlines) and 'regional' macrostructures (subheadings, bullet point rationales and the author of a statement, if applicable), as well as the local context determined by proximity (Hellsten et al., forthcoming; Kintsch, 1998; van Dijk, 2008).

Concept coding & co-occurrence coding

Coding proceeded in three main steps: First, concepts were identified within the texts using a long list of coding rules that were constructed as follows: A set of key words was created based on a) a subsample of texts that were coded inductively, b) those categories developed by Baden and de Vreese (2008) to capture focus group discussions about the EU constitutional referendum, c) the code book used by Takens (2006) for her analysis of the press coverage about the same, and d) word frequency lists from the newspaper subsample. Expressions were grouped as equivalent if they were used interchangeably, or in the same semantic function (e.g., different examples of Dutch liberties were coded jointly unless their relevance was differentiated, Baden & de Vreese, 2008); synonyms and circumscriptions were added and disambiguated utilizing a thesaurus and, in difficult disambiguations, an analysis of concordances in the sample texts.[10]

Each concept was coded searching for occurrences of one or several keywords or word stems in combination with a number of disambiguation criteria that specified which other words must or must not be found within a defined distance of the focal word (van Atteveldt, 2008). For

instance, 'positive (subjective evaluation)' was coded, amongst others, if the focal word 'good' ('goed') was found within 5 words distance of the word stem of 'to find' ('vind*' or 'vond*'), nearby (distance: 10 words) a self-reference ('ik') and not immediately pre- or succeeded (distance: 2 words) by a negation ('niet', 'geen'). In total, 1205 concepts were coded searching for 3267 keyword-disambiguation-combinations.

Those concepts recognized in macrostructure-relevant parts of the texts were extracted and stored as attributes of those parts of text they referred to. For each word recognized as a concept, every attribute-stored concept constituted a co-occurrence relation between the focal concept and the respective element of the macrostructure. Finally, co-occurrence was determined for all concepts within the local text structure using the described word distance based algorithm. As a result, each article can be represented by a vector listing each concept's occurrence frequency, and a symmetric matrix containing the frequencies of co-occurrences between any pair of concepts (Diesner, 2004; Hellsten et al., forthcoming).

Data transformation, aggregation & reduction

For analysis, the derived article matrices had to be aggregated and transformed. Articles were grouped by party and the frequencies of occurrences and co-occurrences were added. However, these frequency based matrices do not yet allow a direct analysis: First, co-occurrence frequencies are heavily dependent on the occurrence frequencies of the involved concepts; frequency matrices are dominated by relatively few concepts that occur very often in language use (Steyvers & Tenenbaum, 2005); However, the information value of terms is inversely related to their frequency: Among the coded concepts, pronouns (self-references, 'we', etc.) were most frequent and hence co-occur frequently with everything else, while adding relatively little to the interpretation. The most interesting concepts occur relatively infrequently (Lowe, 2001).

Second, the coding procedure opted to include relatively many nearby concepts in an attempt to capture most related concepts; thereby, it inevitably recorded a sizeable share of spurious co-occurrences. Thus, in order to distinguish co-occurrences that (are likely to) follow

18

from the semantics of the text from those random entries, I compared the observed co-occurrence frequencies to those expected if there was no systematic relation between concepts (Griffiths & Steyvers).[11] The expected frequency of links between a particular pair of concepts is binomially distributed and depends on the concepts' occurrence frequencies as well as the summed frequency of all concepts in a corpus. Determining the observed co-occurrence frequencies' z scores on this expected distribution, one obtains a measure of the certainty that a co-occurrence is systematic. For analysis, I eliminated all links that failed to reach significance at a .001 level (two tailed).

The last remaining problem concerns statistical power; while the normalization procedure is robust for frequent concepts, some concepts occurred very infrequently in some matrices; following the binomial logic above, their expected co-occurrence frequencies were well below one, and any coincidental co-occurrence would register as statistically significant. In order to avoid mistaking single co-occurrences of rare concepts for important associations, I eliminated all concepts with less than five occurrences. Deleting also those concepts showing no significant links with any other concepts, I obtained a set of binarized, reduced and much sparser matrices retaining around 200-300 concepts and 2000-3000 systematic, probably meaningful links (Hellsten et al., forthcoming).

Within the reduced networks, I identified regions with heightened interconnection density by searching for cliques (complete subgraphs: maximal subsets of the network for which each concept is linked to all other concepts; only cliques of a size of 4 or above were considered; Wasserman & Faust, 1994). Weighting links by the number of cliques they participate in, I obtain a network that reflects the density of local clustering (Gamson, 1988). Tie strength can be interpreted as the participating concepts' number of common associates which are themselves linked, as well. A hierarchical component decomposition was subsequently applied to determine cohesive subsets of concepts regularly co-occurring in common contexts (Kim & Rhee, 2009). Both the clique search and the hierarchical clustering algorithms are implemented in the software

package UCInet 6.0 (Borgatti, Everett, & Freeman, 2002). The graphical representations presented in this paper are obtained using the Kamada-Kawai algorithm, which interprets the presence or line values of links as proximity measures and optimizes stress in a two-dimensional projection (Hellsten et al., forthcoming). The visualization algorithms are available in the software package Pajek (de Nooy, Batagelj, & Mrvar, 2005).

RESULTS

Coherence

Based on the described clustering algorithm, between 7 (SP) and 14 (VVD) cohesive structures of a size of four or above were identified in the parties' discourse networks; each structure groups concepts that are semantically coherent and readily interpretable, lending credibility to the validity of detected structures. Clusters with more than six concepts contain a core which represents the 'central organizing idea' of the frame, and is surrounded by concepts with decreasing association strength. In each discourse, there are one or two clusters that are larger and are internally differentiated by up to two local cores representing distinct aspects within the frame. For instance, figure 1 shows the four largest cohesive structures identified within the green party's (GroenLinks) discourse.[12] In the first shown cluster, the bottom four concepts ('superstate', 'competences', 'national constitutions' and 'false') were more similar to one another than to the rest of the frame; the same is true for the pair 'liberalization' and 'equality', as well as the five concepts at the bottom right of the second cluster ('constitutional rules', 'summary', 'EU legislation' (='rules'), 'EU countries' and 'community of European states' (='union'). Table 1 lists the frames' central organizing ideas and subdivisions, as well as the concepts constituting the frames (presented in the order established by the hierarchical cluster decomposition).

Figure 1 and Table 1 about here

Regarding coherence between frames, *H1.1* expected that frames regularly share concepts belonging to both frames' cores. Such sharedness should be reflected in the derived networks by

20

strong links between core-affiliated concepts, indicating that both regularly occur in one another's associated contexts. Figure 2 shows all pairs of concepts located in different clusters that share membership in five or more complete subgraphs. While a multitude of weak links exist between frames' peripheral elements (not shown), most strong ties between frames connect core components, corroborating *H1.1*: Frames' core concepts occur regularly in the context of other frames. Moving on to *H1.2*, the two largest clusters take in a central position in the discourse: Not only are these are most densely connected (both by strong and weak links) to other clusters, also semantically they represent the core of the party's narratives. However, not all clusters primarily link to the central clusters; the bottom left cluster in figure 2, for instance, is only weakly directly related to the cores, and coheres more directly with the adjacent blue cluster. Across all discourses, only about a third of smaller clusters shows direct strong ties with the central frames; another half is strongly connected to other smaller clusters, while a few structures are tied in only by weak links. While on the whole, coherence is established by frame overlaps around a discursive core, several frames cohere only indirectly with the core. *H1.2* must be refined.

Figure 2 about here

Purpose

In line with *H2.1*, the parties' respective voting recommendations along with most evaluative statements belong to the central clusters in three of the four discourses. Only in the SP's discourse, voting No plays a peripheral role; while the central clusters raise negative evaluations and connotations ('contra arguments', 'threat', 'war'; 'discontent'; 'problem'), they do not expressly draw the link to voting No. This is in line with the SP's main campaign slogan, 'Weet waar je ja tegen zegt' (Know what you say yes to): Sketching a negative scenario of alleged implications of the EU Constitution, the party left the obvious conclusion about vote choice to the voters' reasoning. Similarly, vote choice is never a core component of the central frames

21

within the other parties' discourses, either. While the recommended vote choice is associated with the main argument, the explicit link is usually not made.

In order to address the first research question I investigated how peripheral frames support the recommended vote choice. Only a few links represent causal connections (for instance, the two clusters in at the left margin of figure 2 appear to be causally related: overruling Dutch interests is not conducive to preserving balance and cooperation); Mostly, peripheral clusters elaborate on aspects of the central frames' situation definition. Treatment recommendation is limited to voting Yes or No, as anticipated. Clusters typically cohere only indirectly with the core's evaluative valence by raising connoted concepts; They rarely refer explicitly to the evaluative statements in the cores. Some discourses showed limited evaluative inconsistency, but this was easily resolved within the narrative. For instance, the VVD noted that people distrusted the current government, only to proceed explaining that this could not be a valid reason for rejecting the EU Constitution.

Most peripheral frames do not link directly to vote choice or evaluative concepts, but to objects belonging to the core's or semi-peripheral frames' situation definitions. Figure 3 shows the links between clusters within the Green party's discourse, collapsing all clusters except for the core containing 'voting Yes'; Tracing how, for instance, the frame 'Protecting social and human rights' (upper right corner) supports the vote choice, it is evident that the most direct link (via 'equality' and 'EU Constitution') is of minor importance; Instead, social and human rights are connected to 'Foreign Policy, Development & Security', thus elaborating on an issue understood to be a direct associate of the EU Constitution; beyond this, the cluster indirectly bolsters the parties' claims about 'Economic Integration & Welfare', the strongest associate of the EU constitution. Only few frames primarily support central claims justifying the voting recommendation. While most frames indirectly support and cohere with the central frames' functional dimensions, the direct alignment expected in *H2.2* is not supported.

Figure 3 about here

Selectivity

The common ground of frame uses (*H3.1*) was assessed by determining the range of concepts included in frames in all parties' discourses, as well as those concept pairs reliably found within one cluster in all discourses. 31 concepts were used by all parties' framing strategies, including the most prominent objects of the referendum proposal (e.g., EU Constitution, Institutions, Competences) a range of policy issues saliently associated (e.g., human rights, social protection, criminal prosecution), concerns of national identity, and a few categories such as 'pros' and 'cons' or 'goals'. These shared concepts reliably occurred within the 6 to 8 largest and most central clusters in each party's discourse. As to the objects of discussion, hence, there is some agreement across the investigated parties.

However, the way in which concepts were associated with one another and third concepts differs dramatically. Not a single pair of all coded concepts was joined in one cluster across all parties' discourses; merely eight pairs occurred together in three out of four discourses, and out of these, only five represented meaningful semantic associations:[13] The concept 'European level' was associated with 'decisions', the EU Parliament, and the national level, the EU Constitution is linked to the notion of a European superstate, and the 'EU legislation' was associated with the whole of the European community of states. The commonality in parties' framing strategies is thus limited to a concern with the division of decision competences in the European multilevel system. Parties' agreement did not extend even to the most direct associates of core concepts. Figure 4 shows the frames pertaining to the EU Constitution in each party's discourse. Only 8 out of 72 concepts are referred to by more than one party's frame, only one ('superstate') occurs in three frames. While the range of concepts that regularly co-occur with 'EU Constitution' is much wider than the displayed cluster, the core interpretative structures are remarkably different.

Figure 4 about here

Focusing on the semantic content of the parties' framing strategies, the diversity of understandings is further corroborated The liberal party interprets the Constitution's bearings on

23

the workings of Europe and the preservation of Dutch identity; this is aided by another core frame spelling out how exactly the new competence order protects Dutch interests and furthers desirable policies; peripheral frames give examples of such policy cooperation (combating crime, regulating immigration, safeguarding free trade) and appeal to Dutch identity (human rights, liberal legislation). Mostly, they refer to issues already associated with the party's usual discourse.

The other Yes camp party, GroenLinks, refutes common misunderstandings about the EU Constitution and contrasts these with a positive frame regarding economic integration and social welfare; two more frames (No camp threat, doubts) bolster the warning against false claims, and a few more elaborate on the welfare theme (social rights, health and education, energy waste); However, the green party's discourse also features several party-typical frames that do not derive from the central frames (democracy, transparence, peace and the rejection of the Iraq war).

The religion- and culture-oriented frames in the ChristenUnie's discourse follow mainly from a party-specific master frame, as well, however, these are more closely aligned with the narrative cores; the central concern with lost influence and identity includes a cultural-religious aspect taken up by the two semi-peripheral frames. The second core frame, sketching an eruption of discontent in the French referendum seems to have little implications for frame selection, merely the 'another Europe' theme may have been imported from the French debate.

Similarly to the two preceding discourses, also the SP's discourse is structured around an antagonism of two frames, juxtaposing a militarized EU superstate with a democratic, decentralized national order; references to big countries' preferences as well as national diversities follow from this juxtaposition, while the other frames' alignment is not clearly related; The party's master frame is reflected in the core's antimilitarism theme as well as the somewhat disconnected reference to labor relations

All discourses contained a central concern with direct implications of the referendum proposal, structured by the party's assumed stance. Most parties referred foremost to the reordering of influence in Europe, only GroenLinks putting these considerations second to

substantive implications. Another major share of considerations followed from the respective parties' master frames. However, while VVD integrated both logics into the discursive core, the two repertoires stand somewhat apart in the other parties' discourses. The Greens' discourse even prominently featured party-specific frames largely unrelated to the core campaign narrative. A third range of considerations concerns reactions to the campaign situation, such as the refutation of 'false' claims by GroenLinks or the ChristenUnie's view of the French referendum. Together, these three logics seem to cover most of the considerations selected for building each party's arguments.

DISCUSSION

Contextualizing the above findings in the light of the framing literature, a number of both substantive and methodological implications need mentioning. Substantively, the above findings tie in well with the existing knowledge on the Dutch referendum campaign (Aarts & van der Kolk, 2006; de Vreese, 2006; Harmsen, 2007; Takens, 2006); Most frames raised can be plausibly explained from the parties' strategic stances in the campaign: Parties weave their narratives relying on both common knowledge beliefs and considerations reflecting the party's master frames (Noakes & Johnston, 2005; Snow & Benford, 1992); the main finding unanticipated by the literature concerns the rather large space taken in by reactions to the campaign situation – noting, of course, that the represented semantic nets do not measure the frequency of mentioning, but the density of association in common contexts; aside of that, it is remarkable how little similarities between the parties' discourses were found beyond the reference to common objects. Apparently, the anchoring of accounts of the referendum proposal in established social representations was rather shallow and undetermined (Moscovici, 1961). However, since parties were sampled based on maximum diversity, we would normally expect more similarity between less different political parties.

More interesting than the substantive content of frames, however, are the structural arrangements revealed by the above analysis: Frames in discourse are connected by an intricate

network of shared contexts, overlaps and links between their central organizing ideas (Donati, 1992; Fisher, 1997; Gamson & Modigliani, 1987). These links serve to establish coherence between the frames of a narrative, and help focusing various claims toward their common purpose (Carragee & Roefs, 2004; Entman, 1993; Noakes & Johnston, 2005). Frames within discourse do not stand disconnected, each independently suggesting a particular conclusion; they support one another and often do not link directly to the implied conclusion at all. To form compelling arguments, parties do not simply advance all frames that come to mind in relation to the desired conclusion; rather, they group supportive frames around a very limited set of (often dialectically opposing, Moloney & Walker, 2002) core claims that constitute the campaign discourse's central frames (Gerhards & Rucht, 1992); The frame structure of narratives shows remarkable similarity with the structure of social representations (Moloney & Walker, 2002; Moscovici, 1961): Since social representations evolve from widely accepted public accounts, their structure is based on the structure of the original narratives. Both in established and potential social representations, the set of central organizing frames constrained the range of ideas can be coherently linked to these by supportive frames. Most notably, explicit valence (as opposed to the connotation-sustained implicit valence of the periphery) and treatment recommendation seem to be monopolized by the core (Moloney & Walker, 2002; Sibley et al., 2006).

Evidently, frames react to the context in which they are used: Frames may agree on a set of claims related to their 'central organizing ideas' – consensually identifying, for instance, the reordering of competencies as a central concern – yet elaborate these in quite different ways. As a consequence, understanding frames as relatively well-delimited, holistic and stable semantic structures defined in content-analytic codebooks may be inappropriate for investigating framing practice in discourse (Matthes & Kohring, 2008); The above analysis suggests a more flexible notion allowing multiple overlaps between frames as well as fuzzy boundaries. Besides reflecting frame sponsors' purpose-driven, eclectic use of frames, a view that conceptualizes frames as rather fluid, emergent structures in discourse provides an avenue out of the common difficulties

in delimiting and defining frames – be they deductive approaches, which disregard important situational contingencies, or inductive ones, which rarely find comparable frames in different discourses; SNA offers a methodology for systematically comparing similar, but not identical frames discovered in different places, at different times, in different discourses.

Limitations

Contrary to frequently voiced fears in relation to SNA, the strong face validity of detected structures bolsters my confidence in the validity of measurement (van Atteveldt, 2008); however, semantic coherence of frames was assessed from the networks, without checking back with the original documents; interpreting co-occurrence based networks always bears the risk of mistaking artefactual collocations for semantic relations. Relatedly, the correspondence of derived patterns with parties' master frames is not grounded in an investigation of the parties' usual discourse. The matches thus hinge upon their plausibility, and require substantiation where doubts remain. Finally, the Dutch EU referendum campaign has been selected as a conveniently clear-cut setup for investigation; as a consequence, findings cannot claim to apply to strategic political framing in other political settings and circumstances (notably, election campaigns); While there may be good reasons to expect similar narrative structures, this remains to be tested.

Conclusion

This study has been, to my knowledge, the first to distill frames by entirely rule-bound procedures from (near) exhaustively recorded discourse. It has introduced a methodology for the automated treatment of discourse corpora and proposed modeling considerations regarding their semantic structure. The approach has proven capable of reducing this data to deliver a handful of interpretable, meaningful structures. Demonstrating the feasibility and validity of this approach, this paper has argued that frames can and should be analyzed within their discursive context: Frames interact with one another in multiple ways within discourse. They are selected and crafted by their sponsors to advance specific conclusions. Multiple frames are woven into narratives that account not just for single issues, but for the whole, complex situation people find

themselves in. These narratives, not the individual frames, are the focus of attention – both for those social and political actors crafting them and their audiences using them to make sense of the world they encounter. Analyzing frames without their discursive context not risks overlooking subtle but consequential changes in their internal composition and external alignment; it also attributes meaning to semantic structures that, in practice, are rarely understood as independent wholes. In order to grasp the full relevance of a frame in public discourse both to its sponsors and users, we need to reflect the environment it appears in – we need to contextualize frames.
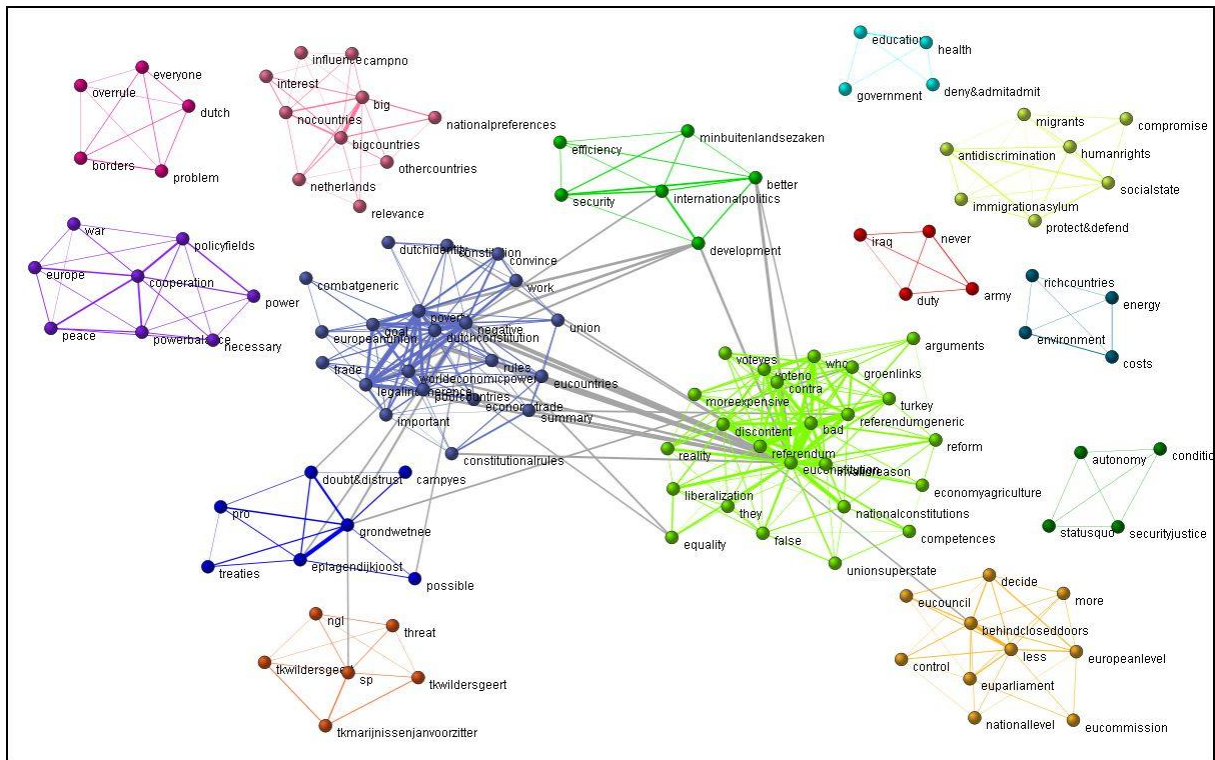
Figure 1.

Composition of the four largest cohesive structures in the campaign discourse of GroenLinks.
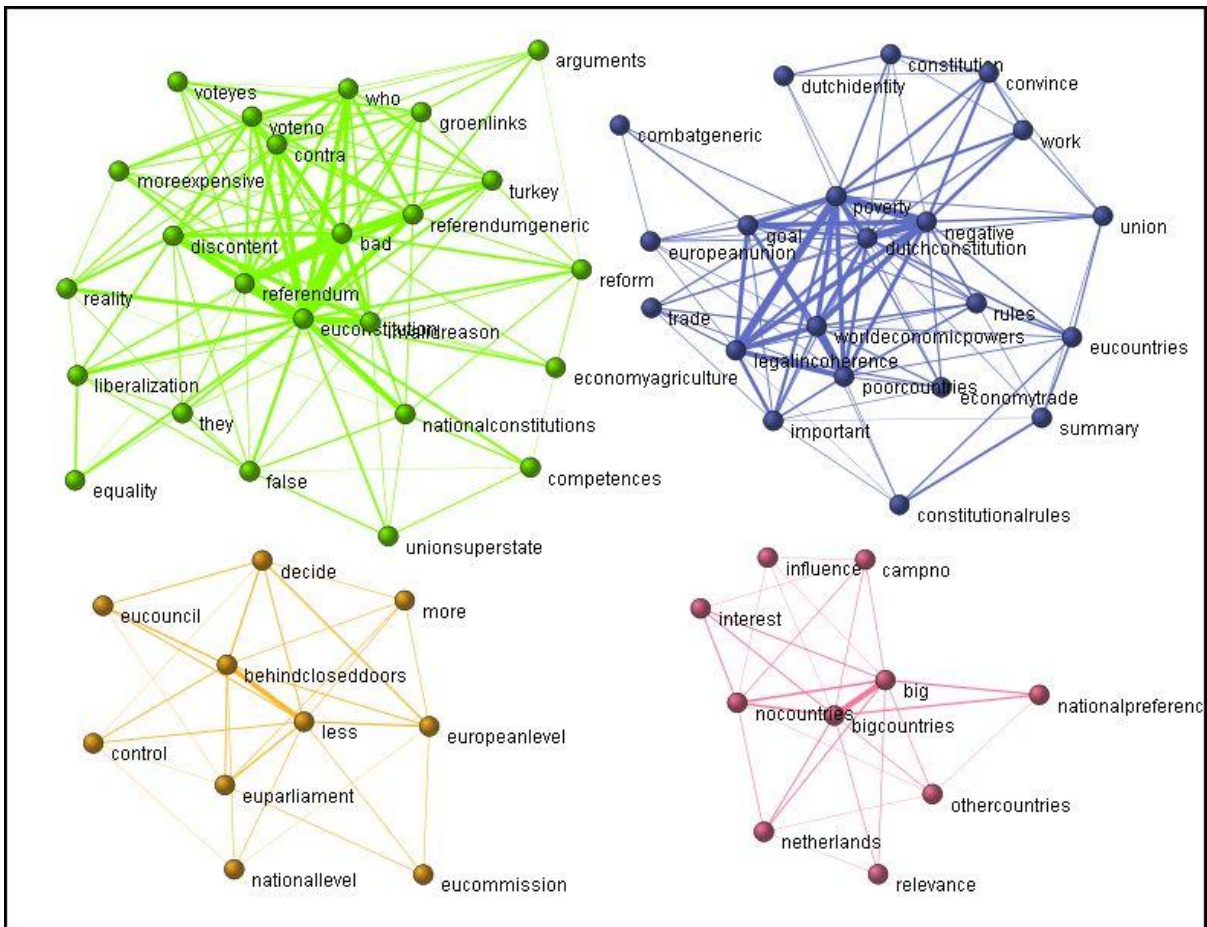
Note: Line strengths represent local interconnection density.

Figure 2.

Figure 2.

Overlap patterns between cohesive structures in the campaign discourse of GroenLinks.

Note: Grey lines link concept pairs from different structures with five or more common associates.

Figure 3.

Connection patterns between cohesive structures and relation to vote choice.
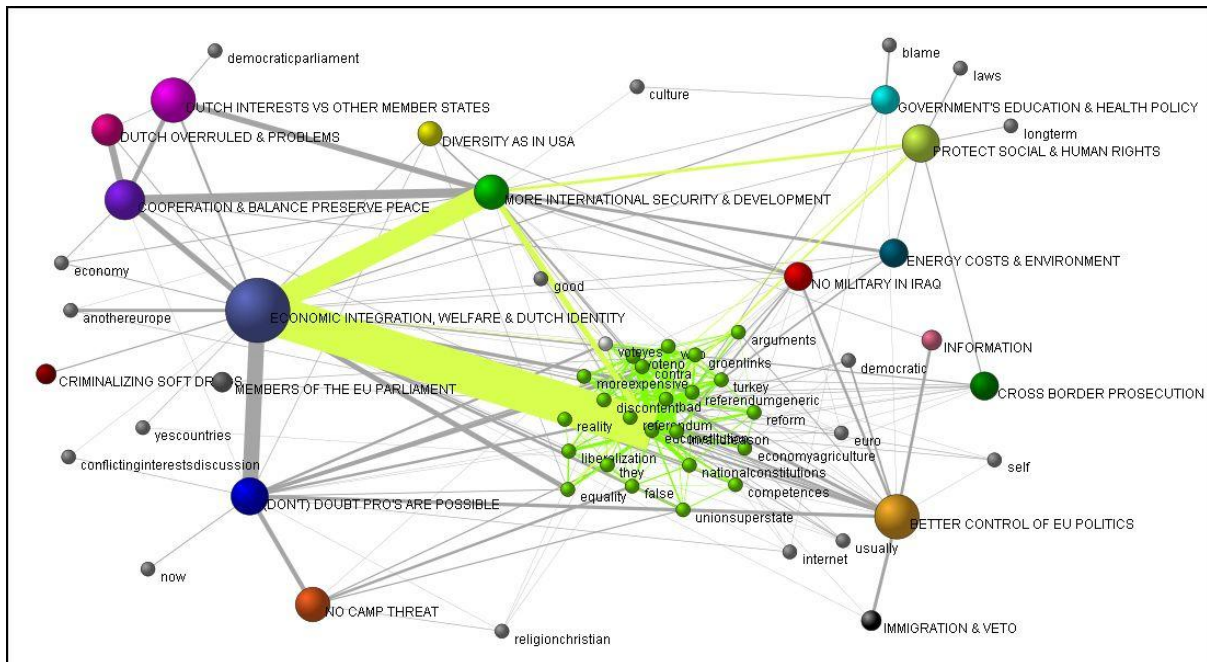
Note: All clusters collapsed except for the one containing the recommended vote choice ('Yes', white vertex). Links highlighted in green represent the strongest paths with a step distance of three and four from 'Protect Social & Human Rights' (green vertex in upper right corner) to 'voting Yes'.

Figure 4.

Clusters pertaining to the EU Constitution in the discourses of VVD, GroenLinks, ChristenUnie & SP
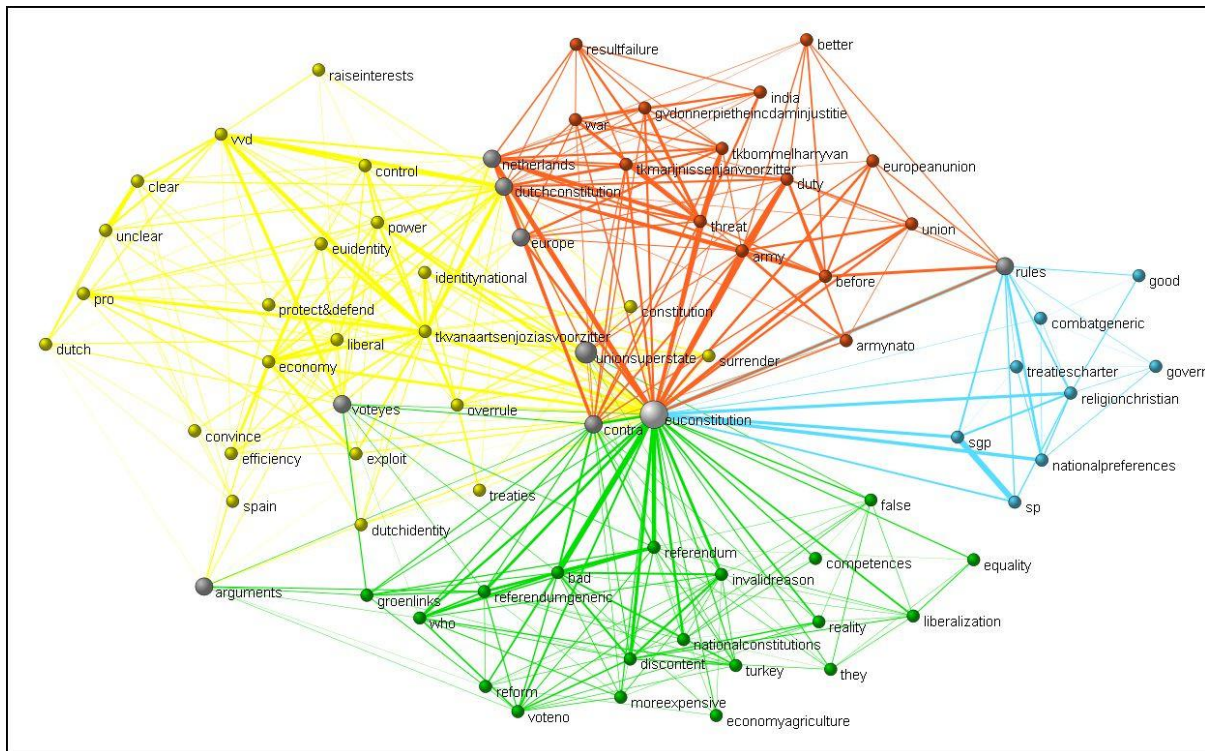
Note: VVD – yellow, GroenLinks – green, ChristenUnie – blue, SP – red; colored vertices represent concepts associated with the EU constitution only by either of the parties; grey vertices represent concepts used by multiple parties, vertex size representing the number of parties.

Volkspartij voor Vrijheid en Democratie (VVD, People's party for Freedom and Democracy, right-liberal)									
Identities in Strong Liberal Europe	**Distribution of Competences in Europe**	**Resolve Disagreements & Combat Crime**	**European Free Trade**	**Relevance of EU Policy Fields**	**Enlargement Spreads Human Rights**				
1. Treaties Supersede National Law: constitution, overrule, treaties **2. Dutch Identity in Strong Liberal EU:** control, Dutch constitution, VVD, Jozias van Aartsen, voting Yes, economy, liberal, power, EU Constitution, exploitation, pro, efficiency, EU identity, protecting, Netherlands, national identity, superstate, surrender, Dutch identity, arguments **3. Low Interest in Europe:** Europe, raise interest, convince, Spain, Dutch, unclear, clear	**1. Institutional Setup:** competences, democratic, decisions, EU Parliament, EU Council, participation in EU policies, EU, Nice Treaty **2. Unpopular EU Policies:** agriculture, European level, EU countries, national constitutions, Turkey, MEPs, Jules Maaten, union, Yes voting countries, voting No **3. Uneven Influence:** influence, national level, big EU countries, citizens, EU legislation, status quo	chance, conflict, justice & interior, crime, reality, cooperation, police, development, threat	autonomy, EU Commission trade, open, social state, Stability Pact, EU Commissioner	immigration, asylum, relevance, interest, work, Dutch Guilder, simplify	accession, new EU members, human rights, short term, conditions				▪ Dutch liberties & Yes camp ▪ National vetoes less important ▪ CDA, PvdA & turnout ▪ Distrust in government ▪ Hope for French referendum ▪ Try to form an opinion ▪ Never again the wars of the past ▪ Parliamentary or popular ratification
GroenLinks (GL, Green Left, green-alternative)									
Economic Integration & Welfare	**Invalid Contra Arguments & No Superstate**	**More Transparency in EU Decisions**	**Eurosceptic & Big Countries' Interests**	**Protect Social & Human Rights**	**No Camp Doubts Advantages**	**Cooperation & Balance Necessary**	**No Camp Threat**		
1. Incoherent Rules for World Economy & Poverty: combat, EU, constitution, convince, labour, Dutch identity, trade, goal, different legislation, poverty, Dutch constitution, negative, world economic powers, poor countries, important **2. Summary of Current EU Legislation:** constitutional rules, summary, EU legislation, EU countries, union	**1. No Superstate:** competences, national constitutions, superstate, false **2. Arguments Against the Constitution Invalid:** agriculture, reform, reality, referendum, EU constitution, bad, contra, voting No, discontent, invalid reasons, Turkey, price rises, voting Yes, arguments **3. Liberalization:** equality, liberalization	intransparent politics, less, decisions, European level, EU Council, more, EU Commission, EU Parliament, control, national level	Influence, No camp, national preferences, big EU countries, eurosceptic countries, interest, Netherlands, other countries, relevance	compromise, migrants, human rights, protection, antidiscrimination, social state, asylum	treaties, Comité Grondwet Nee, Joost Eigendijk, doubts, pro, Yes camp, possible	cooperation, policy fields, power, peace, balance, necessary, Europe, war	threat, NGL, Geert Wilders, SP, Jan Marijnissen		▪ No military in Iraq ▪ Developed countries' energy waste ▪ Borders & problems ▪ Foreign policy, development & security ▪ Nationally bounded prosecution ▪ Domestic health & education policy

ChristenUnie (CU, Christian Union, Christian social conservative)									
Loss of Influence in Superstate EU	**Discontent in French Referendum**	**Christian Heritage in EU Constitution**	**Everyone Un-derestimates Referendum**	**Preservation of Cultural Diversity**	**Better Control of EU Subsidiarity**	**Competences in Another Europe**	**Cross Border Crime & Security**		
1. Loss of Democratic Influence: costs, democratic, EU, loss of influence, surrender, Netherlands, small countries, Turkey **2. Domestic Policy Fields:** education, health, policy fields **3. Loss of Identity:** decision procedures, loss of identity, Dutch liberties, typical, threat, superstate	Follow, goal, opinion poll, French referendum result, campaign material, contra, discontent, bad, job loss, Yes camp, vote No, citizens, CU, Dutch constitution, irrelevant, worries, foolish, social state, No camp, Dutch identity, distrust	combat, national preferences, EU legislation, EU constitution, Christianity, SGP, SP, fundamental rights, good, government	membership, EU parliament, referendum, underestimation, long term, everyone, Jan Peter Balkenende, Politics, campaign	culture, denial, diversity, future, EU identity, national identity, unclear, relevance, interest, pro, clear	control, decisions, European level, EU Parliament, subsidiarity, more	another Europe, competences, EU countries, legitimacy, usually	borders, open, crime, security, development	▪ rich EU countries ▪ constitution too far reaching	

Socialistische Partij (SP, Socialist Party, neo-marxist)									
Defective European vs. National Democracy	**Constitution Militarizes EU & Netherlands**	**French & Dutch Referenda**	**Christian Conservative Influence**	**Differences in National Legislations**	**Social State & Labour Relations**	**Big Countries' Preferences**			
1. Democratic EU Parliament? citizens, impossible, arguments, competences, democratic, EU parliament, power, Belgium **2. National Democracy:** decisions, contradictory, SP, national parliamentary democracy, short term, Ronald van Raak, European level, national level, MEPs, discontent, EU commission, EU countries, pro	**1. EU Better Without Army:** army, duty, NATO, EU, EU legislation, before, better **2. Threats Posed by EU Constitution & Minister Donner** Europe, threat, EU Constitution, Netherlands, Harry van Bommel, war, Piet Hein Donner, referendum failure, superstate, Dutch constitution, contra, Jan Marijnissen	controversy, referendum, French referendum, French result, Dutch politics, confidence, EU politics, Dutch people, parliament, turnout, impact, Dutch identity, elections, problem	influence, Christianity, knowledge, clear, opinion polls, CDA, unclear, justice& interior	agriculture, different legislation, national constitutions, new EU members, goal, negotiate, more	economy, social state, labour, human rights, women, policy fields	national preferences, Jacques Chirac, France, Germany			

REFERENCES

Aarts, K., & van der Kolk, H. (2006). Understanding the Dutch 'no': The Euro, the East, and the elite. *PS: Political Science and Politics, 39*(2), 243-246.

Baden, C. (2009). *Shifting the valence balance: Resonance, resistance, and countervalence of cognitive responses to communication frames.* Paper presented at the ICA Annual Conference, Chicago, IL.

Baden, C., & de Vreese, C. H. (2008). Making sense: A reconstruction of people's understandings of the European constitutional referendum in the Netherlands. *Communications, 33*, 117-146.

Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology, 26*, 611-639.

Bennett, W. L. (1980). The paradox of public discourse: A framework for the analysis of political accounts. *The Journal of Politics, 42*, 792-817.

Berinsky, A. J., & Kinder, D. R. (2006). Making sense of issues through media frames: Understanding the Kosovo crisis. *The Journal of Politics, 68*, 640-656.

Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2002). *Ucinet for Windows: Software for social network analysis.* Harvard, MA: Analytic Technologies.

Boudana, S. (2008, May). *Frames and keywords: On the significance of these related tools of analysis and on a method for determining them.* Paper presented at the ICA Annual Conference, Montreal, Canada.

Brewer, P. R., & Gross, K. (2005). Values, framing, and citizens' thoughts about policy issues: Effects on content and quantity. *Political Psychology, 26*, 929-948.

Burnett, R. (1991). Accounts and Narratives. In B. M. Montgomery & S. Duck (Eds.), *Studying interpersonal interaction* (pp. 121-140). New York: Guilford Press.

Carley, K. M., & Kaufer, D. S. (1993). Semantic connectivity: An approach for analyzing symbols in semantic networks. *Communication Theory, 3*, 183-213.

Carragee, K. M., & Roefs, W. (2004). The neglect of power in recent framing research. *Journal of Communication, 54*, 214-233.

Chong, D., & Druckman, J. N. (2007). A theory of framing and opinion formation in competitive elite environments. *Journal of Communication, 57*, 99-118.

Conover, P. J., & Feldman, S. (1984). How people organize the political world: A schematic model. *American Journal of Political Science, 28*(1), 95-126.

de Nooy, W., Batagelj, V., & Mrvar, A. (2005). *Exploratory social network analysis with Pajek.* Cambridge, UK: Cambridge University Press.

de Vreese, C. H. (2006). Political parties in dire straits? Consequences of national referendums for political parties. *Party Politics, 12*, 581-598.

de Vreese, C. H., & Semetko, H. A. (2004). *Political campaigning in referendums: Framing the referendum issue.* London: Routledge.

Delicath, J. W., & DeLuca, K. M. (2003). Image events, the public sphere, and argumentative practice: The case of radical environmental groups. *Argumentation, 17*, 315-333.

Diesner, J. (2004). *AutoMap 1.2: Extract, analyze, represent, and compare mental models from text.* Pittsburgh, PA: Center for Computational Analysis of Social and Organizational Systems.

Donati, P. R. (1992). Political discourse analysis. In M. Diani & R. Eyerman (Eds.), *Studying collective action.* London: Sage.

Edelman, M. (1971). *Politics as symbolic action.* New York: Academic Press Inc.

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication, 43*(4), 51-58.

Fisher, K. (1997). Locating frames in the discursive universe. *Sociological Research Online, 2*(3).

Gamson, W. A. (1988). The 1987 distinguished lecture: A constructionist approach to mass media and public opinion. *Symbolic Interaction, 11*(2), 161-174.

Gamson, W. A. (1992). *Talking politics.* Cambridge, UK: Cambridge University Press.

Gamson, W. A. (1996). Media discourse as a framing resource. In A. N. Crigler (Ed.), *The psychology of political communication*. Ann Arbor, MI.

Gamson, W. A., & Modigliani, A. (1987). The changing culture of affirmative action. In R. G. Braungart & M. M. Braungart (Eds.), *Research in Political Sociology* (Vol. 3, pp. 137-177). Greenwich, CN: JAI Press.

Gerhards, J., & Rucht, D. (1992). Mesomobilization: Organizing framing in two protest campaigns in West Germany. *The American Journal of Sociology, 98*, 555-595.

Graber, D. A. (2001). *Processing politics: Learning from television in the internet age*. Chicago: University of Chicago Press.

Graesser, A. C., Bertus, E. L., & Magliano, J. P. (1995). Inference generation during the comprehension of narrative text. In R. F. Lorch & E. J. O'Brien (Eds.), *Sources of coherence in reading* (pp. 295-320). Hillsdale, NJ: Lawrence Erlbaum Associates.

Griffiths, T. L., & Steyvers, M. *A probabilistic approach to semantic representation.* Paper presented at the 24th Annual Conference of the Cognitive Science Society.

Harmsen, R. (2007, May). *Reframing a national narrative: The shifting contours of the Dutch European debate.* Paper presented at the 10th Biennial International Conference of the European Union Studies Association, Montreal, Canada.

Hellsten, I., Dawson, J., & Leydesdorff, L. (forthcoming). Implicit media frames: Automated analysis of public debate on artificial sweeteners. *Public Understanding of Science*.

Hobolt, S. B. (2007). Taking cues on Europe: Voter competence and party endorsements in referendums on european integration. *European Journal of Political Research, 46*(2), 151-182.

Johnson-Cartee, K. S. (2004). *News narrative and news framing: Constructing political reality*. Oxford, UK: Rowman & Littlefield.

Johnston, H. (1995). A methodology for frame analysis: From discourse to cognitive schemata. In H. Johnston & B. Klandermans (Eds.), *Social movements and culture*. London: UCL Press.

Kim, H. S., & Rhee, J. W. (2009, May). *Framing and trans-framing: A mental models approach to news framing effects.* Paper presented at the ICA Annual Conference, Chicago, IL.

Kintsch, W. (1998). *Comprehension: A paradigm for cognition.* Cambridge, UK: Cambridge University Press.

Lowe, W. (2001). *Towards a theory of semantic space.* Paper presented at the 21st Annual Conference of the Cognitive Science Society.

Matthes, J., & Kohring, M. (2008). The content analysis of media frames: Toward improving reliability and validity. *Journal of Communication, 58*, 258-279.

Merelman, R. M. (1969). The dramaturgy of politics. *The Sociological Quarterly, 1*, 216-243.

Mitsikopoulou, B. (2008). Introduction: The branding of political entities as discursive practice. *Journal of Language and Politics, 7*, 353-371.

Moloney, G., & Walker, I. (2002). Talking about transplants: Social representations and the dialectical, dilemmatic nature of organ donation and transplantation. *British Journal of Social Psychology, 41*, 299-320.

Moscovici, S. (1961). *La psychanalyse, son image et son public.* Paris: P.U.F.

Nisbet, M. C., Brossard, D., & Kroepsch, A. (2003). Framing science: The stem cell controversy in an age of press/politics. *The Harvard Journal of Press/Politics, 8*(2), 36-70.

Noakes, J. A., & Johnston, H. (2005). Frames of protest: A road map to a perspective. In J. A. Noakes & H. Johnston (Eds.), *Frames of protest: Social movements and the framing perspective* (pp. 1-32). Oxford, UK: Rowman & Littlefield.

Oliver, P. E., & Johnston, H. (2005). What a good idea! Ideologies and frames in social movement research. In J. A. Noakes & H. Johnston (Eds.), *Frames of protest: Social movements and the framing perspective* (pp. 185-204). Oxford, UK: Rowman & Littlefield.

Pan, Z., & Kosicki, G. M. (1993). Framing analysis: An approach to news discourse. *Political Communication, 10*, 55-75.

Pellow, D. N. (1999). Framing emerging environmental movement tactics: Mobilizing consensus, demobilizing conflict. *Sociological Forum, 14*, 659-683.

Price, V., Tewksbury, D., & Powers, E. (1997). Switching trains of thought. *Communication Research, 24*, 481-506.

Rhee, J. W. (1997). Strategy and issue frames in election campaign coverage: A social cognitive account of framing effects. *Journal of Communication, 47*, 26-48.

Riessman, C. K. (1993). *Narrative analysis.* Newbury Park, CA: Sage.

Scheufele, B. (2004a). Framing-effects approach: A theoretical and methodological critique. *Communications, 29*, 401-428.

Scheufele, B. (2004b). Framing-Effekte auf dem Prüfstand: Eine theoretische, methodische und empirische Auseinandersetzung mit der Wirkungsperspektive des Framing-Ansatzes. *Medien und Kommunikationswissenschaft, 52*(4), 30-55.

Scheufele, B. (2006). Frames, schemata, and news reporting. *Communications, 31*, 65-83.

Sibley, C. G., Liu, J. H., & Kirkwood, S. (2006). Toward a social representations theory of attitude change: The effect of message framing on general and specific attitudes toward equality and entitlement. *New Zealand Journal of Psychology, 35*(1), 3-13.

Snow, D. A., & Benford, R. D. (1992). Master frames and cycles of protest. In A. Morris & C. Mueller (Eds.), *Frontiers in social movement theory.* New Haven, CT: Yale University Press.

Sotirovic, M. (2003). How individuals explain social problems: The influences of media use. *Journal of Communication, 53*, 122-137.

Steyvers, M., & Tenenbaum, J. B. (2005). The large-scale structure of semantic networks: Statistical analyses and a model of semantic growth. *Cognitive Science, 29*, 41-79.

Takens, J. (2006). *A negative Campaign? A study of the news coverage of the European Constitution and its effects.* Free University Amsterdam, Amsterdam, the Netherlands.

Tapiero, I., van den Broek, P., & Quintana, M.-P. (2002). The mental representation of narrative texts as networks: The role of necessity and sufficiency in the detection of different types of causal relations. *Discourse Processes, 34*, 237-258.

Triandafyllidou, A., & Fotiou, A. (1998). Sustainability and modernity in the European Union: A frame theory approach to policy-making. *Sociological Research Online, 3*(1).

Triandafyllidou, A., & Kosic, A. (2002). *Nation and Europe in the Italian public discourse: A comparative analysis of the media and political elite debates.* San Domenico di Fiesole: European University Institute.

van Atteveldt, W. (2008). *Semantic network analysis: Techniques for extracting, representing, and querying media content.* Free University of Amsterdam, Amsterdam, the Netherlands.

van Atteveldt, W., Ruigrok, N., & Kleinnijenhuis, J. (2006, June). *Associative framing: A unified method for measuring media frames and the media agenda.* Paper presented at the ICA 56th Annual Conference, Dresden, Germany.

van Dijk, T. A. (1985). Structures of news in the press. In T. A. van Dijk (Ed.), *Discourse and communication* (Vol. 69-93). Berlin: De Gruyter.

van Dijk, T. A. (2008). *Discourse and context: A sociocognitive approach.* Cambridge, UK: Cambridge University Press.

van Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension.* Orlando, FL: Academic Press.

van Gorp, B. (2005). Where is the frame? Victims and intruders in the Belgian press coverage of the asylum issue. *European Journal of Communication, 20*, 484-507.

van Gorp, B. (2007). The constructionist approach to framing: Bringing culture back in. *Journal of Communication, 57*, 60-78.

van Gorp, B., & van der Goot, M. (2009, February). *Framing duurzame landbouw in Belgie: Van de strijd tegen Frankenfood tot de stereotiepe keuterboer.* Paper presented at the Etmaal van de Communicatiewetenschap, Nijmegen, Netherlands.

Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications.* Cambridge, UK: Cambridge University Press.

Zhou, Y., & Moy, P. (2007). Parsing framing processes: The interplay between online public opinion and media coverage. *Journal of Communication, 57*, 79-98.

---

[1] Throughout this paper, the term 'narrative' is used to refer to the story structure of discourse, which provides causally linked accounts to make sense of issues. The expression 'argumentation line' refers to the purposeful alignment of claims to support particular conclusions. They thus refer to different aspects of the same discursive structure: Obviously, arguments follow a narrative structure, just as narratives are purposeful (Burnett, 1991)

[2] This problem also applies if frames are inductively derived and then codified for content analytic coding.

[3] While also journalists may pursue particular agendas with their framing practice, the primary strategy typically followed in Western media aims at constructing the journalist as a neutral, objective or balanced arbiter and mediator. This may explain why the strategic purpose of frames has often been neglected in media framing research.

[4] Referendum campaigns directly frame the proposal that is voted upon. In elections, frames' relation to vote choice is more indirect: Societal issues are framed to highlight aspects a party or candidate is ascribed competence for.

[5] Some authors talk about functional elements instead of dimensions (Matthes & Kohring, 2008); however, some concepts evoke multiple frame-dimensions at once – e.g., 'market failure' implies diagnostic, causal, and evaluative dimensions (Oliver & Johnston, 2005; Zhou & Moy, 2007). Hence, this study does not assume that different functions must be located in divisible elements of a frame.

[6] Documentatiecentrum Nederlandse Politieke Partijen at the University of Groningen, the Netherlands

[7] Three national broadsheets (NRC Handelsblad, Trouw, Volkskrant), two regional (Brabants Dagblad, Dagblad van het Noorden), two popular newspapers (Telegraaf, Algemeen Dagblad) and the leading free newspaper (Metro); this selection reflects the highest circulation figures while maximizing diversity in left-right alignment and ownership.

[8] News shows: NOS Journaal (NOS, public), RTL4 Nieuws (RTL4, commercial); Talk shows: NOVA/Den Haag vandaag (NOS, public, daily), Buitenhof (VPRO, public, weekly), Barend & van Dorp (RTL4, commercial, daily)

[9] The distance is relatively arbitrary and mainly affects the type I/type II error rate; the large window size aims to include all relevant concepts in a concept's surrounding, at the cost of including also irrelevant concepts which will be filtered out later (see below). The window size affects network density, but not its structure.

[10] The entire coding scheme is available upon request.

[11] The expected frequency can be calculated assuming a random distribution of all recorded occurrences of a given pair of concepts over the texts, and considering the probability of both occurring within the same window, or within another's macrostructure context, respectively. Unfortunately, this formula is forbiddingly complex. The approach I take conditions on the observed density of co-occurrences in a matrix (which is arbitrary and neutral towards structure) and assesses whether the observed distribution of links deviates from a random distribution. In the simulations run, the difference between results obtained by both approaches were negligible.

[12] Due to space restrictions, graphical representations are presented only for the discourse of GroenLinks, where representations were most accessible visually; all other representations are available upon request.

[13] The others represent antonymic or logical relations, e.g., 'clear'-'unclear' or 'French people'-'French referendum'