This section explains the so-called NET method, a way of relational content analysis utilised in the iNet software.

1.1 Objects and relations

Using the so-called NET method (Network analysis Evaluative Texts) we assume a text can be represented through a network of meaning objects, and relations between them. With meaning objects we mean both actors and issues. Actors are acting persons or institutes like companies, political parties, countries and so on. Issues are, for example, economic variables such as the employment and interest rates, investments, but also ideologically rooted ideals like freedom, equality, and justice. In news about politics, meaning objects are, for example, the aforementioned political parties (Democrats and Republicans) but also individual politicians (Congress members, minister or president), trade unions, employers, advisory committees, and lobby or pressure groups (like consumer or environmental associations). Besides these political actors, central political topics (issues) are distinguished as meaning objects too. Examples include healthcare, education, security, employment, euthanasia. Relations between meaning objects occur as verbal connections in a text. This means, objects are semantically linked with each other. This could be in a positive or negative sense. For instance in headlines like:

- ‘General Motors and trade union reach agreement’ →
    - The meaning objects ‘General Motors’ and the relevant ‘trade union’ are associated in a positive way (reach agreement).
- ‘Higher wages push up inflation’ →
    - From an economics point of view, the relation between the meaning objects ‘wages’ and ‘inflation’ is a negative one, but given the semantically-driven assumptions of the NET method they are interlinked positively. Namely, the higher wages contribute to an increased inflation level, a positive direction.
- ‘Bush wants to allow through less Mexican immigrants’ →
    - ‘Bush’ and ‘Mexican immigrants’ are related negatively: Bush’s aim is a restrictive policy, which is negative for the Mexicans.

1.2 Core phrases

To identify the substantive composition of an article or item from a newspaper or newscast, a text is divided and analyzed into so-called nuclear phrases. These phrases are linguistic constructions that describe the relation between two meaning objects. A nuclear phrase consists of only two objects, namely a subject and an object, as well as a predicate that describes the relations between the objects and the positive, negative or neutral value of the connection between them.

1.2.1 The components of a core phrase

Subject

In this subsection we'll clarify the individual parts of a nuclear phrase more in depth.

The actor or issue in the subject-position of a nuclear phrase is the one that acts or says something, from whom the energy originates:

- 'Shell will develop cleaner diesel'>
    - the subject is 'Shell' (oil company).

Object

The object is the actor or issue that something is being talked or written about or with which something is done. In the previous example, diesel is the object. This is a typical example, with the subject placed at the beginning of the phrase and the 'receiving', 'undergoing' object at the end. However, the object isn't always situated at the end of a sentence, as is shown in the following example:

• 'The health service receives more money from the Clinton administration' →

o here, the 'Clinton administration' is the subject and 'health service'the object. The Clinton administration is the acting institution that gives the money.

Predicate

The predicate contains information about the link between subject and object. In the above examples the predicates are 'will develop' and 'receives more money'.

Value

In addition, the value of the link between subject and object is important. With the term value we mean the positive (1), neutral (0) or negative (-1) charged meaning of the predicate. The value is determined by the question whether the predicate is positive or negative for the object. Consequently, one always has to reason from the object's point of view.

In the first example concerning Shell ('Shell will develop cleaner diesel') the value between the oil company and diesel is 1, because the developmental efforts of Shell are positive for cleaner diesel. The second case concerning the Clinton administration and the health service also gets the value 1 ('The health service receives more money from the Clinton administration'). From the point of view of the object, the health service, receiving more money from the government (the subject) is positive.

In most cases, the values 1 or -1 are utilized, unless it is not possible to distinguish a direction (value 0) or a positively or negatively charged predicate is weakened (indicated by verbs like 'probably', 'perhaps', 'possibly', 'slightly' and so on). If a predicate is weakened, the connection between subject and object gets the value -0.5 or +0.5. Examples are:

- ‘ABN Amro will probably buy a Brazilian bank.
- ‘Obama will perhaps choose to cooperate with Clinton.’

Summarising all aspects of a nuclear phrase so far then, the above examples will be coded as:

- ABN Amro (subject) / will probably buy (predicate) / 0.5 (value) / Brazilian bank (object).
- Obama (subject) / will perhaps choose to cooperate (predicate) / 0.5 (value) / Clinton (object)

Source

The last aspect of a core phrase that we need to explain is the possibility to code a source of a statement in the text. The source will only be coded if the statement is explicitly attributed to an actor. For instance in the case of direct quotes. An example of how a direct quote is coded:

• ‘Clinton contributes to a bipartition of the health service’, Obama stated. →

o Obama (source) / Clinton (subject) / contributes to a bipartition (predicate) / -1 (value) / health service (object).

However, many news stories present statements of sources as paraphrases of what is said: ‘According to Obama, Clinton contributes to the bipartition of the health service.’ This paraphrase is coded in the same way as the direct quote. Another possibility is a quote as headline without the source being directly mentioned (‘Clinton contributes to bipartition health service’). In such a case, you would have to search the source within the article.

A sentence like ‘that is said by Obama’ can be coded in two ways, depending on how it’s formulated. The first example contains two distinct phrases: ‘Clinton contributes to a bipartition of the health service. That’s what is being said by Obama.’ The first phrase is coded without source. The second one with both source and the first sentence, due to the reference to the first phrase by the word ‘that’:

• 'Clinton contributes to a bipartition of the health service. 2) That’s what is being said by Obama.' →

o 1) Clinton (subject) / contributes to a bipartition (predicate) / -1 (value) / health service (object).

o 2) Obama (source) / Clinton (subject) / contributes to a bipartition (predicate) / -1 (value) / health service (object).

The second variant ‘Clinton contributes to a bipartition of the health service, Obama said’, is coded as one core phrase with source.

Differences between headlines, subtitles and leads

Only the headline, subtitle, and lead of an article are coded. When a single sentence contains several core phrases, it's important to give them the same number. In this way, while analyzing all data afterwards, it remains clear that several core phrases originate from the same sentence.

1.3 Deviant core phrases

The easiest phrases consist of a single subject and object and a relation between them (predicate). Nevertheless, language isn't always that simple. Some sentences include more than two subjects or objects, others only one. Besides that, some relations between subject and object are reciprocal. Core phrases that differ from the standard model are a bit harder to code and therefore deserve some special attention. This section will address each of these exceptions.

1.3.1 Core phrases containing more than two central objects

Sentences containing more than two subjects are reduced into several, distinct core phrases with one subject, predicate, and object. This can often be done quite easily:

• 'Bush and Brown against Iranian policy proposal' →

o 1) Bush (subject) / against (predicate) / -1 (value) / Iranian policy proposal (object).

o 2) Brown (subject) / against (predicate) / -1 (value) / Iranian policy proposal (object).

Nonetheless, it could be more complicated. Especially when, for example, both criticism and a substantive point of view come together in one sentence.

• Obama disapproves Clinton's plan to reduce fuel excise →

o 1) Obama (subject) / disapproves (predicate) / -1 (value) / Clinton's plan [to reduce excise] (object).

o 2) Clinton (subject) / reduce (predicate) / -1 (value) / fuel excise (object).

1.3.2 Core phrases containing only one central object

Sentences with only one actor or issue are another deviant type. Take as an example phrases like 'McCain is back again', 'Economic development slows' or 'Bush loses support'. In this type of sentence, objects are acted upon, but the phrase doesn't tell why. Nothing is told about why McCain (object) is doing well, the reasons why economic growth (object) is slowing, or Bush (object) is losing political ground.

Another type are phrases containing only a subject. For example: ‘Obama (subject) is suited for the job ahead’.

In sum, in sentences containing only one actor/issue, a statement is made about reality (no subject, only an object) or evaluative judgments are made (no object, only a subject). The first kind we categorize as reality phrases, the second as ideal phrases. Below we’ll describe each type in more detail.

Reality phrases

Reality phrases are sentences where something is told about reality concerning a certain actor or issue. An example of a reality phrase is:

• ‘McCain gains more votes’ →

o This type with only one object will be coded as: reality (subject) / gains more votes (predicate) / 1 / McCain (object).

McCain isn’t the subject because he isn’t the person doing something actively. Something is happening to him, but – as cited earlier – the why doesn’t become clear within the current phrase. When the actor or issue from whom the energy originates from is lacking, the subject is coded as ‘reality’, as can be seen in the example above. In other words: ‘reality’ is used in subject position when it’s unclear who or what has something done to the object.

‘Reality’ is never used when both a subject and object are specified within the sentence. For instance:

• ‘Crime fighter Bush takes the wind out of the Democrat’s sails’ →

o 1) Bush (subject) / crime fighter (predicate) / -1 (value) / crime (object).

o 2) Bush (object) / takes the wind out of the sails (predicate) / -1 (value) / Democrats (object).

Diagram 1: Reality phrases

Value	Meaning	Example
-1	It doesn't go well with Y	Y hasn't got enough mandate to complete this important task. Reality/-1/Y
-0,5	Probably it doesn't go well with Y	Reality/-0,5/Y
0	Y is present, involved, responsible and so on,	Bush will be present at the memorial

	without positive or negative connotation	Reality/will be present/0/Bush
0,5	Probably it goes well with Y	Reality/+0.5/Y
1	It goes well with Y	Soon, more than half of metropoles will exist of immigrants Reality/+1/Immigrants

Ideal phrases

A second variant are sentences with only one actor or issue in subject position, the so-called ideal phrases. This is an evaluative phrase where an actor or issue is characterized as doing well or badly, or as an evaluation like ‘X is incompetent’. A positive charged example is:

• ‘McCain is a skilled politician’ →

o McCain (subject) / is skilled (predicate) / 1 (value) / ideal (object).

‘Ideal’ is also used in object position when it’s ambiguous for which actor or issue the actions of the subject are positive or negative.

• ‘Bush has made wrong policy choices’ →

o Bush (subject) / has made wrong policy choices (predicate) / -1 (value) / ideal (object).

Often adjectival nouns also contain evaluations. This is an extra point that needs special attention.

• ‘The experienced Clinton wanted to learn more about (…)’ →

o Clinton (subject) / experienced (predicate) / 1 (value) / ideal (object).

The central question that has to be asked continuously during coding is: is something said about how to evaluate an actor or issue in terms of good or bad? If so, it’s always an ideal phrase.

Diagram 2: Ideal phrases

Value	Meaning	Example
-1	X isn't doing well/is incompetent	'Especially the ropy bureaucracy' civil servants/ropy/-1/ideal
-0.5	X is slightly incompetent	X/predicate/-0,5/ideal

0	X can be evaluated neutrally (hardly ever occurs!)	X/predicate/0/ideal
+0.5	X is doing slightly well	X/predicate/0.5/ideal
+1	X is doing well/is competent	X/predicate/1/ideal

1.3.3 Reciprocity phrases

A predicate connects two central objects. Generally it's an asymmetrical relation:

• 'ANC (subject) / fights (predicate) / -1 (value) / Inkatha movement (object)' doesn't mean the same as 'Inkatha movement (subject) / fights (predicate) / -1 (value) / ANC'.

However, some linguistic forms contain reciprocity, or, in terms of the NET method, they contain two core phrases. The following sentences are examples:

• 'Clinton and Obama are in disagreement' →
o Clinton / disagreement / -1 / Obama.
o Obama / disagreement / -1 / Clinton.

• 'Bush and the Congress are in conflict' →
o Bush / conflict / -1 / Congress.
o Congress / conflict / -1 / Bush.

Clinton is negative towards Obama, but Obama is also in disagreement with Clinton. The same applies to the conflict between Bush and the Congress. That's why you have to code two core phrases in the case of reciprocity. 'Disagreement' and 'conflict' are typical examples of reciprocal predicates. A rough-and-ready rule to check reciprocity is the question: can one add 'with each other' to the core phrase? In the examples like the one about Bush and the Congress, this is the case:

• 'Bush and the Congress are in conflict with each other'

1.4 Different types of core phrases

Within the NET method we distinguish seven distinct types of core phrases. In diagram 3 below we give an overview, including their abbreviations (to be used in the computer program Inet; for more details see the Introduction Guide to Inet) and a brief explanation.

Diagram 3: seven types of core phrases

Type	Abbreviation	Explanation
Ideal	ide	Evaluative statement in which an object is linked to a sources' value, standard or ideal
Reality	rea	Factual statement in which our reality is typified by an object (actor or issue)
Affection	aff	Affective statement in which a feeling/wish with respect to an actor/ issue is expressed

Action	act	Concrete action towards an actor or an issue
Causal	cau	Causal statement in which the state of the object is explained by the subject
Order	ord	Order concerning the direction the object has to move as a consequence of the subject
Equivalence	eqv	Equivalence relation, similarity between one and the other that isn't based that isn't based on concrete affections or actions

In the actual research we come across issues and actors. These could appear in all kinds of core phrases. Below we'll give an overview.

Diagram 4: Ideal phrases: IDEAL (IDE)*

Subject type	Object type	Core phrase type	Example
actor	ideal	ide	Obama inattentive
issue	ideal	ide	Compulsory identification useless

*Note: when you enter 'ideal' as the object, the core phrase type always is IDEAL (or IDE).

Diagram 5: Reality phrases: REALITY (REA)*

Subject type	Object type	Core phrase type	Example
reality	actor	rea	Obama wins debate
reality	issue	rea	Compulsory identification rejected

*Note: when you enter 'reality' as the subject, the core phrase type always is REALITY (or REA).

Core phrases that express relations between an actor in subject position and an actor in object position:

Diagram 6: Actor-actor-sentences

Subject type	Object type	Core phrase type	Example
actor	actor	aff	Obama disagrees with McCain
		act	Obama votes against McCain
		cau	Clinton brings Obama trouble
		ord	Clinton has to support Obama
		eqv	Clinton imitates Obama

Core phrases that express relations between an actor in subject position and an issue in object position:

Diagram 7: Actor-issue-sentences

Subject type	Object type	Core phrase type	Example
actor	issue	aff	Obama against compulsory identification
		act	Obama takes measures against compulsory identif.
		cau	Obama threatened compulsory identification
		ord	Obama has to reject compulsory identification

* Note that the difference between AFF and ACT at first sight is subtle, but there is a clear distinction. An affective type (AFF) reflects a wish/will of an actor, within an action sentence (ACT) a real action/measure is taken with respect to another actor or an issue. An action sentence reflects a concrete measure that has taken place. When an action will soon be taken or is wished, it's an affective phrase.

Core phrases that express the relation between an issue in subject position and an actor in object position:

Diagram 8: Issue-actor-sentences

Subject type	Object type	Core phrase type	Example
issue	actor	cau	Compulsory identification debate brings Obama trouble

Core phrases that express the relations between an issue in both subject position and object position:

Diagram 9: Issue-issue-sentences

Subject type	Object type	Core phrase type	Example
issue	issue	cau	Compulsory identification leap ahead in war on terror
		ord	Compulsory identification has to facilitate the war on terror
		eqv	Compulsory identification is dicrimination

1.5 The context

In sentences about actors, we want to know something about the context things take place in. When the object doesn't provide much information about the action/energy of the subject, then the central issue of the text is added as 'angle'. A few examples:

Diagram 10: Angle added if the central issue is unclear

Subject type	Object type	Core phrase type	Example	Angle
actor	ideal	ide	Obama inattentive	Compulsory identification
issue	ideal	ide	Compulsory identification useless	
issue	actor	rea	Obama wins debate	Compuklsory identification
reality	issue	rea	Compulsory identification rejected	
actor	actor	aff	Obama disagrees with McCain	Compulsory identification
actor	actor	cau	Clinton brings Obama trouble	Compulsory identification
actor	actor	ord	Clinton has to support Obama	Compulsory identification
actor	actor	eqv	Clinton imitates Obama	Compulsory identification

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1.6 List of central objects

The daily stream of journalistic stories includes infinite central objects that can be coded. Over a longer period this would lead to an ever-expanding, complex set of central objects that isn't very manageable for our research. That's why a list of central objects is composed in advance. This list contains only the most important (political) actors and issues related to the focus of the research. Other actors, like scientist x mentioned once or twice in the Wall Street Journal, are categorized with a label like 'experts'. In this way, most actors and issues can be coded and, more importantly, the central list remains clear and manageable. If an important actor is missing, you can report this so the research leader can decide whether to add the actor to the list or say which existing category is best suited.

1.7 Visual network

When all texts have been analyzed, all the aforementioned elements of core phrases can be represented as a visual network (using the computer program Inet). As a starting point, the central objects are placed within oval shapes. Next, all relations between the actors and issues are visualized by means of arrows (every arrow represents a core phrase). A blue-coloured arrow indicates that there's a positive relation, a red one a negative connection. Taken together, these visual elements reveal the argumentative structure of

the article. Normally you won't use this feature, but it could be useful to check that all coded relations form a logical network.

1.8 Using the NET method step by step

The last pages of this introduction to the NET method will give you some assistance by providing some step-by-step guidelines.

1. Read. First read the headlines and lead of the article. Consider what the text is about and what the referencespoint to. In principle you'll only have to read and analyze the headline and lead. It's only when the meaning of certain words and references in the headline or lead remains unclear that you'll have to read the whole article to trace the meaning of ambiguous terms. Frequently the next sentence will provide the context or word you need.

The lead of a newspaper article can be distinguished by its letters printed in bold or in a deviant font type. In the Inet software, this kind of typographical information isn't available, so we'll always code the headline, lead and the first subsection of the text. If the newspaper itself is present, it's obvious you can use this as a source to determine which sentences form the lead.

Short articles

In the case of short articles consisting of only one or two subsections, usually longer than a lead, the whole text will be coded.

Journalistic puzzles

Some headlines of journalistic texts are formulated in a strange, ambiguous way in order to attract the reader. For example, a lead consisting of only a single word, that marks a transition to the following topic within the text. Like the lead 'unreasonable' that refers to Bush in a story about the situation in Iraq. In terms of the NET method, this word contains an evaluation, so you'll have to read the next subsection of the article to trace back who or what is unreasonable, and then code it as a core phrase.

2. Search for central objects. Next it's important to identify the central objects within a sentence of the article. Determine the subject(s) and object(s), and subsequently their category in the list of central objects.

3. Search for core phrases. Once you've identified the central objects, it won't be hard to detect the core phrases. To formulate a core phrase we'll have to search for a predicate containing the information about the relation between subject and object. A single sentence often includes several core phrases. Pay attention to core phrases consisting of only one central object. This type has to be coded as reality or ideal. Sentences with reciprocal relations contain two or more core phrases (like conflict and disagreement between actors).

4. Determine the strength and direction (value) of the connection. The strength and direction are expressed by the values -1, -0.5, 0, 0.5 or 1.

5. Source. In the case of direct citations or paraphrases, a source has to be coded. Determine which source the statement is attributed to. The source has to be included the list of central objects.

6. Sentences that will be skipped. In some cases a sentence won't be coded. For example, when it consists of a single word and the context doesn't provide much information about the meaning. Questions are a second type that we'll skip.