

Contrasting themes among different types of phrases in a Dutch ministerial debate concerning the German attack on Antwerp.
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Introduction.

Content analyses come in many kinds serving a great variety of purposes. Usually, however, content analysis purports to describe and interpret the surface or deep structure meaning of some communication. In the case of a Dutch ministerial foreign policy debate (Gallhofer, Namenwirth et al.) classification was the major goal and interpretation remained cursory thus requiring further elaboration. This article presents a method for the detection and interpretation of thematic contrasts among various types of phrases, proceeds with a substantive interpretation thereof, to conclude with some more general comments on thematic analysis. Since the nature of content and content variables was discussed in the just mentioned articles, a brief summary must suffice at this point.

The text to be analyzed is an excerpt from Dutch ministerial debates concerning an impending attack by German forces on Antwerp during the first weeks of the First World War and the appropriate Dutch response to this threat (Algemeen Rijksarchief). To test a decision theoretical model, this excerpt was first hand-coded and subsequently its results were replicated by automated content analysis using discriminant analyses. In the latter effort eight types of phrases (or kernel sentences), namely Action Netherland, Action Opposition, Probability Statements, Value Statements, Outcomes, New Developments, Motivation Phrases, and Undetermined were postdicted using 37 content analytic variables of which 14 were single words and 23 combinations of words (or dictionary category) variables. To identify the semantic contrasts among the eight types of phrases, factor analysis proved to be a useful methodology.

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A factor analytic approach.

To discover the underlying structure of the data matrix, the 37 content analytic variables were correlated with seven dummy variables, which were used to specify whether a phrase was of one type or another. For example, on the dummy variable Action Netherland all phrases were coded as follows: if a phrase was an Action Netherland it was assigned a value of one, if it was not (i.e. all other phrases) it was assigned a value of zero. To prevent overdetermination of the ensuing correlation matrix, one of the eight types of phrases was not represented by its own dummy variable but identified by a value of zero on the remaining seven. In this investigation the Undetermined Phrases were thus represented. Consequently, a 44 variables correlation matrix was created. Because of the extreme skewness of the content analytic variables, Pearson's r would considerably underestimate the "true" correlations among these variables. Word frequencies across sentences are not truly distributed in a dichotomous fashion. After all, a particular word (or combination of words) may be absent in a sentence, occur once, twice, or more frequently. The dichotomous distribution of word frequencies therefore is a qualitative representation of a continuous variable and for this reason the tetrachoric correlation coefficient provides a better estimate of the true correlation. The same argument surely does not apply to the representation of type of sentences by dummy variables since kernel phrases (i.e. parts of the original phrases which were decomposed in the hand-coded content analysis) are of one type or another and not more or less so. Hence, the resulting matrix of tetrachoric correlation will overestimate the strength of the relationship between types of phrases and content variables while the extent of this overestimation remains unknown. However, the overestimation will not distort the underlying structure and might even clarify it which in our view justifies the procedure. ¹⁾

The tetrachoric correlation matrix was subsequently factor analyzed using a principal component solution. Of the extracted factors, the first seven were maintained for further analysis. The reasons for this decision were both statistical and substantive. None of the dummy variables had loadings beyond the seventh factor and consequently the remaining factors could at best describe patterns of content which do not relate to content differences among types of phrases.

The latter patterns are of no interest to this study. The eight's factor was perhaps a two variable factor but all others were at best one variable factors and should therefore be discarded. Table 1 specifies the distribution of explained variance among the seven factors which describe our semantic space:

Table 1. Variance explained by 8 or 7 factors before and after varimax rotation.

Factor	Variance Explained	
	Before Rotation	After Rotation
I	17.4%	13.8%
II	11.2%	9.4%
III	8.7%	9.3%
IV	7.3%	8.1%
V	6.5%	8.0%
VI	6.0%	7.4%
VII	5.5%	6.6%
VIII	4.2%	---

Total per cent explained by VII factors: 62.6%.

Considering the precipitous drop in variance explained from first to subsequent factors, it might be argued that the correlation matrix has really only one underlying factor. This, however, seems most unlikely for the following reasons: Factor I explains a bigger part of the variance for substantive as much as fortuitous reasons. In general, the length of Undetermined Phrases (as shown below, the type of phrase characterized by this factor) is greater by far than the length of other phrases. Hence, there were more words which characterized this type of phrase and therefore more variables loading on factor I. At any rate, the inequality in variance explained before and after varimax rotation does not preclude a striking simple structure which clearly identifies the semantic content of each of the types of phrases requiring further interpretation. Because simple structure is especially noteworthy in the last four factors, the semantic interpretation will proceed backward, beginning with factor VII and ending with factor I.

Factor VII: Probability Statements.

Probability Statements have a loading on .84 on the factor and the content variables must describe the semantic content of this type of phrase. Therefore, it does not come as a surprise that the category Probability Words has a high loading on the factor -- they occur frequently in probability statements. The category includes words such as "obviously", "chance(s)" ²⁾, "doubtful", 30 words in all including four disambiguation sequences of words, namely, "can none", "can not", "can not recognize", "can not rely on". ³⁾ In addition, such phrases often contain the verb form "is" as well as the word "not". Thus Probability Statements must be often put in the form: "It is not likely". In addition, this type of phrase is more likely than not characterized by the absence (hence negative loadings) of prepositions and references to Dutch concerns, i.e. the category Pronoun, First Person Plural, with words such as "we, us, our(s)", and so on. Clearly when Ministers in their deliberations refer to themselves or to the larger collectivity of which they are an important agent using the word "we", they are loath to make probability estimates whether of a certain or uncertain kind. Finally, we note the tendency that words which are present in Probability Statements are absent in Value Statements and vice versa. To illustrate these contentions let us quote some Probability Statements which are statistically characterized by this configuration of content (i.e. phrases with the highest positive factor scores on this factor.

(The analysis was performed on the Dutch text. For this publication, the phrases were translated by the author).

Even though it is not probable. ⁴⁾

It is unthinkable. ⁵⁾

For all that, it is clear. ⁶⁾

Table 2. Factor loadings of 37 content analytic variables and seven types of phrases, orthogonal principal component analysis, varimax rotation; loadings |<.30| omitted.

Variables	Factor loadings times 100						
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>
Authority (ties) Words	80	---	---	---	---	---	---
Have/has	72	---	---	---	---	---	---
Deliberation Words	68	-34	---	---	---	---	---
Third Person Pronoun	65	---	---	---	---	---	---
The	60	33	38	---	---	---	---
Time/Space	59	---	---	---	36	---	---
Understate Words	54	---	---	---	---	---	---
Of	52	---	34	48	---	---	---
Would/should	50	---	---	---	---	---	---
Prepositions	49	---	34	---	---	---	-36
Before/for	46	---	---	---	---	---	---
Overstate Words	41	---	---	---	---	---	---
On	39	---	35	---	---	---	---
Embedded Indicators	---	86	---	---	---	---	---
Development Words	---	71	---	---	---	---	---
Effect Words	---	71	---	---	---	---	---
Moral Policy Words	---	---	68	---	---	---	---
Interaction Words	---	---	66	---	---	36	---
At/in	36	---	66	---	---	---	---
Neutrality	---	---	57	---	---	---	---
Identity Wreckers and Builders	---	-49	-58	-38	---	---	---
War Words	---	---	---	71	---	---	---
Termination Words	---	---	---	66	---	---	---
Status Quo Words	---	---	---	54	---	---	---
Motivation Words	31	---	---	---	72	---	---
I, me, mine, myself	---	---	---	---	65	---	---
National Interest Words	---	---	---	---	64	---	---
Moment	---	---	---	---	63	---	---
Let	---	---	---	---	---	76	---
Foreign Actors	---	---	---	58	---	62	---
Will/shall	---	---	---	---	---	53	---
That	30	---	---	---	---	46	---
One/him/herself/themselves	36	---	---	---	---	38	---
Probability Words	---	---	---	---	---	---	85
Is	36	---	---	---	40	---	47
Not	30	---	---	---	---	---	45
We, us, our(s), ourselves	---	33	45	---	---	---	-48
Outcomes	---	96	---	---	---	---	---
Action Netherland	-43	---	87	---	---	---	---
Value Statements	-57	-56	-62	---	---	---	-38
Developments	---	---	---	100	---	---	---
Phrases	---	---	---	---	92	---	---
Action Opposition	---	---	---	---	---	95	---
Probability Statements	---	---	---	---	---	---	84

Before turning to the next factor let us consider the fact that some variables are loaded on more than one factor. The words "is" and "not" are also loaded on factor I while the word "is" appears again on factor V. Similar observations can be made about the categories Prepositions and Pronoun, First Person Plural. These are so called fused variables which are part of more than one semantic dimension. For instance (and not unexpectedly) the word "is" occurs with some frequency in other than Probability Statements.

Factor VI: Action Opposition.

Action Opposition has a factor loading of .95 (or near identity) and consequently the factor clearly describes a semantic pattern characteristic of this type of phrases. (The reader will remember that the factor loadings of these dummy variables are probably inflated). A hypothetical phrase of this kind might be: "If on the attack, the Germans will not bother themselves with Dutch concerns; they let that be known". Thus, these phrases are characterized with high to moderate frequency occurrences of the single word variables "let", "will/shall", "that", "self or selves". In Dutch, the same word is used for the auxiliary verb form of "I will", as well as "you and he shall" ("zal"). Also, the reflexive forms of personal pronouns is indicated by a separate word ("zich"). The category: Foreign Actors includes really the names of foreign countries, one place name, namely Antwerp, and the name of its river, nineteen words in all. The category: Interaction Words includes a long list of words, largely verbs connoting mostly physical actions or interactions between at least two parties. In our discussion of Factor III, this category will be further explored. To illustrate further the semantic nature of this phrase type we cite a few phrases with very high positive factor scores.

That from Berlin the answer will be that the government does not wish to reveal its intentions concerning Antwerp. ⁷⁾

When in that case the German forces will allow themselves to be interned. ⁸⁾

In view of a possibly to be expected British demand for us to allow the transportation of military forces aboard ships along the Schelde in the direction and in behalf of Antwerp. ⁹⁾

Factor V: Motivation Phrases.

The dummy variable "Motivation Phrases" is highly loaded on Factor V (.92) leaving little doubt that the factor describes the semantic content of this type of phrases. Again and not surprisingly, this type of phrase includes quite often one or another kind of Motivation Words in combination with references to the Pronoun, First Person Singular, the three words of the category National Interest, best translated as "interest", "national interest" and "life and death issues", the words "moment" and "is", and finally, (and to lesser extent), the category: Time/Space. The latter category includes 16 time and space referents and its frequent use often indicates a specificity of concern. This category will be further explored in the discussion of Factor I. Finally the category: "Motivation Words" includes 33 rather diverse types of words. Some are causation terms such as "therefore", "because", "necessity"; others have a more teleological flavor, e.g. "reason", "conclusion", and so on, all suggesting a concern with either motivation, justification, or both.

These factor analytic findings suggest that Motivation of Action Phrases present reasons, motivations, and justifications of preferred actions as presented by each participant to the debate who frequently refers to himself by using the First Pronoun Singular. These reasons are more often than not reasons of state and national interest as they appear at the present moment in specific circumstances of time and place rather than as abstract general principles. Citing some phrases with extremely high factor scores will further illustrate these interpretations.

At this moment and in my view, it is in the interest
of our country. ¹⁰⁾

And at this moment judging largely in the nation's
interest, I cannot support the proposal. ¹¹⁾

Considering the issue of life and death confronting
the Netherlands at this point, I am fully prepared
to support the proposal. ¹²⁾

Factor IV: New Developments.

New Development phrases have a loading of unity on the factor clearly marking its interpretation. The semantic content of this type of phrases is defined by the more or less frequent presence in these phrases of four categories of words, one single word variable, and the possible absence of one other category of words. The category: War Words includes 26 entries, predominantly nouns defining war acts ranging

from "skirmish" to "annexation". The category: Termination Words contains a list of (at first sight) rather distinct words all however designating some part of a developmental process from beginning to end. Thus we find here the words "birth" and "born", "beginning", "following" and "termination". The category: Status Quo Words contains only three entries, namely "remain(s)", "remaining" and "maintain/ conserve" expressing a concern with preservation and the maintenance of the status quo. The category: Foreign Actors was dealt with in the discussion of Factor VI. The single word variable is the preposition "of". Finally, the category: Identity Wreckers and Builders has a negative loading on the factor indicating that its words are unlikely to appear in New Development phrases.

Semantically, New Development phrases are characterized as follows: they deal with the development of belligerent actions which affect the existing status quo and in which foreign actors play a predominant role. A few examples of New Development phrases with high factor scores highlight these content features.

At the end of the battle, the parties still nearly
balance and they end the contest because of general
exhaustion. ¹³⁾

The possibility may even arise that Germany will
abandon further actions against Antwerp. ¹⁴⁾

At the very same moment that they become or are forced
to become ... (harmd) ... ¹⁵⁾

Factor III: Action Netherland.

The interpretation of this factor provides a complication not earlier encountered. The positive end of the dimension clearly represents Action Netherland phrases which are semantically defined by categories of words and single word variables with positive loadings on the factor and especially the categories: Moral Policy Words, Interaction Words, and the single word: "Neutrality". However, the negative pole of the factor is partly identified by the type pf phrase, Value Statements which is here semantically characterized by a somewhat likely presence of the category: Identity Builders and Wreckers.

In general, if a phrase contains the latter category then it is more likely than not to be a Value Statement and not an Action Netherland phrase while if words predominate which are characteristic for Action Netherland phrases then it is very unlikely that it would be a Value Statement.

To complicate matters, the semantic content of Value Statements is not exhausted by the content of one factor but by many, namely Factors III, I, II and VII, in descending order of importance. Furthermore, the factor analysis describes the content of Value Statements mostly in a negative rather than positive fashion. It describes it in terms of an absence rather than presence of particular content variables. There are a few exceptions to this rule, on both Factors III and II the category: Identity Builders and Wreckers defines the phrase positively. This category is a largely melancholy list of 48 words alphabetically beginning with "attack" and ending with the Dutch equivalent of "suicide" (zelfmoord), most of these words denoting the utter destruction of an actor, a few his/her glorification, and positive ends such as "freedom", "free", and "honorable". These words are largely nouns or verbs among the nouns a goodly part are noun forms of verbs. At any rate, Value Statements, if positively identified contain these states of destruction or glorification but more often they are characterized by the absence of words which typify other types of phrases. With respect to this factor the following selection of Value Statements illustrates the point.

Somewhat discredited. 16)

Not coerced, hence completely independent. 17)

Dangerous. 18)

The category: Moral Policy Words is the most frequent indicator of Action Netherland phrases. It is a somewhat odd combination of policy words such as "action", "course", and "choice" and their moral qualifiers such as "clear", "undivided", and "just", 28 distinct words in all. The category: Interaction Words, which was mentioned before, includes 49 different words, partly verbs and verb forms, the remainder nouns, all denoting an interaction between two or among more parties. Examples thereof are "to urge", "answer", "question", "allow", "notification". The category: Personal Pronoun, First Person Plural, was described before and its meaning is clear from table 2 as is the case with category: Prepositions, and the separate word variables "at/in", "on" and "of", all prepositions as well. The single word variable "neutrality" speaks also for itself as does the variable "the". The question remains: "what does this combination of categories mean?" The perusal of frequently occurring words strongly suggests that Action Netherland phrases are of the following kind. The actor is "we", e.g.

we ask, we give notification, or rather it is our policy to interact. Thus a possible phrase -- "we decide to ask, to intern", "it is our course to give notification", and so on. Of course, neutrality was the official policy and its maintenance the central concern of Dutch foreign actions at that time. The qualification of Dutch policy in moral terms behoves a small nation which can scarcely define interests of state in military or imposing economic terms and is probably an expression of ethnocentrism which applies to policy declarations of most nations, small and large. In their language, then, whenever ministers formulate Dutch policies they are called more often than not just, clear, honest, and so on. The frequent usage of all kinds of prepositions in these phrases indicates the use of careful language limiting the applicability of policy declarations since they apply (only) in, at, on, of, and so on. The same is likely true because of the rather frequent usage of the definite article "the" which in contrast with the indefinite article greatly restricts the range of applicability of each subsequent utterance. The particulars of these semantic characteristics of Action Netherland phrases are further documented by the following statistically selected examples:

And that therefore this fact must be seized to establish one's own course and henceforth not to be bound by the duties of strict neutrality. 19)

To notify Germany that there are limits to our neutrality, that we are prepared to transform our strict neutrality first into a wait and see, soon into a conditional policy. 20)

That we must maintain neutrality as long as possible. 21)

In conclusion it suffices to note that Action Netherland phrases are most unlikely to contain Identity Builders and Wreckers words and the absence of the semantic qualities of Action Netherland phrases characterizes Value Statements. Whether the prevalent flavor of desperation in the Value Statements is a reflection of a universal Dutch world view or a reflection of the rather gruesome future, of Antwerp, Belgium, or the European scene at the beginning of World War I as seen from the Dutch vantage point, is a question which will be discussed below.

Factor II: Outcomes.

Outcome phrases have a factor loading near unity on Factor II, which clearly defines the nature of this factor. As in factor III, the factor is bi-polar but this requires no further interpretation. Outcome phrases are best characterized by a frequent occurrence of the category: Embedded Indicators, or in other words a few Probability Statements but a great many Value Statements were originally embedded in Outcome phrases. Hence, the perceived results of Dutch and foreign actions are the "things" most frequently evaluated rather than these actions themselves, and the evaluation of these results is more often than not gloomy and depressingly pessimistic. At the same time, these evaluations are not part of result phrases, because the hand coders were instructed to isolate them from the phrase (and to prevent double counting were excised in the present analysis). Therefore, the negative correlation between Value Statements and Result Phrases is in part a reflection of coding instructions !

Apart from this negative indication, Result Phrases are positively identified by more or less frequent occurrences of Development and Effect Words. The category: Development Words includes 17 entries, 15 nouns of which 6 in combination with the auxiliary "can", and two verb nouns, namely "development" and "realization". All these words have a strong common flavor suggesting potential yet necessary directed change, such as "can bring", "can happen", or "prise". The category: Effect Words, in contrast, combines 24 words all denoting the result of some process or development. Examples are "settlement", "reckoning", "as a result", and so on. The category: Pronoun, First Person Plural, and the definite article are also somewhat loaded on this factor.

In general, the semantic interpretation of this factor and therefore of the language of Outcome phrases is quite clear, if not obvious: As defined in the coding instructions, such phrases deal with the perceived (we) processes and consequences of actions which are immediately and most often negatively evaluated (but these evaluations are excised). In this context the absence of Deliberation Words (-.34) is interesting. Its entries (which are further defined below) suggest a concern with reflection and even hesitancy but this is absent in the language of Result Phrases. The latter are stated in a factual and forthright manner which no doubt is part of a debating technique. While it is wise to state premises in careful and considerate language, in stating perceived outcomes they must be blunt and direct in order to convince others of one's policy preferences. Painting the evaluation of such results

in the starkest of terms may well be part of these rhetorical strategies. The selected phrases further confirm this interpretation.

The latter can lead to -- (quarrelling) -- . 22)

Perhaps to war. 23)

And can produce only -- (displeasure) -- . 24)

Coerced against our interest. 25)

At a moment that England cannot support us on land. 26)

In his view, it would be a disaster for our country. 27)

Factor I: Undetermined.

The six previous factors identified seven out of eight types of phrases, seven uniquely, and one, Value Statements, conjointly and with negative loadings. The remaining Factor I identifies the eighth type of phrase but because it was excluded as a dummy variable it does not appear as such in the factor analytic results. Nevertheless, its identification is obvious. Many content variables have positive loadings on the factor, two types of phrases have moderately negative loadings and no type of phrase has a positive loading. No doubt, if Undetermined Phrases has been included as a dummy variable in the analysis it would have had a loading of close to unity. This is further confirmed by the discriminant analysis results (see Namenwirth, et al.) and the various cross sorts where the content variables alone or in combination are highly associated with this type of phrase.

What is the semantic content of Undetermined Phrases ?

The category: Authority Words includes eight nouns namely "chamber" (of parliament), "minister", "council of ministers", "the Netherlands", "commander in chief", "government" and "chairman" (of council of ministers) 28). Clearly, these authorities are the subjects of this type of sentence. The category: Deliberation Words includes 63 words denoting processes of deliberation, debate, and communication. Examples thereof are "understand", "promise", "consider", "mean(s)", "discussion", "argued", "premises", "consider(ation)", "say(s)", and "said". This type of phrases therefore contains the various ministerial deliberations, perhaps of a hypothetical nature, which precede or interrupt decision making propositions proper. The fact that both the categories: Overstate and Understate characterize the phrase helps our interpretation. The category: Understate consists of 13 words, largely indefinite numerals, nouns and adverbs, limiting and delimiting the certainty of an argument. Examples are "otherwise", "really", "something", "nothing", and so on.

The category Overstate consists of 15 words, adjectives and adverbs such as "biggest", "greatest", and "paramount". While we may think that to overstate and understate one's arguments distinguishes between types of debaters, in fact we find the two categories moderately highly correlated and this "syndrome" has been found before (Namenwirth, 1969, p. 347 and references there). A sentence such as "It is perhaps possible, it may be sometimes the case that under all circumstances, every will always", and so on, appears frequently in diverse types of texts. The combined usage of under- and overstate words is a likely indicator of defensiveness on the part of the speaker covering aggressive impulses. The frequent usage of all kinds of prepositions further confirms this interpretation because by compounding one's sentence the weight of arguments is limited and restricted; it is no longer a simple declarative phrase. And, undetermined sentences are indeed longer and far more convoluted than any other type of phrase. 29) Once this interpretation is accepted, the appearing of the remaining variables on this factor makes good sense. In part sentences, the forms "has" and "have" of the verb "to have" play an important role as do the entries of the category: Third Person Pronoun, such as "we", "she" and "they" referring to an earlier mentioned subject of the sentence.

Finally, the category: Time/Space contains 16 words denoting the specifics of either time or space and the frequent usage of this category of words is characteristic of concrete language dealing with particulars rather than abstractions thus limiting the applicability of arguments. In sum, Undetermined phrases frequently concern ministerial or other authoritative deliberations dealing with issues which are irrelevant to the decisions at hand and which are stated in carefully worded and defensive language. The statistically selected phrases further confirm our interpretation: the phrases with negative extreme factor scores merely lack this type of concern and language completely.

By timely notification of the German government that we won't refuse entry into our country nor the use of our territory to military forces of one of the powers who guaranteed the neutrality of Belgium when this entry is desired for the purpose of throwing back the German forces into their own country after they have violated this neutrality by violent force. 30)

The position of the Netherlands on the North Sea is that advantageous strategically, the Northern estuaries with Den Helder as naval base constitute such an advantageous operational center, that neither Germany nor England can remain indifferent about which side we happen to fall into and in my view this is the reason why we have remained non-belligerent rather than juridical or humanitarian considerations. 31) That is an equally independent attitude therefore equal to. 32)

But hereafter would have to be checked -- (with violent force) -- . 33)

A tabular summary of factor analytic interpretations.

Scheme I provides a tabular summary of our factor analytic interpretations.

Scheme I: Tabular summary of semantic features of eight phrases based on factor analytic interpretation.

<u>Type of phrase</u>	<u>Factors</u>	<u>Content</u>
Action Netherland	I & III	Careful language stating the nature of Dutch policy which has a strong moral flavor and which is centered on the maintenance of neutrality. References to content which are characteristic for Value Statements and Undetermined Phrases are absent.
Action Opposition	VI	Concerns about future actions and especially interactions which affect Dutch positions, policies, and strategies by foreign actors as identified by the names of countries, places, and so on.
Probability Statements	VII	Probability estimates stated quite often in negative fashion: "It is not likely that". Content characteristic Value Statements, especially references towards "we", "us", and so on are absent.
Value Statements	I, II, III, VII	Value Statements are largely characterized by the absence of content characteristic of Undetermined, Action Netherland, Outcome Phrases and Probability Statements. They contain frequently references to absolute and dismal destruction or conversely, to glory, freedom, and justice.

<u>Type of phrase</u>	<u>Factors</u>	<u>Content</u>
Outcomes	II	Concern with directed processes and their results stated in strong and declarative sentences. They are more often than not evaluated but these evaluations have been excised in the hand-coding.
New Developments	IV	Concern with beginning to end processes of belligerent actions affecting the status quo and dominated by foreign actors.
Motivation Phrases	V	Presentation of reasons, motivations and justifications of preferred actions, frequently reasons of state in situational rather than principled language.
Undetermined	I	Ministerial or other authoritative deliberations which have little direct bearing on the policy decisions at hand and which are stated in tentative and defensive language in compound if not opaque sentences covering aggressive impulses.

Discussion.

Having just summarized the interpretation of the content analytic findings, the discussion will address some more general and fundamental issues in content analyses of this kind. The striking simple structure of the factor analytic results reproduced in part the design of this study. In delineating single word variables as well as category of word variables, words were selected which would optimally discriminate among the various types of kernel sentences. Additively combining these variables in factor analysis (or for that matter in discriminant analysis or any other member of the general linear model) simply confirms the "behavior" of the constituent parts. What then is the contribution of the factor analytic approach ?

As in all content analyses, one does not need an expensive apparatus for the analysis of surface meaning. For instance, one does not need factor analytic content analysis to confirm that probability words such as "chance" and "probably" characterize Probability Statements: the unaided reader will surmise and notice. However, it may require more systematic inquiry, to note that Probability Statements are often expressed in the negative rather than affirmative voice, i.e. "It is not probable that" rather than "It is pure chance". ³⁴⁾ Indeed, even the content analysts who hand-coded the texts proved to have only a

superficial knowledge of their contents. In preparing the dictionary, they were asked to tell what words characterize Value Statements and they answered: "adjectives". Nonetheless, value adjectives are characteristic of Indeterminate phrases (and Action Netherland phrases to some extent) as are all adjectives while they are largely absent from Value Statements. Instead, verb nouns, often of a melancholy sort, characterize the latter. Why verb nouns and why verb nouns of the melancholy kind? To answer these questions automated content analysis and the factor analytic approach prove most helpful.

During the interpretation of the Action Netherland and Outcome factors we noted the absence of the category: Identity Builders and Wreckers in the former and its presence in the latter. Therefore, the decision maker abstains from evaluating his own policy preferences but evaluates the Outcomes of his own, but especially the adversaries' policy decisions in the starkest of terms.³⁵⁾ As observed before, this is most likely a rhetorical device to convince participants in the debate of the equity and urgency of the speaker's preferences. In the debate at hand, the rhetorical device may well interact with contextual elements: the "destruction" and "murder" inflicted on Antwerp. The use of verb nouns at such points suggest the processual nature of Outcomes while at the same time implying rather than specifying moral judgments. Contrarily, the use of words such as "good", "bad", or "despicable" would have specified rather than implied these judgments. It is in this manner that the factor analysis introduces a deep structure and thematic approach which would remain unfeasible without the use of multi-dimensional scaling techniques.

In conclusion, the factor analysis produced themes which discriminate among various types of phrases. As is the case in all science, we would hope that these themes are generic and universal but the replication of these efforts on another debate makes us wary: these themes may well vary from one type of debate to another. If the themes here interpreted are thus conditioned, important questions arise about the nature of these conditions and the types of debates which may exist. This, however, is another story which, as is the case in all stories, will require further content analyses.

- 1) For a more technical argument, the reader is referred to Carroll, J.B., The nature of the data, or how to choose a correlation coefficient. In: Psychometrika, Vol. 26, no. 4, December 1961, pp. 347-372.
- 2) For further illustration, compare with table 2 in Namenwirth et al.
- 3) I.e. the verb form "can" has an ambiguous meaning and was therefore disambiguated and only classified as a Probability Word if it occurred in the specified combination with other words.
- 4) Factor score = 2.69; of kernel sentence = 419.
- 5) Factor score = 2.62; of kernel sentence = 390.
- 6) Factor score = 2.58; of kernel sentence = 265.
- 7) Factor score = 5.22; of kernel sentence = 546.
- 8) Factor score = 5.12; of kernel sentence = 70.
- 9) Factor score = 4.98; of kernel sentence = 483.
- 10) Factor score = 4.16; of kernel sentence = 463.
- 11) Factor score = 3.68; of kernel sentence = 535.
- 12) Factor score = 3.51; of kernel sentence = 168.
- 13) Factor score = 2.83; of kernel sentence = 235.
- 14) Factor score = 2.80; of kernel sentence = 161.
- 15) Factor score = 2.76; of kernel sentence = 27. The word "harmed" was coded as an embedded value assertion which in the analysis was replaced by the variable "Embedded Indicators" and as a value assertion analyzed as a separate kernel sentence. The latter procedure requires an explanation. In the hand-coding, the embedded Value Word, e.g. "harmed" would have been counted twice, first as part of the New Developments phrase and second as part of a Value Statement thus creating statistical dependencies which are logical rather than empirical producing serious error in factor analysis (and the discriminant analyses as well). The used procedure eliminates such errors.
- 16) Factor score = -1.31; of kernel sentence = 472.
- 17) Factor score = -1.29; of kernel sentence = 499.
- 18) Factor score = -1.26; of kernel sentence = 614.
- 19) Factor score = 2.03; of kernel sentence = 58.
- 20) Factor score = 2.00; of kernel sentence = 160.
- 21) Factor score = 1.93; of kernel sentence = 194.
- 22) Factor score = 2.30; of kernel sentence = 424. The word "quarrelling" was coded as an embedded value assertion which in the analysis was replaced by the variable "Embedded Indicators" and as a value assertion analyzed as a separate kernel sentence. See note 15.
- 23) Factor score = 2.30; of kernel sentence = 425.
- 24) Factor score = 2.30; of kernel sentence = 552. The word "displeasure" was excised; see note 15.

- 25) Factor score = -1.18; of kernel sentence = 388.
- 26) Factor score = -1.18; of kernel sentence = 590.
- 27) Factor score = -1.16; of kernel sentence = 185.
- 28) At the time of these debates, the position of prime minister did as yet not exist in the Netherlands. If present, the Minister of the Interior was the chairman of Council of Ministers' debates.
- 29) This is in part due to coding instructions as noted before because attributions of motivations, probability estimates, and value assessments were left embedded as they are of no consequence for the induction of decision strategies.
- 30) Factor score = 2.25; of kernel sentence = 104.
- 31) Factor score = 2.15; of kernel sentence = 46.
- 32) Factor score = -.95; of kernel sentence = 467. This sentence is a Value Statement.
- 33) Factor score = -.91; of kernel sentence = 3. The words "with violent force" were replaced with the variable "Embedded Indicators" and constituted a separate Value Statement. This kernel sentence is an Action Netherland phrase.
- 34) Of course, after the fact everything is obvious and it may be argued that it is easier to predict what will not occur than to foresee what will happen. Hence, the negatively voiced Probability Statements.
- 35) This is not completely true since the reader may remember that Action Netherland phrases are in part characterized by Moral Policy Words thus suggesting that these preferences are "just", "fair", and so on. Not only are these words adjectives, they are also of a very different character than those combined in Identity Builders and Wreckers.

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