A Technique for Structural Content Analysis of Party Propaganda

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1. Introduction

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2. Principles for Studying the Co-Occurrence of Signs

In this section wa shall first attemt to define some concepts we believe basic to all content analysis. This does not mean, of course, that the terminology used here need necessarily be utilized.

Every form of content analysis implies, among other things, that certain signs, usually word signs, are assigned to particular content categories. *Content categories are designations of specific classes of signs or of individual signs.*

A number of content categories together can, under certain conditions, constitute a content variable. For this to be permissible the content categories must be exhaustive and mutually exclusive. In other words, together they must form a variable at, minimally, the nominal scale level.

We term the process by which signs are assigned to content categories, 'recording' or 'coding'. This presupposes, naturally, that we have defined what must distinguish a sign or a set of signs in order for it to be recorded. Here there are several possibilities. It is conceivable, for instance, that signs are recorded when they form words, sentences, or assertions. *Such a delimited number of signs, explicitly defined, constitutes a recording unit.*

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We should point out that the question of recording and the recording unit must be carefully distinguished from that of measurement and measure. It is not uncommon in content analysis studies that the recording itself is regarded as a sort of measurement of the attention devoted to a specific content category. This, in many cases, is reasonable from a practical point of view. Failure to make a clear analytical distinction between these two concepts, however, can have serious consequences. In many types of content analysis it is of course entirely possible to combine a particular type of recording with several types of measurement. The choice between various measures is ultimately determined by the requirements different theoretical problems pose.

Every form of content analysis that is not confined to only an investigation of the occurrence and/or space allocations, or frequency of the individual content categories in a content variable, implies of necessity a study of the *co-occurrence* of various content categories in the same and/or different content variables.

This in turn requires that we define 'co-occurrence'. We can distinguish here two possible cases:

1. Recording the co-occurrence of various content categories (in the same and/or different content variables) in a certain text or part of a text independent of relationships in the text existing between recorded signs, i.e. independent of the structure of the text;
2. Recording the co-occurrence of various content categories (in the same and/or different content variables) in view of relationships in the text existing between recorded signs.

In case 1 we can conceive of two types of principles for demarcating the sections of text within which the co-occurrence of the content categories is studied. We can divide the text into sections which can be regarded as 'natural' in some sense. In this instance we speak of using a *formal principle*. Such sections of the text may be composed, for example, of articles, paragraphs, sentences, books, or letters. An example of such an investigation is J. M. Paige's psychological trait analysis of a collection of letters.[1]

The demarcation of sections of text can also occur according to a *mechanical principle*. A rule, for instance, can be set up stipulating that one or some specific content categories are to be recorded if signs belonging to these content categories occur within a distance of a certain number of words or lines before and/or after signs which in the coding belong to another certain content category. A principle of this type has been employed by Julius Laffal in a psychological investigation of an autobiography.[2]

One of the best known examples of a relatively early content analysis technique for studying co-occurrence of signs is contingency analysis, which has been developed primarily by Charles E. Osgood. Contingency analysis entails a recording of co-occurrence according to case 1, and it can be used in connection with both a formal and a mechanical principle.[3]

In case 2 (i.e. when the recording of co-occurrence is dependent upon relationships in the text between signs assigned to different content categories) the rule, defining co-occurrence, must be formulated in terms of relationships between content categories or specific combinations of such categories. The definition of co-occurrence, then, is made according to a *syntactic principle*.

Content analysis studies of how certain definite phenomena are described or valuated in a text are examples of applying a syntactic principle.

Such studies may take the form of relatively gross estimates of attitudes expressed toward fairly extensive 'subject matter areas' and the like. Or they may have the character of a meticulous recording of valuations of precisely defined phenomena. Evaluative assertion analysis is an early example of such a technique.[4] Techniques of this type, which proceed from the syntactic structure in a text, have subsequently been further developed by Ole R. Holsti, among others, in conjunction with the General Inquirer System.[5]

The use of content analysis in testing elaborate theories in the social sciences, at least in a large number of cases, probably requires that the co-occurrence of various content categories be recorded, and that structural characteristics in the text be taken into consideration.[6] We have therefore preferred a syntactic principle in defining co-occurrence rather than a formal or a mechanical one. A similar position has been adopted, moreover, in *The General Inquirer*.[7]

We are interested, for reasons brought out in section 3 below, in certain definite types of statements in the investigated text. The rules for recording individual assertions and valuations are discussed in detail in section 5.

The recording of the statements requires in the simplest cases that the co-occurrence of three content categories in three different content variables be coded. In the structurally most complicated cases of recording individual assertions and valuations, twenty or so different types of content categories in six different content variables can be recorded simultaneously. Thus great precision in recording various types of valuations is made possible.

For various reasons, however, we have also chosen to record certain specific relationships that can exist between different statements in a text. We have therefore developed a technique for such a study, the so-called *coupling technique*. This means that we have sought greater exactness in recording the structure of a text than had been possible in recording only individual statements. This has also confronted us, however, with substantial problems. In designing the coupling technique we could not, for instance, find any previous content analysis technique of a similar kind that we could further develop.[8]

3. Consequences of a Party Theory for Studying Propaganda

The study[9] in which the content analysis technique is employed aims ultimately at testing a theory of political parties. The parties are assumed to be goal-steered organizations. The goals we assume to steer the parties affect the parties in a par-

ticular way in a particular situation. We have chosen to investigate the parties during election campaigns with the result that we focus on the parties' goal of maximizing votes; that is, their efforts to increase their electoral support. More or less established relationships of cooperation or conflict existing between parties in a multi-party system as in Sweden are assumed, however, to influence strongly the parties' appraisal of the possibilities to operate according to vote maximization principles.

The parties, when considering their chances of winning votes and risks of losing votes, are assumed to divide up the electorate according to its social composition (occupation, income, sex, etc.) and to its party identification. It is further assumed that the parties may combine these ways of dividing up the electorate by group and party identification. The chances of gains and the risks of losses can concern a certain group in relation to a certain party and another group in relation to another party. The parties are then assumed to concentrate their propaganda on these various groups and parties and combinations of them. In this connection the parties are assumed not only to take into account the benefits that diverse aggregates of voters derive from the policy presented in their propaganda, but to take into consideration that their desire and ability to implement this policy appears credible to the voters.

As a consequence of these assumptions the content analysis must obviously focus on studying statements about the attitudes of the parties toward various groups and one another. The attitude toward a group or a party can be explicitly stated in the propaganda. But it is just as common that the attitude is implicit in character. In the case of a group, a party may express its attitude by adopting a position on a social condition affecting the group or the interests of the group. The attitude toward the group is thus expressed without explicit mention of the group.

Even an attitude toward another party can be expressed implicitly. It is common in the propaganda, for example, that a party adopts a position on another party's proposal to change a social condition without explicitly mentioning the party presenting the proposal.

In conclusion, it is not sufficient to study the explicit attitudes toward groups and parties. It is also necessary to study the parties' positions on various social conditions. Only in this way can one obtain sufficient validity in the analyses of the parties' attitudes toward groups and toward one another.

This aspect of the investigation's content analysis ought to be conceived as a study of co-occurrence – a study of the co-occurrence of a certain valuating party, a specific valuation, and a particular group or a particular other party that is the object of this valuation. But the theory also requires that more complicated cases of co-occurrence in a statement be studied. For instance, in order to investigate whether or not the group propaganda of a party differs when it is combined with propaganda leveled at various parties, the co-occurrence of declared attitudes toward a certain party and a certain group must be recorded in the content analysis. We must also examine which social conditions, groups, and parties are mentioned in conjunction with those expressions in a particular party's propaganda that

involve its own or other parties' desire and ability to implement policies.

One of the assumptions above maintained that the parties rate their chances of gains and risks of losses among various groups of voters. How is this rating to be inferred from the propaganda? Questions of this kind are invariably answered in content analysis with the aid of measurements of the *attention* devoted in the text to the relevant phenomena. A simple type of measure of attention that can be used is the number of statements in which a certain party expresses a particular attitude toward a specific phenomenon. A measure of this type has the advantage of being easy to understand and calculate. But it has the disadvantage of not taking account of the varying contexts in which statements with the same content may appear. If one wants to have a measure of attention that can claim high validity, some sort of relationship between the statements in the text must thus be taken into consideration. In our investigation, certain relationships between statements, the so-called 'couplings', are studied. For reasons we cannot go into here, the coupling technique seems to us to afford substantial possibilities for a refined measurement of rating.

The material for the study consists of party propaganda, with a mass distribution, during four election campaigns of the 1960's – 1960, 1962, 1964, and 1966. The propaganda was produced by the national party organizations. It comprises brochures and leaflets distributed during the campaigns as well as nationwide radio and television election programs consisting of policy presentations produced by the parties and party debates. Written transcriptions of the programs, subsequently undertaken by the Swedish Broadcasting Corporation, have been used in the investigation.

The coding process consisted of two steps. First of all the material was recorded, in accordance with the rules presented below, and transcribed onto coding sheets. In this process a simplified symbolic language was employed to a varying degree. Secondly, the content of the coding sheets was transcribed onto optical reader data sheets. In connection with this, the coded material was adapted for computer processing.

Since the propaganda material has a diversified typographical format, no measure of its size can be specified. However, it must be characterized as extensive. This fact, in combination with the 'detailed' recording, has made the coding quite laborious, which seems however to be unavoidable in more developed forms of content analysis with manual coding. The number of optical reader data sheets, which thus constitute the final product of the coding, totals nearly 35,000, evenly distributed during the four election campaigns.

4. Basic Structure Categories

Every form of content analysis presupposes, as stated above, that it has been established when a set of signs is to be assigned to content categories in one or several content variables. A recording unit, in other words, must have been defined.

The recording unit can be constructed according to various principles. In our opinion the use of content analysis in testing fairly well-developed theories in the social sciences presumes, at least in many instances, that the recording unit has been defined with regard to structural properties in the text (see section 2). *To accentuate the connection with the structure of the text, the term 'structure category' is used in this study for the content variables.*

The definition of content categories, in contrast, is naturally dependent upon what is viewed as interesting in a certain text with regard to the given theory.

For various theoretical reasons we are interested in three types of statements in a given text: statements by a party 1) about a group, 2) about an existing or possible social condition, and 3) about one or several parties.

The prerequisite for recording a statement is that it consist of a valuation or assertion by a party about a group, a social condition, or a party.

The object of a valuation or an assertion is designated *social object,* if it constitutes an actual or conceivable social condition or a group. In the case of this structure category we have sought to devise content categories that relate as nearly as possible to what the parties actually say in the propaganda. The coding of the social objects, in other words, can largely be described as a reproduction on coding sheets of the words or combinations of words used by the parties in their propaganda to depict the object of a certain valuation or assertion. A complete reproduction has not, however, been made. Different words or combinations of words that within narrow limits express equivalent content have been assigned to the same social object.

When the object of a party's valuation consists of a party or a combination of parties, we term the object of such a valuation *acting unit object.* In the text, for instance, mention of a party or a representative of the party may occur. The content categories in our study are composed simply of the names of the political parties.

An analytical construction of content categories has, however, been formulated in the case of so-called *party description objects.* This concerns a description of parties expressed in terms of certain value words or attributes involving the parties' desire and ability to implement their policies. The content categories for party description objects are directly derived from a particular portion of the theory of political parties applied here.[10] The six content categories of party description objects are: reality description, parliamentary efficacy, reliability, consistency, continuity, and cohesion. It is not possible in this context to specify the meaning of these categories.

In order for a set of signs in a text to be recorded there must exist, as we pointed out earlier, a valuation by an acting unit, in our case by a party. The party that has produced the given brochure or program, or whose representative has expressed himself in a debate, constitutes the acting unit whose attitude we attempt to establish. It is a simple matter to set up content categories for the structure category *acting unit.* They consist of the five Swedish parliamentary parties during the period covered by the study. These parties were during this period:

The Conservative Party (Cons) ⎫
The Liberal Party (Lib) ⎬ non-socialist parties
The Center Party (Cen) ⎭
The Social Democrats (SD)
The Communist Party (Comm)

The abbreviations in parentheses will be used in the examples of coding in this article.

If we assume that an acting unit and an object of the acting unit's valuation occur, we must now, in order to be able to establish a recording unit, devise categories that clarify the relationship between the acting unit and the object of its valuation or assertion. The character of this relationship depends upon whether the object can be designated as a social object, an acting unit object, or a party description object.

A social object can be discussed in terms of satisfaction or dissatisfaction with the state of the object or, expressed more exactly, with the state of the entity the given content category, in the structure category, the social object refers to. Or the acting unit, in our case a party, can propose that the social object should be changed or that it should not be changed in some definite direction and fashion.

The meaning of valuations of social objects is recorded with the assistance of the structure category verbal attribute. This is divided up into twenty-eight content categories, which means that a high degree of precision is attained in the recording of valuations of social objects. The content categories are: increase, decrease, introduce, abolish, improve, make worse, concentrate, disperse, preserve, change, join, leave, be satisfactory, be unsatisfactory, plus the negations of these verbal attributes (increase/not increase, abolish/not abolish, etc.). The negations are necessary for an accurate recording in those cases where an acting unit, i.e. some party, is content to dissociate itself from another party's proposal or from a specific development of the social object. This possibility of negating verbal attributes is also significant in the recording of couplings (see below).

If, on the other hand, the object of the acting unit's valuation is a party or a combination of parties, *the meaning in the relationship between the acting unit and the acting unit object is specified with the aid of the structure category acting unit relationship.* We distinguish here primarily between a) positive valuation and b) negative valuation.

It is, moreover, necessary to construct content categories that enable us to distinguish between those cases when the object of the valuation is only one party and when it consists of a combination of several parties. In the latter instance it may additionally be stated in the text that there is unity or disunity among the parties mentioned.

Finally, a relationship can exist between an acting unit and a party description object. With the assistance of party description objects, certain properties are, as mentioned above, designated.

The valuation of these properties is, by definition, positive. *As a designation of*

the valuation relationship that occurs, the structure category verbal attribute is used, but in reality only one content category needs to be utilized, viz. positive valuation of the given property.

5. The Basic Unit

Structures of the Basic Unit

In the preceding section we have designated the structure categories used to record statements by an acting unit about some particular object. These structure categories can be combined, and the permissible combinations of content categories within such structure categories indicate which assertions and valuations in a text are to be recorded. *Each statement that can be recorded, according to such a permissible combination, we call a basic unit.* The basic unit constitutes the recording unit in our study for coding individual statements.

Three simple combinations of structure categories can be discerned: the acting unit can make a valuation of 1) a social object, 2) an acting unit object, or 3) a party description object.

When an acting unit makes an assertion about a social condition or a group, the meaning of the valuation of the social object is recorded using the structure category verbal attribute. Examples of assertions of this type are:

(i) Lib: 'There is a crying shortage of day nurseries.'
(ii) Cen: 'We must bring about equivalent incomes for agriculture.'

The social objects here are day nurseries and equivalent incomes for agriculture.

The structure of the assertions, in terms of our structure categories, is the same in the two examples:

(1) Acting unit (AU) _____ verbal attribute (va) _____ Social object (SO)

The coding is:

(i) Lib _____ be unsatisfactory _____ day nurseries

(ii) Cen _____ introduce _____ equivalent incomes
                                                                          for agriculture

Another simple combination of structure categories exists in the case of one party's stating something about its attitude toward another party. The relationship that in this case appears in the text between the acting unit and the acting unit object is coded, as stated above, with the assistance of the structure category acting unit relationship. An assertion of this type is, for example, the following:

Cons: 'The policy of the government can be characterized as a series of failures.'

The structure of the assertion is simple:

(2) AU_____ acting unit relationship (aur)_____ Acting unit object (AUO)

Recording:

Cons _____negative _____ SD

A party may also make a valuation of itself or another party in terms of the party's reliability, the consistency in a proposed policy, the continuity of the party line, correctness of reality descriptions, the party's parliamentary efficacy, or its internal cohesion – in terms of any of the content categories belonging to the analytically devised structure category party description object.

A valuation in terms of a party description category concerns not only the property itself, which by definition is considered to be positive, but also one or more parties. We can say that these parties are characterized with the aid of assertions of whether they possess or do not possess a certain property. In these instances we must therefore always take note of two objects: a party description object and an acting unit object as well as two relationships. The first relationship is between the acting unit and the party description object, which is designated with the help of the structure category verbal attribute, and secondly the relationship between the acting unit and the acting unit object, which is specified with the assistance of the structure category acting unit relationship. Examples of assertions of this type are:

(i) SD: 'If it were considered an expression of continuity to change position as often as the Liberal Party has done, then I am a little surprised at this sort of continuity.'

(ii) Comm: 'The Communists don't promise the moon if you cast your ballot for the party.'

The structure of the assertions can be specified in the following way:

(3) AU ────┬──── va ───────────── Party description object (PDO)
           └──── acting unit ───────── Acting unit object (AUO)
                 relationship (aur)

The coding yields:

(i) SD ────┬──── be satisfactory ───────────── continuity
           └──── negative ───────────────────── Lib

(ii) Comm ──┬──── be satisfactory ───────────── reliability
            └──── positive ──────────────────── Comm

We have now designated the three simple combinations of structure categories for recording the assertions in a text. The remaining permissible cases of basic units can be viewed as different combinations of these three simple cases. They all aim at making possible a more exact recording of the structure of the examined text.

A common type of statement in the propaganda text is characterized by an acting unit: a party makes a valuation of a social object and simultaneously says something about its attitude toward another party in relation to the particular social object. Two examples of this are:

(i) Cons: 'But with equal clarity the Conservatives have said no to the Social Democratic demand to give local government the prior right to purchase land.'

(ii) Lib: 'The Liberal Party and the Center Party fought in order that parliament would declare itself in favor of increases in the national pension. The Social Democrats and the Conservatives did not want to go along with this.'

The structure of the assertions can be expressed in the following way:

(4) AU ——————— va ——————— SO
     |————— aur ——————— AUO

The coding is:

(i) Cons ——— not introduce ——————— prior right of local government to purchase land

     |——— negative ——————— SD

(ii) Lib ——— increase ——————— national pensions

     |——— positive ——————— Cen

     |——— negative ——————— unity: Cons and SD

The other two cases, of which the first is very common, exist when the acting unit states its attitude toward a social object or toward an acting unit object and simultaneously expresses a party description in relation to the social object or the acting unit object respectively. An example of the first case is:

Lib: 'Last spring the Minister of the Interior promised that fluctuations in housing construction would be less, but now the figures are such that fluctuations are obviously greater.'

In this instance the Liberal Party expresses a negative attitude toward the Social Democrats, more specifically toward the Social Democratic Minister of the Interior, at the same time as housing construction is being discussed. Disagreement does not, however, concern the attitude toward a specific state of the social object. Both the Liberal Party and the Social Democrats, in the opinion of the Liberal Party, evidently consider fluctuations in housing construction to be undesirable. The Liberal Party seems, on the other hand, to doubt the reliability of the Social Democrats in combating unevenness in housing construction. In other words, the Liberals express a negative party description of Social Democratic policy in this particular respect. The structure of the statement can be regarded as a combination of cases (1) and (3):

(5) AU ─────┬───── va ────────────────────── SO
           │
           └───── va ────────────────────── PDO
              │
              └── aur ───────────────────── AUO

The recording is:

Lib ─────┬───── decrease ───────────── fluctuations in housing
        │   construction
        └───── be satisfactory ─────────────── reliability
           │
           └── negative ──────────────────────── SD
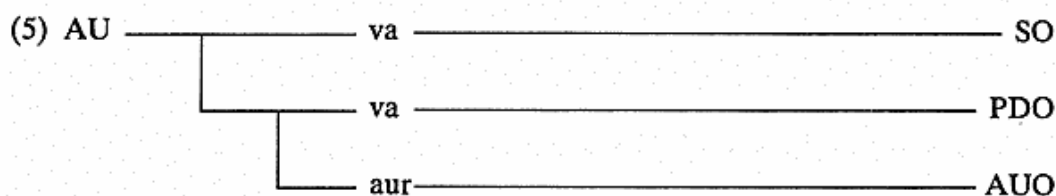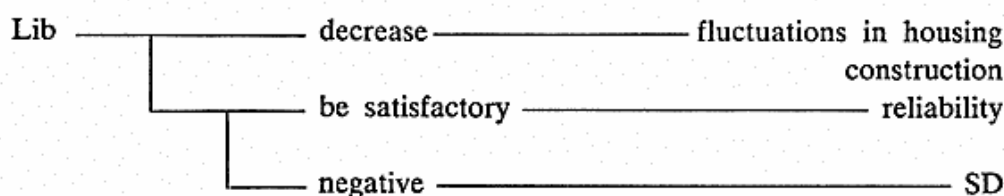
An example of the second case is:

Cons: 'We will agree on a joint non-socialist program of action, but the representatives of the government will probably in this evening's debate strike up the old melody of non-socialist disunity.'

Here the acting unit, the Conservative Party, expresses both a positive attitude toward the idea of cooperation with the other two non-socialist parties, and a negative valuation of the way the Social Democrats describe the relationship between the non-socialist parties. The structure of the assertion is:
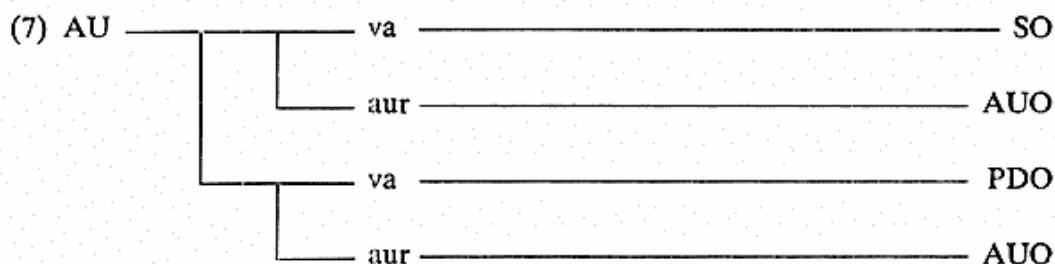
(6) AU ─────┬───── aur ───────────────────── AUO
           │
           └───── va ────────────────────── PDO
              │
              └── aur ───────────────────── AUO

Coding:

Cons ─────────┬──────── positive ──────────── unity: Cons, Lib, and Cen

              └──────── be satisfactory ──────────── reality description

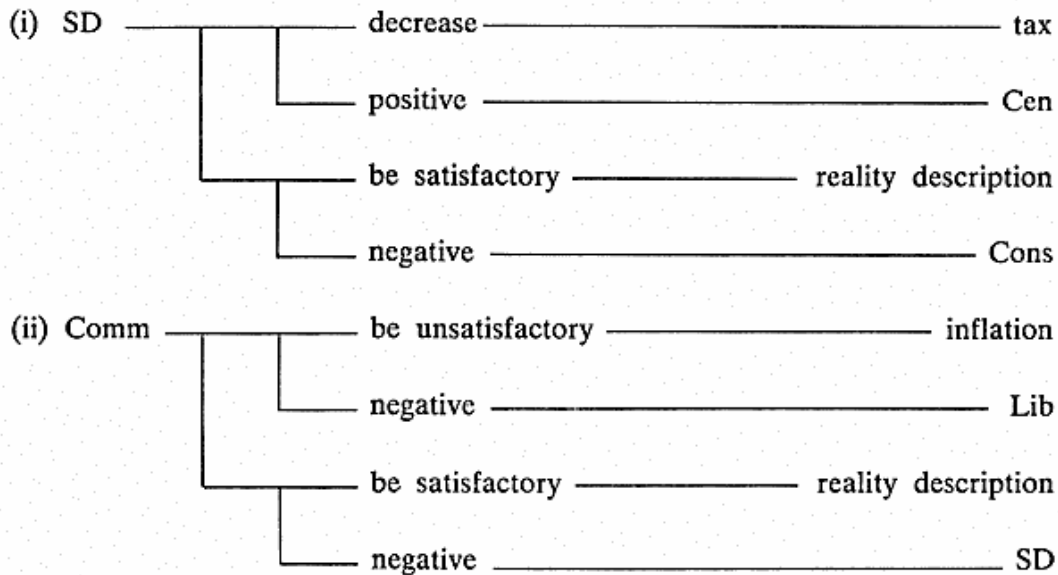   └──── negative ──────────────────────── SD
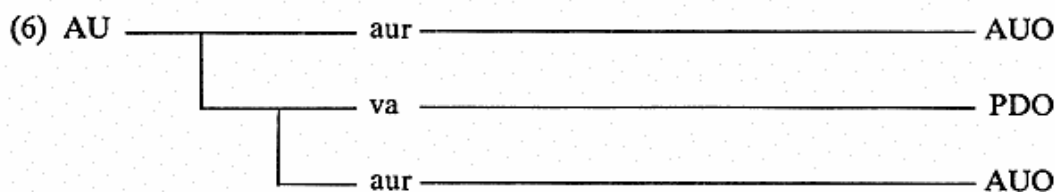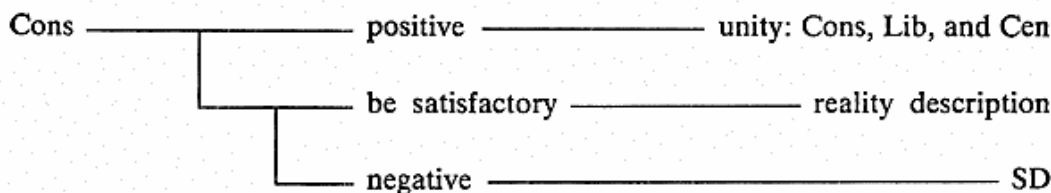
We have now combined the three simple cases, (1), (2), and (3), into various pairs. A somewhat more complicated case, with regard to the structure of assertions, arises when all three of the simple cases are combined. Statements of this type often appear in the text. Examples are:

(i) SD: 'One is of course a little amazed to hear Mr. Holmberg assert that we are only interested in raising taxes. He says this during a year when we, after cooperating with the Center Party, have obtained tax reductions which have not been unsubstantial.'

(ii) Comm: 'No, Mr. Prime Minister, we really do not have the same program as the Liberals concerning the question of rising prices.'

In example (i) the Social Democrats say that they, together with another party, the Center Party, have wanted and carried out a definite change, specifically a reduction of a particular social object, taxes. Simultaneously it is stated that the Conservative Party, in the opinion of the Social Democrats, has presented an incorrect description of the Social Democratic position on taxation. A high degree of precision in recording valuations is attained by concurrently adopting two different analytical perspectives on the examined assertion. One perspective pertains to the attitude toward actual or conceivable states of social conditions, and the other perspective concerns certain properties of acting units and acting unit objects involving these units' ability and desire to carry out their proposals and policies. The structure of the assertions can be presented as follows:
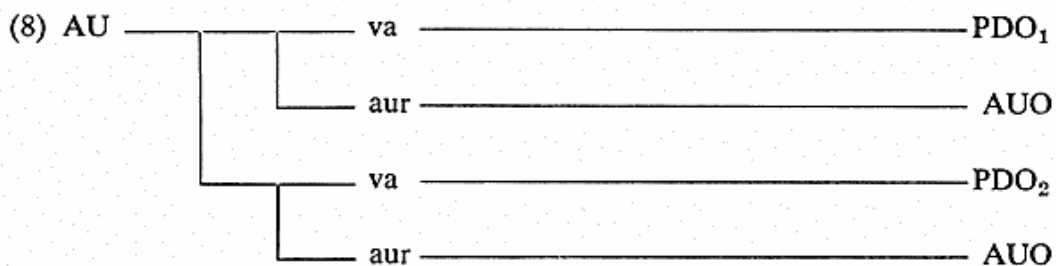
(7) AU ─────┬──────┬──── va ──────────────────── SO

            │   └──── aur ──────────────────── AUO

            └──────┬──── va ──────────────────── PDO

                   └──── aur ──────────────────── AUO

Recording:

(i)   SD ——————————— decrease ————————————————————————— tax
                  positive ————————————————————————— Cen
                  be satisfactory ——————————— reality description
                  negative ————————————————————————— Cons

(ii)   Comm ———————— be unsatisfactory ——————————— inflation
                  negative ————————————————————————— Lib
                  be satisfactory ——————————— reality description
                  negative ————————————————————————— SD

The number of permissible combinations of structure categories ought to have been described now. However, a party description can concern another party description. An example of this case is:

Lib: 'No, Mr. Prime Minister, it is impossible to assert anything other than that our proposals balance out.'

Here the acting unit declares that its policy is consistent and that another party, the Social Democrats, incorrectly asserts that this is not the case. Such an assertion has the following structure:

(8)   AU ——————————— va ———————————————————————— PDO$_1$
                  aur ————————————————————————— AUO
                  va ———————————————————————— PDO$_2$
                  aur ————————————————————————— AUO

Combinations of two party description objects can also occur in connection with social objects and acting unit objects. In these cases *either* the one party description can be related to the other party description, which is related to a social object or an acting unit object, *or* both party description objects can be related to a social object or an acting unit object. Actually these are only special variations of cases (5), (6), and (7) above. What we could call cases (9), (10), (11), and (12)

can be viewed as special cases of (5) and (6). Assertions of the following type can be regarded as a special case of (7):
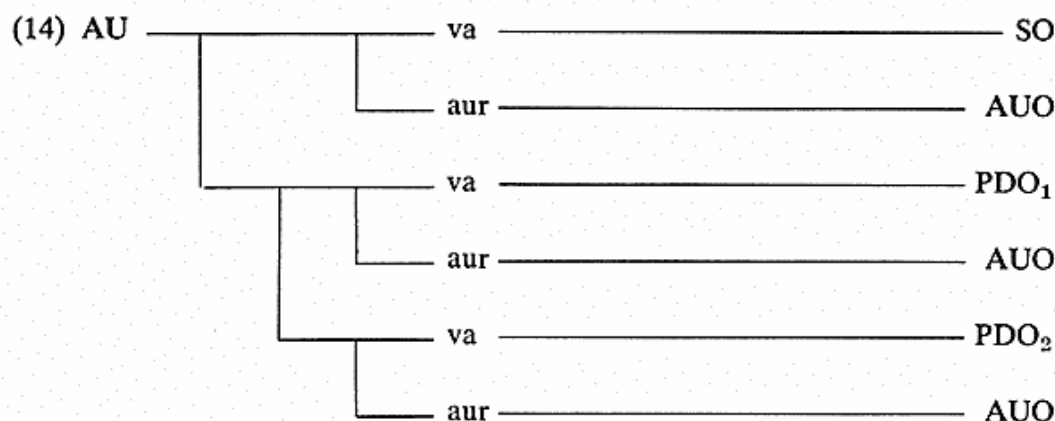
(i) Lib: 'For several years we have, despite the Social Democrats' negative attitude, proposed increased school construction, and our financial proposals provide funds to cover this.'

(ii) Cons: 'When the Prime Minister says that our tax reduction proposal, which of course the Social Democrats oppose, does not balance out, then he is going too far.'
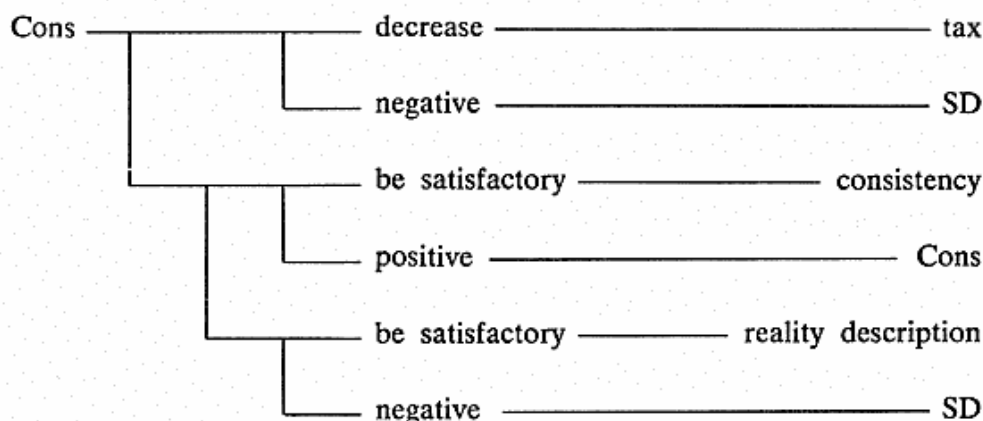
(13) AU

va		SO
aur		AUO
va		PDO_1
aur		AUO
va		PDO_2
aur		AUO
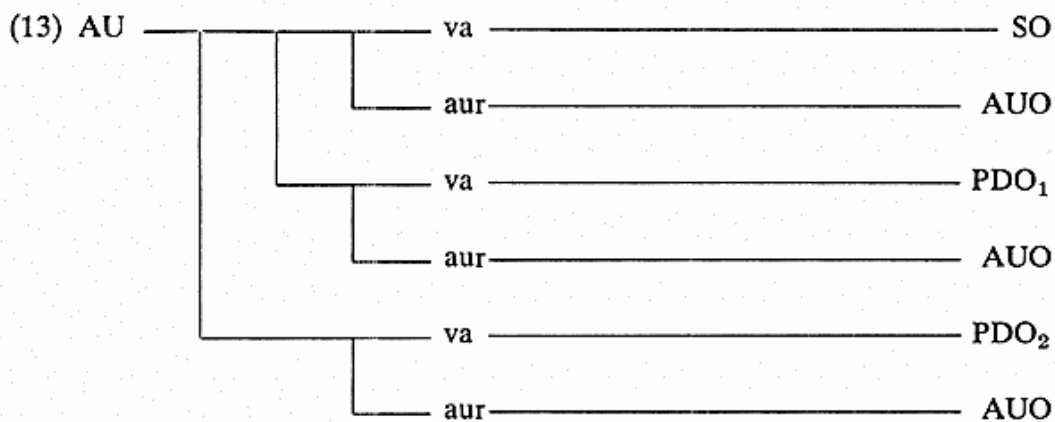
The coding of example (i) is:

Lib

increase	school construction
negative	SD
be satisfactory	continuity
positive	Lib
be satisfactory	consistency
positive	Lib
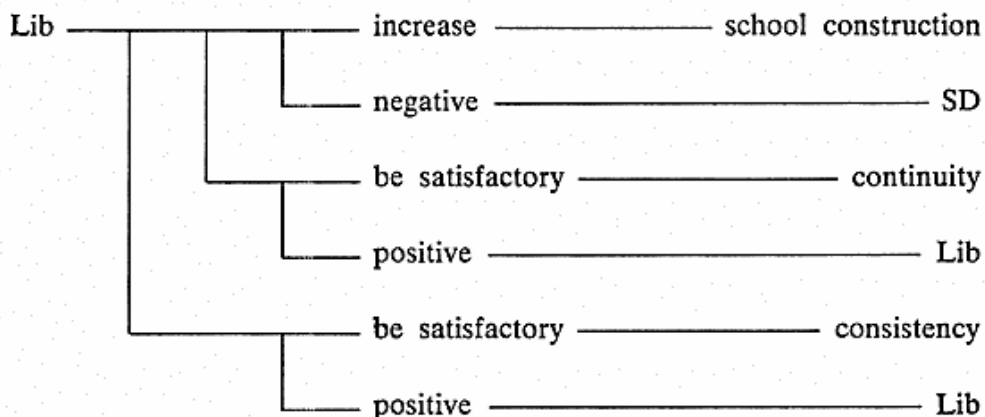
The assertion in example (ii) differs structurally from example (i) because one party description here is related to the other party description, which in turn refers to a social object.

(14) AU ─┬── va ──────────────── SO
         │   └── aur ─────────────── AUO
         └─┬── va ──────────────── PDO$_1$
           │   └── aur ─────────────── AUO
           └─┬── va ──────────────── PDO$_2$
                └── aur ─────────────── AUO

Recording:

Cons ─┬── decrease ──────────── tax
      │   └── negative ──────────── SD
      ├── be satisfactory ────────── consistency
      │   └── positive ──────────── Cons
      └── be satisfactory ──────── reality description
           └── negative ──────────── SD

In section 4 we discussed the structure categories we use to define the recording unit. In this section we have presented the number of permissible combinations of structure categories. As previously mentioned, each statement that can be recorded according to a permissible combination of content categories is called a basic unit. The basic unit constitutes the recording unit of our study for coding individual statements.

Reliability

The value of a study depends in part upon the reliability of the instruments of measurement employed. Reliability tests in content analysis can be used for various purposes: a) to test instruments of measurement during a preliminary stage of the investigation in an attempt to improve definitions and instructions, b) to make a final evaluation of the results of the study. In our investigation reliability tests have been conducted for both purposes.

It is generally true for content analysis that the probability of high reliability scores decreases when there is an increase in the number of alternatives to be

taken into consideration in the coding of each individual recording unit. The number of alternatives in turn is dependent on both the number of content variables and the number of content categories in the different content variables. In the case of our study the number of such alternatives in coding each individual basic unit is admittedly high. Scores approaching perfect reliability have therefore not been obtained. But the reliability concerning the instruments of measurement must be judged in relation to the necessity of precision in the results. In quantitative content analysis it does not seem that conclusions can be based on small differences between various categories. Thus one can tolerate a certain margin of error due to imperfect reliability concerning the instruments of measurement. How high the reliability ought to be is difficult to say. The reliability tests conducted, however, yield scores at a level normally considered acceptable. Reliability tests have been undertaken on several occasions, and the intercoder reliability for two coders in recording entire basic units has consistently ranged between 0.75 and 0.85.[11]

In judging reliability results from the presented téchnique, two circumstances ought to be taken into account.

In the first place, the intercoder reliability is actually somewhat higher than that indicated by the scores above. In computing the scores, we have included all cases of 1) non-agreement in decisions to record a basic unit at all, 2) non-agreement in decisions about recording in different content categories of the various structure categories, and 3) agreement in recording an entire basic unit. All conceivable cases of non-agreement have thus been included. In contrast, only agreement in recording a basic unit in various content categories has been included. If the coders have been in agreement about not recording a certain section of the text, this agreement has not been included in the scores. The reason is, of course, that taking this type of agreement into consideration requires that a measure of the recordable material be constructed. In our case this would mean that we measured the total number of statements in a text. In accordance with our definition of the recording unit, certain statements (encouragements to solve crossword puzzles, etc.), primarily in the brochure material, are not recorded.

In the second place, it has turned out that the lack of agreement between the coders does not appear systematically in particular content categories, but is evenly distributed among them. In view of the size of the material examined and the large number of content categories it can thus be expected that errors to some extent cancel one another out.

For the structure category verbal attribute it proved difficult from the very beginning to obtain acceptable reliability. But the instances of non-agreement do not affect the results to an appreciable degree, since they seldom concern the tendency of the parties' valuations of social objects. They pertain to cases when different verbal attributes yield similar meaning in relation to a social object (e.g. not change, preserve, not increase). It has still been considered essential to retain the set of verbal attributes partly in order to sharpen the coders' judgments about the party valuations of social objects, and partly because verbal attributes, which may have similar meaning in relation to a certain object, may have a different meaning

in relation to another (increasing or improving welfare and increasing or improving housing respectively).

Summary

A structure is usually defined as a set of elements and the relationships between these elements. The basic structure, which is discerned in the text with the aid of this content analysis technique, consists maximally of four elements and the relationships between them. The four elements comprise an acting unit and three types of objects: social object, acting unit object, and party description object. Two of the elements, acting unit object and party description object, however, can occur more than once in a basic structure. Basic structures correspond to assertions and valuations in the text.

Not all basic structures in the text are basic units. The recording of a basic unit requires that a relationship between an acting unit and at least one of the types of objects be expressed in the text. It is also necessary that the meaning of this relationship can be classified with the aid of one of the structure categories constructed for these relationships. The specific structure category used depends on the kind of object: verbal attribute is used for social and party description objects, and acting unit relationship for acting unit objects.

The other conceivable relationships in the basic structure, i.e. the relationships between the types of objects, are not employed as a criterion for recording. If the requirements for recording are met, even other elements and relationships occurring in the basic structure are recorded.

For the relationships between the types of objects, no structure categories have been devised; that is, the meaning of the relationships is not ascertained. This statement, however, must be modified somewhat in the case of the meaning of the relationship between an acting unit object on the one hand and a social object or a party description object on the other. In some cases the recording indirectly reflects the meaning of these relationships. This is true for primarily basic units where the acting unit relationship is positive (see example (ii) of case (4) above). But it is also true for certain basic units where the acting unit relationship is negative and simultaneously the verbal attribute is negated (see example (i) of case (4) above).

In many other instances, however, the meaning of these relationships is stated in the text but cannot be indirectly inferred from the recording. It thus appears quite possible to increase the structural similarity between a text and a recorded text by introducing structure categories for the relationships between an acting unit object and a social object or a party description object respectively. In this way one could investigate more exactly than is possible with the selected technique a particular party's description of another party's valuation of a social object and a party description object respectively – a question which we do not pose in our study.

For the relationship between a social object and a party description object, no structure category has been devised, nor can it be. The structure categories social

object and party description object are based on different analytical perspectives on the propaganda text. In the first perspective the text is regarded as composed of statements about various actual and conceivable social conditions (social objects), in the second perspective as composed of assertions about a party's credibility, descriptions of reality, etc. (party description objects). A statement can, of course, contain both types of objects, but any structural connection between them other than the party's description object being related to a certain social object cannot be construed from the text. In recording the relationship between social objects and party description objects, only the appearance of the objects in the same basic unit is thus noted.

6. Couplings between Basic Units

The portion of the content analysis technique discussed so far has dealt with the recording of the text into a number of structure categories, which in turn are divided into content categories. In a basic unit certain specific relationships existing between various structure categories are represented. In the propaganda, however, there are also relations between the content in basic units: the parties propose measures and designate their expected effect in an area. For instance, a party declares, 'We want to lower the rate of interest in order to improve the situation of small businessmen.' The example results in two basic units in the recording: 'Lower the rate of interest' and 'Improve the situation of small businessmen.' The two basic units are related to each other as measure-effect or means-goal. Relations of cause and effect are of a similar kind, e.g. 'The deterioration in the value of money has dealt a hard blow to the low-income groups.'

With the aid of the rules presented below, it is possible to record these relationships between various statements as well as the character of these relationships: what is means and what is goal. Of course, more than two statements can be related to one another in a 'chain'. This means that the content of a statement is an effect of a proposed measure and in turn has an effect in another area and therefore is both a goal and a means in a chain of relationships.

A means-goal relationship in the propaganda is established on the basis of relationships in the propaganda text. It is thus not the analyst's own view about the effect of a measure in an area that is decisive, but the propagandist's assertion about a means-goal relationship. It ought to be observed, however, that such assertions may have an identical causal meaning despite the fact that their verbal formulation may be somewhat different. The above-mentioned example 'We want to lower the rate of interest in order to improve the situation of small businessmen' is often expressed in the following way: 'We want to improve the situation of small businessmen. For this reason we propose a reduction in the rate of interest.' The meaning in these two examples is the same. The recording of the two relationships must therefore be identical.

Two statements may be related to each other as means and goal on one occasion but not necessarily on another. Compare the above example about a reduction in the rate of interest with 'Our party works for a lowering of the rate of interest, an improvement in the situation of small businessmen, etc.'

By focusing attention on means-goal relationships a more reliable basis for recording certain structure categories in the basic unit is obtained. In recording the basic unit the coder has to determine whether or not a party wishes a change in a particular social object. Such a valuation is often made explicitly by the parties: 'We cannot accept an increase in the rate of interest,' but in some instances the valuation is implicit: 'The rate of interest is going to be raised. This will worsen the situation of small businessmen.' A negative valuation of an increase in the rate of interest is made in the latter example via a negative valuation of its effect on small businessmen. The prerequisite for a negative valuation of raising the rate of interest is, of course, that the party does not declare that it wants to worsen the conditions of small businessmen. If the party were to make such a declaration, the valuation of an increase in the rate of interest would obviously have to be recorded as positive. By taking the means-goal relationship into consideration, it is possible to make the recording of verbal attributes more reliable than would be the case otherwise.

Furthermore, certain content categories in the structure category party description object are not always related to a single statement but may pertain to a relationship between statements. This is true for the category reality description 'Party X says that an increase in the rate of interest is unfair to small businessmen, but this is wrong.' Party X is said here to have made an incorrect reality description of the effect of an increase in the rate of interest. In order to record the party description, the relationship between the content in the two basic units must have been observed.

The following specifies rules for recording causal relationships of the kind which have been discussed above.

The term 'coupling' is used for the structure category that designates words expressing a causal relationship between two statements that have been recorded as basic units.

As an aid in the recording of couplings we have used a *standard formulation,*[12] which consists of three elements: the content in basic unit 1 /'leads to'/ the content in basic unit 2. The words 'leads to' function as a 'model expression' for a coupling. 'Leads to' is represented symbolically ' $\longrightarrow$ '.

When a coupling appears to exist in the text, the coder rephrases the text using the standard formulation. After this standardization, he asks himself if the reformulation has changed the meaning of the text. If this is not the case, a coupling between the basic units is recorded.

A prerequisite for standardization is that the two components of the causal relationship simultaneously are structured according to the rules for coding basic units.

The method can be illustrated by an example. A propaganda text reads:

Cons: 'What families need is a fair tax system.'

Standardization and recording of the pronouncement:

	Basic unit 1			Basic unit 2	
va	object	coupling	va	object	
introduce	fair tax system	———————→	improve	families	

The reformulation has not changed the meaning of the text.

The majority of the assertions about causal relations in the propaganda text can be reduced to this simple standard formulation. There are, however, two additional types of relationships between statements that are recorded as couplings, although the standard formulation does not fit as well.

Propaganda texts contain, in the first place, assertions whose meaning is that a certain condition does *not* lead to another. Most assertions of this type imply that a party rejects another party's assertion about a causal relation.

SD: 'State endeavors are portrayed (by the non-socialist parties) as a threat to personal freedom.'

SD: 'We do not believe (as the non-socialist parties) that the added-value tax is a suitable instrument in the struggle against inflation.'

In coding, cases of this type are distinguished by the negation of the verbal attribute in one of the basic units (see section 4 above). The examples are coded:

	1			2	
va	object	coupling	va	object	
improve	state endeavors	————→	not make worse	personal freedom	
not introduce	added-value tax	————→	decrease	inflation	

Secondly a party may valuate a certain social condition and, in connection with this, presents exemplifications.

Lib: 'The society of waiting lines *(kösamhället)* is a bitter reality. This is a society where there are hospitals ... But there are not hospitals for all those who need this service.'

In such cases a coupling is recorded between the exemplification and the assertion the exemplification is intended to illustrate. The exemplification constitutes the left-hand component, basic unit 1.

	1				2	
va		object	coupling	va		object
be unsatis-factory		hospitals	————→	be unsatis-factory		society of waiting lines
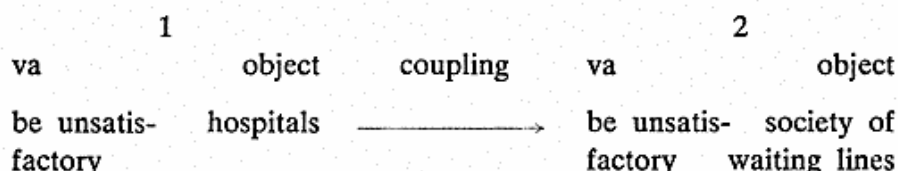
The standard formulation of the text is not completely unreasonable, but its meaning scarcely corresponds to the original formulation. The relationship between the statements is rather of a definitional than causal character. It is more in accord with the original formulation to view the 'society of waiting lines' as a phenomenon defined in terms of deficient conditions regarding various social utilities, here hospitals.

It must be acknowledged that the coupling in this case represents a relationship with a fairly weak causal meaning. On the other hand it is extremely difficult to draw a borderline between this case and cases with roughly the same language structure but without a pronounced definitional relationship between the assertions.

> Cons: 'We want to have thrift in public spending, among other things, reduced appropriations for the Swedish State Railways.'

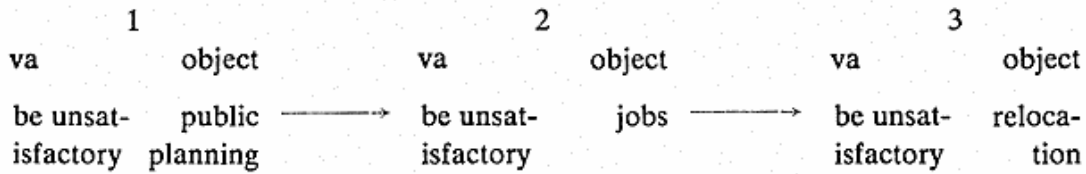|	1				2	
va		object	coupling	va		object
decrease		appropriations for Swedish State Railways	————→	improve		thrift in public spending
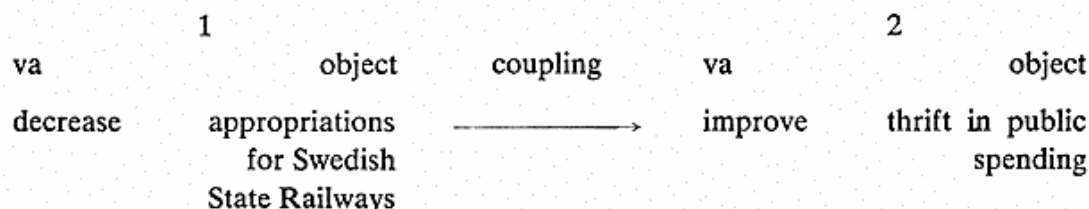
The standard formulation in this instance corresponds better to the original formulation, even though the content in basic unit 1 still can be viewed as an exemplification of the content in basic unit 2.

In the examples discussed so far each basic unit has only been affected by one coupling. It does happen, however, that several couplings concern the same basic unit. In principle, this does not entail any new problems. But let us present examples of three types of cases when a basic unit involves two couplings.

The first is when the content in a basic unit is presented as an effect of the content in a second and simultaneously as a cause of the content in a third.
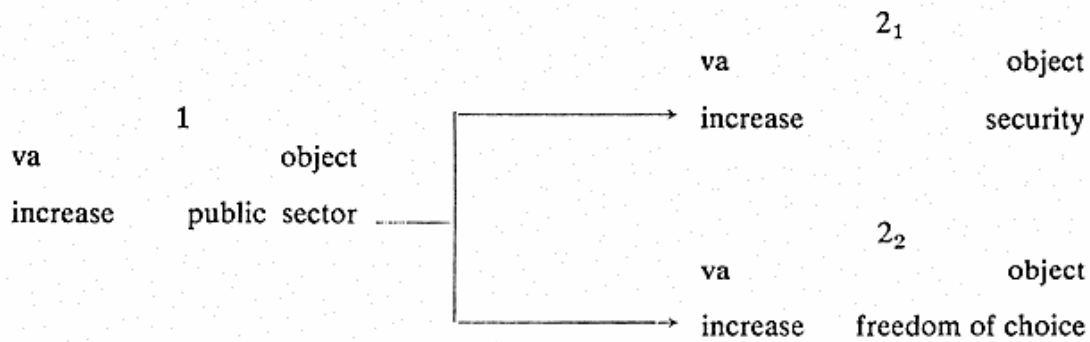
> Comm: '... when there is a lack of jobs in large parts of the country and people must move to other locations in order to get a job, this is due to the lack of public planning.'

	1			2			3	
va	object		va	object		va	object	
be unsat- isfactory	public planning	$\longrightarrow$	be unsat- isfactory	jobs	$\longrightarrow$	be unsat- isfactory	reloca- tion	

This may be called a 'chain' of couplings. Complexes of assertions may, of course, occur in the text which result in the recording of a chain of couplings with more than two links.
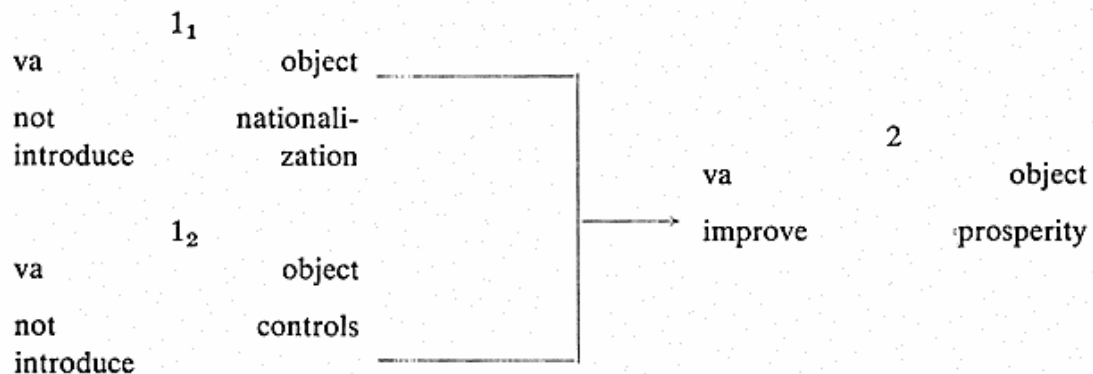
Secondly it occurs that the content in basic unit 1 is asserted to lead to the content in two basic units, 2_1 and 2_2.

    SD: 'An increased public sector is a way to greater security and expanded freedom of choice.'

$$2_1$$

	1			2_1	
va	object		va	object
increase	public sector	$\longrightarrow$	increase	security

	2_2	
va	object
increase	freedom of choice

    The third type of case is when the content in two basic units 1_1 and 1_2 is asserted to lead to the content in basic unit 2.

    Cen: 'Nationalization and controls do not create prosperity.'

	1_1			2	
va	object		va	object
not introduce	nationali- zation		improve	prosperity

	1_2	
va	object
not introduce	controls

    In both these latter types of cases one can easily imagine several parallel basic units

$$1_1 \ \& \ 1_2 \ \& \dots \& \ 1_n \ \longrightarrow \ 2$$

$$1 \ \longrightarrow \ 2_1 \ \& \ 2_2 \ \& \dots \& \ 2_n$$

as well as combinations of them

$$1_1 \ \& \ 1_2 \ \& \dots \& \ 1_n \ \longrightarrow \ 2_1 \ \& \ 2_2 \ \& \dots \& \ 2_n.$$

Finally, combinations of chains of couplings and parallel basic units occur. The general case of couplings can be written:

$$1_1 \ \& \ 1_2 \ \& \dots \& \ 1_n \ \longrightarrow \ 2_1 \ \& \ 2_2 \ \& \dots \& \ 2_n \ \longrightarrow$$
$$\dots \ \longrightarrow N_1 \ \& \ N_2 \ \& \dots \& \ N_n.$$

When content analysis is employed in studies involving social science theories it is, as indicated in section 2, in many cases necessary to study the co-occurrence of signs and in this connection to use a syntactic principle for recording co-occurrence. It also seems likely then that for certain analytical purposes it is necessary to study not only individual statements but also relationships between statements. The coupling technique presented here permits such a study of relationships between statements. The coupling technique has proved to be applicable in an extensive empirical investigation. It must, however, be underscored that the technique can surely be further developed and refined in many respects. In this context there arise several interesting problems, among which is the relationship between content analysis and philosophically oriented analysis of communication.[13]

Finally it ought to be pointed out that the coupling technique can provide a basis for quantitative studies of even relatively complicated problems in political science of the type: What goals do the parties declare themselves to be striving for? Do the interests of certain groups or do certain general social principles (e.g. increased production, equality) dominate? What measures do the parties propose to obtain these goals?

NOTES

1. Jeffery M. Paige, 'Letters from Jenny: An Approach to the Clinical Analysis of Personality Structure by Computer', in Philip J. Stone, Dexter C. Dunphy, Marshall S. Smith, Daniel M. Ogilvie, *et al., The General Inquirer: A Computer Approach to Content Analysis,* Cambridge, Mass.: MIT Press, 1966, pp. 431ff.
2. Julius Laffal, 'Contextual Similarities as a Basis for Inference', in George Gerbner, Ole R. Holsti, Klaus Krippendorff, William J. Paisley and Philip J. Stone, *The Analysis of Communication Content, Developments in Scientific Theories and Computer Techniques,* New York: John Wiley, 1969, pp. 159ff.
3. Charles E. Osgood, 'The Representational Model and Relevant Research Methods', in Ithiel de Sola Pool (ed.), *Trends in Content Analysis,* Urbana: University of Illinois Press, 1959, pp. 61f.

4. Charles E. Osgood, Sal Saporta and Jim C. Nunnally, 'Evaluative Assertion Analysis', *Litera 3* (1956), pp. 47ff.

5. See e.g. Robert C. North, Ole R. Holsti, M. George Zaninovich and Dina A. Zinnes, *Content Analysis, A Handbook with Applications for the Study of International Crisis*, Evanston, Ill.: Northwestern University Press, 1963, pp. 129ff; Ole R. Holsti, 'External Conflict and Internal Consensus: Sino-Soviet Case', in Stone, Dunphy, Smith, Ogilvie *et al., op.cit.*, pp. 343ff; Ole R. Holsti, 'A Computer Content Analysis Program for Analyzing Attitudes: The Measurement of Qualities and Performance', in Gerbner, Holsti, Krippendorff, Paisley and Stone, *op.cit.*, pp. 355ff.

6. Cf. the discussion on association models and discourse models in Klaus Krippendorff, 'Models of Messages: Three Prototypes', in Gerbner, Holsti, Krippendorff, Paisley and Stone, *op.cit.*, pp. 69ff.

7. Stone, Dunphy, Smith, Ogilvie *et al., op.cit.*, pp. 41f.

8. Hall's technique for analyzing dreams seems to make it possible to take structural characteristics into consideration. It scarcely needs to be pointed out that the technique does not bear any resemblance to the coupling analysis presented here. See Calvin S. Hall, 'Content Analysis of Dreams: Categories, Units and Norms', in Gerbner, Holst, Krippendorff, Paisley and Stone, *op.cit.*, p. 152.

9. The study for which this technique has been developed and used has received financial support from the Tri-Centennial Fund of the Bank of Sweden. As this was being written (December 1971) the processing of data from the investigation was in progress. The study is estimated to be completed in the autumn of 1972.

10. See also Gunnar Sjöblom, *Party Strategies in a Multiparty System*, Lund: Studentlitteratur, 1968, pp. 148ff.

11. The reliability scores have been computed according to the conventional formula:

$$\text{Reliability coefficient} = \frac{2\,M}{N_1 + N_2}$$

where M = the number of coding decisions where agreement occurs, and N = the number of coding decisions made by a coder.

12. Cf. the concept core formulation *(kjerneformulering)* in Svennik Høyer, *Samfunnsvitenskapelig tekstanalyse*, Oslo: Universitetsforlaget, 1966, p. 42.

13. A Swedish methodological study of the analysis of propaganda from 1961 discusses the relationships between statements, but from a different point of view than ours, viz. proceeding from a philosophically oriented analysis of communication. The authors of the study tentatively formulate four rules for recording such relations. These rules, disregarding significant differences in terminology, can be interpreted so that all four are compatible with the rules for the coupling analysis presented in this article. The correctness of this interpretation is difficult to determine since these rules do not seem to have been applied in any empirical investigation. See Joachim Israel and Björn Häggqvist, *Propaganda kring Genèvekonferensen 1959. En propagandaanalytisk metodstudie*, Stockholm: Militärpsykologiska institutet, 1961 (mimeo).