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# On the Integration of Quantitative and Qualitative Methodological Paradigms (Based on the Example of Content Analysis)

Norbert Groeben and Ruth Rustemeyer

## 1 The Metatheoretical Point of Departure: The Position of Content Analysis Between Monism and Dualism

### 1.1 Quantitative and Qualitative Methods as the Operational Level of Monism and Dualism

Within the field of psychology, it is possible to distinguish between two contrary concepts of science, or in the words of Prinz (1994, 3) between "two different scientific cultures" (cf. Snow 1964). The difference between them emerges very clearly in the respective canon of methods they accept and propagate. On the one hand we have the so-called quantitative methods based on the classical scientific model for which the experiment is postulated as the *via regia*; on the other, so-called qualitative methods have been developed along the lines of the arts and the humanities, which above all start from the idea that a human being is an organism that generates meaning or sense (cf. Groeben 1986; 1991). Here, the "generation of meaning or sense" is understood as the ability to produce signs and to communicate using these signs. It is certainly symptomatic that what is primarily mentioned as the explication of the "qualitative" method is the determination by the object that it presupposes. Here it becomes evident that the polarity between quantitative and qualitative methods is really only the operational level of the fundamental metatheoretical positions known as monism and dualism. In this context, the monistic position defines the attributes of science primarily resp. solely from the methodological point of view and thus consists of the central postulate according to which one and the same (scientific-experimental) methodology constitutes all disciplines that deserve the name of "science" (hence "monism"). By contrast, dualism starts from the central assumption that scientific methodology should be based on the specific object of study of the individual discipline, in which case a minimum distinction has to be made between the different object domains of "nature" and "culture". Consequently, there are also at least two different concepts of science, with distinct metatheoretical goals, (i.e. "dualism").

Now psychology happens to be a typical area where this controversy between the two basic concepts and orientations of science takes place, since its object, mankind, belongs to both fields - nature and culture. It is in fact so prototypical that the very distinction between monism and dualism actually had its roots in psychology, in 1894 in fact, in the form of Dilthey's "Ideen über eine beschreibende und zergliedernde Psychologie" (Reflexions on a Descriptive Versus an Analytical Psychology; cf. 1968/V). Although there is a relatively clear predominance of the

scientific-monistic position in the history of psychology in the 20th century, the dualist position has never quite disappeared and has remained a force in psychology - though at different levels of visibility. In parallel to this, there has always been a fierce controversy between the monistic and the dualistic orientation: from the diagnosis of a "Krise der Psychologie" (Crisis in Psychology) (Bühler 1927) via the various stages of the controversy between explanatory and interpretive (Verstehen) models of science (cf. Apel's historical systematization, 1979) right down to the realization that there is a "permanent crisis" (by Jüttemann 1991).

At first sight, these basic metatheoretical controversies seem relatively remote from research practice. However, the tension between the two "cultures of science" they express certainly does emerge also in the methodological dimension, which can be seen as the operational level of the fundamental metatheoretical conceptualizations and controversies. Thus, in parallel to the controversy about an adequate philosophy of science, we can also observe a tension between quantitative and qualitative research methods, reflecting two very different paradigms for the acquisition of knowledge: the subject-object paradigm on the one hand and the subject-subject paradigm on the other. The first of these implies the assumption that only the detached perspective of the "third person" as an observer produces information that can be called scientific; the second contains the central postulate that it is above all the ability to show sympathetic understanding (einführendes Verstehen), an intuitive grasp or reconstruction of the inner perspective of the (human) "object" that produces scientifically valuable data (Aschenbach 1992, 184). Here a distinction can still be made between the methodological phases of data collection and analysis. In this respect, the quantitative approach implies the claim of using standardized procedures in collecting data (by using questionnaires, observation, experiments), whereas the qualitative approach refrains from standardization entirely or in part (cf. the narrative interview, participant observation, the biographical method, and so on). In the case of data analysis - and this is the derivation of the names of the two different orientations - the focus, on the one hand, is on quantitative processing (descriptive and inferential statistics), whereas, on the other, it is on interpretive and dialogue-based, hermeneutical processing (cf. Aschenbach 1992, 185; Scheele 1992).

As to the relationship between quantitative and qualitative methodological paradigms, in principle, three metatheoretical positions have emerged from recent discussion:

- The mutual exclusiveness of the two approaches: This position insists on the dichotomy between monism and dualism, but tries to overcome the "unfortunate tendency to one-sided theoretical imperialism of various kinds" (Graumann 1991, 5) whereby one's own position had always been described as the only significant and useful one. One reason for these permanently "crisis-ridden" controversies was the repeated attempt to lay down a single, uniform orientation for the whole of psychology. According to this premise, a solution can be seen in accepting the mutual exclusiveness of the two methodological approaches and thus, logically, in splitting psychology into two disciplines: one being scientific-nomothetic and the other hermeneutical-idiographic, with the latter being more closely related to the social and cultural sciences (Prinz 1994, 5).

- Pluralism of methods: However, the fact that man as the object of psychology belongs both to the sphere of nature and to that of culture may also give logical justification to the maintenance of psychology as a unified discipline that at the same time allows a pluralistic use of methods. The justification here is that it is only through this kind of pluralism of methods that the variety and complexity of the psyche can be covered. This expresses a fundamental conviction that (in psychology) there is not and can never be any such thing as a single method that does justice to its object; and this conviction is seen as the central prerequisite for a nonreductionist psychology (Graumann 1991, 11).

- Integration of methods: However, the disadvantage of this kind of pluralism is that nonetheless individual researchers continue to believe that the methodological approach they happen to prefer (and master) is the most meaningful and correct one, and so forth. In this way, no real link is established between the two orientations, and thus there is no multiple-method coverage of the complex subject of psychology. In principle, this is also true of the application of the two methodological paradigms to different areas of psychology, e.g. the use of the quantitative (nomological) approach in particular for fundamental research and the qualitative (idiographic) approach especially for applied research with practical relevance (Prinz 1994). This kind of "additive link" is not genuine integration in the sense of an equilibrium between and a synthesis of, different (and specifically qualitative and quantitative) methodological target ideas.

This type of balanced synthesis of methodological standards taken from different scientific traditions is the guiding principle behind an integrated approach, which we will demonstrate here constructively using content analysis as a prototypical example. Content analysis proves well-suited for this task because its very point of departure is the objective dimension of man's ability "to generate sense and meaning" with which this essay opened. The main objects of content analysis are human communication processes, which are described as being "the essential field of examination of the social sciences" (Lisch and Kriz 1978, 29). However, the problem of providing a systematic-intersubjective description of these communication processes is not to be underestimated. As the psychology of text processing has shown in the last three decades, the process of understanding texts not only consists in decoding the linguistic information they contain, but this information is also connected to the linguistic and world knowledge the recipient possesses, so that the resulting product of understanding is always a merging of text-generated and recipient-generated information (i.e., of bottom-up and top-down processes: Frederiksen 1977; cf. also Bock 1978; Ballstaedt et al. 1981; Groeben 1982). Thus, in the end, content analysis is a way of systematizing the normal, everyday understanding of texts in terms of two defining goals: on the one hand, in terms of content, to achieve an overview of the text's meaning that reduces its complexity and on the other, in terms of method, to guarantee intersubjective agreement (by eliminating the dangers of distortion).

## 1.2 The History of Content Analysis and its Position Between Hermeneutics and Empiricism

This synthesis of substantive and methodological goals is also reflected in the history of content analysis, which started to develop primarily as an analysis of political propaganda (beginning with Lasswell 1927) (with special emphasis on the 1940s and 1950s: cf. the overview given by Lamnek 1989, 171ff.; Lisch and Kriz 1978, 15ff.; Merten 1983, 34ff.). Starting from mass communication, journalism, and political science, content analysis then went on to acquire a considerable reputation in sociology, educational science, and not least in psychology, as shown by the two constituent conferences, in 1941 at the University of Chicago (Wapels 1941) and in 1955 in Montecello (cf. Pool 1959). Lasswell's classic formulation: "Who says what in what channel to whom with what effect?" (Lasswell 1948) makes it clear that this attempt at systematization of everyday understanding is always subject to two opposing tendencies: a tendency toward intersubjective systematization (as an approximate means of achieving "objectivity") is counterbalanced by the attempt to draw rather extensive (pragmatic) conclusions or inferences about the participants in communication in order to make social-scientific findings of the greatest possible relevance. Here, too, in principle, there is a parallel to everyday communication, in which it is not only (linguistic) information (contained in the communication

process) that is received, but in which such information is also "understood" as indicative of characteristics referring to individuals and situations - and here this "understanding" clearly consists in conclusions and inferences. Now, the scientific systematization of this understanding is quite naturally very interested indeed in "objectifying" such conclusions, since the formulation and testing of (inferential) hypotheses is one of the most important goals of the scientific enterprise (as a system of explanation and prognosis) (cf. Breuer 1990; Prim and Tilmann 1973).

However, the whole question revolves around the extent to which such conclusions can be conceptualized and systematized as part of content analysis - or whether that is asking too much of this "method of understanding". This problem of whether to choose a narrower or a broader conceptualization of content analysis is also reflected in the definitions of it that have been proposed so far. An example of a narrow concept of content analysis that primarily concentrates on a discerning (*verstehende*) description of meaning is surely to be seen in Früh's definition (1989, 23): "content analysis is an empirical method for the systematic and intersubjectively reconstructible description of content-based and formal characteristics of communication." In contrast to this, the explication given by Mayntz et al. (1974, 151) represents the broad line of interpretation which regards content analysis as a method that "identifies and describes the linguistic characteristics of a text objectively and systematically, in order to draw conclusions about non-linguistic characteristics of people and social aggregates" (cf. Lamnek 1989, 167; also Merten 1983, 23ff.). Between these two extreme poles there is a continuum of widely differing proposals for a definition, all of which nonetheless do see content analysis as a link between hermeneutics and the empirical sciences (cf. Rustemeyer 1992, 23) or rather as "a connecting link between qualitative and quantitative paradigms" (Lange and Willenberg 1989, 178). Obviously understanding (*Verstehen*) is also the central methodical procedure in the hermeneutical sciences, even if in a less (or rather different) systematic form than in content analysis. For hermeneutics, the so-called hermeneutical circle is the central methodological concept, which does not actually describe a logical type of circularity as much as it does a pragmatic circuit (Lamnek 1988, 65ff.). This circuit refers, on the one hand, to the relationship between level of expectation and text comprehension, and on the other, to the relationship between individual elements and overall meaning, for which hermeneutics has - in various ways - developed a process-based feedback loop involving such processes as mutual enabling, deepening and further specification (cf. Betti 1967; Coreth 1969; Danner 1979; summary in Lamnek 1988, 68ff.; Mayring 1990, 27ff.). In the history of the field of text analysis, the hermeneutical interpretation of literary texts plays a very prominent role, and here the "analytical description of the text and its discerning interpretation ... represent an inseparable unity" (Früh 1989, 59). The biggest methodological difference between this and the (falsification-oriented) empirical paradigm is to be seen in the fact that here an "interpretation that is held to be subjectively correct ... is formulated, and then a search is made for as much evidence as possible to confirm it" (*ibid.*, 58; cf. also Groeben and Landwehr 1991, 146f.). A version of the so-called qualitative social science paradigm that is relatively close to this method of hermeneutical understanding can be seen in "objective hermeneutics" (cf. Oevermann et al. 1979; 1983; for a discussion of it in this context, see, for example, Lamnek 1989, 213ff.).

On the other hand, taking into account its systematic approach, content analysis is closer to the methods of the empirical sciences. Here, as a rule, linear sequences for proceeding are determined that are (to be) implemented in the same way by all possible (competent) researchers. This does not exclude circular multiple runs of any given procedure, for which once again independence from the (individual) research subject is the main target criterion. Behind this, there is the idea of measuring as an ideal, by means of which empirically established relationships (as observable qualities of reality) are to be transformed into a data structure that represents a ho-

momorphic "reproduction" of these relationships (cf. Früh 1989, 23ff.; Merten 1983, 91ff.). This does not necessarily imply a measurement at the ordinal- or interval-scale level, but (as, for example, in content analysis) certainly permits a purely categorical classification (e.g., of aspects of meaning at the level of the nominal scale). After all, this also applies in the same way to established observation systems, such as the Bales scale, which is used by researchers to classify interaction within group structures in relation to their constructiveness and destructiveness (cf. Bales 1972). As Groeben (1986, 145ff.) has made clear in a differentiated discussion, such scales are only considered to be "pure observation of behavior" because the interpretive components that are certainly present here have recourse to universally shared aspects of meaning (so that this recourse - especially in a behaviourist-type methodology - went unnoticed for a long time). Seen from this perspective, classical observation methods in empirical science are certainly not characterized by a complete exclusion of aspects of meaning. The difference between hermeneutical and empirical methods is to be seen much more in the complexity of the thematic perspectives of meaning as well as of the resulting systematic quality with which the method of understanding "reproduces" these meanings. In the case of empirical methods of observation, in this respect we are dealing with the standardized diagnosis of meanings realized through communication (which represent a manifestation of universal dimensions of meaning). Contrary to this, at its point of departure, hermeneutical interpretation is a subjective explication of aesthetic or pragmatic potential meanings (whereby the concept of potentiality describes a deep structure, which in principle leads to both individual and also inconclusive reconstructions). Content analysis stands between these two poles and at a comparably basic level of abstraction can be described as an intersubjective reconstruction of aspects of meaning in communication, although the potentiality aspect also points to the inclusion of deep structural dimensions the description of which (as communicable aspects of meaning) is in principle indicated as being conclusive, namely, in terms of an intersubjective, systematic way of proceeding. This status of content analysis, at the point of intersection between these two contrary scientific traditions (the hermeneutical and the empirical one), is also reflected in the history of its own inception. For here we find two extremely different, concrete expressions of method that have become known as "quantitative" as opposed to "qualitative" content analysis and which respectively draw their background arguments more from the empirical or the hermeneutical paradigm.

## 2 Prototypes for Systematizing Understanding

### 2.1 Classical "Quantitative" Content Analysis: Narrow Inferences Within Understanding in the Form of a Fixed Canon of Strict Rules

Today, the name and the concept of what is usually called "quantitative" content analysis can be traced back to Berelson's definition (1952, 18): "Content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (cf. also Früh 1989, 23; Lamnek 1989, 180; Mayring 1990, 11). Under the "content of communication", Berelson understands "that body of meanings through symbols (verbal, musical, pictorial, plastic, gestural) which makes up the communication itself" (Berelson 1952, 13). The focal elements of this approach are then designated by the terms "objective", "systematic", "quantitative", and "manifest". Specifically describing the content of communication as "manifest" explicitly excludes all inferences over and beyond the respective content of the signs (cf. also Merten 1983, 55); hence, even in the semantic (or respectively the syntactic) dimension

of the relevant communication content this implies a relatively far-reaching limitation to what is directly stated, to the "surface structure" of communication. In the course of time, this exclusion of "latent" meaning and content has led to a controversy with the advocates of so-called "qualitative" content analysis (see below). However, for Berelson's classical approach, this limitation to manifest communication content is mainly to be seen as a consequence, which should make the implementation of the central methodological criteria "objectivity, systematics, and quantification" possible. Here "objectivity" is understood as the aforementioned (cf. 1.1) inter-subjective testability and agreement (cf. Lamnek 1989, 18ff.) that are to be guaranteed by the systematic nature of the content analysis approach. In principle, this systematic approach involves dividing up the text to be analyzed into individual parts, with regard to which it is then easier and more reliable (on the basis of intersubjective agreement) to ascertain whether they contain certain (theoretically defined) aspects of meaning or not. The basic principle of the content analysis approach thus consists in "systematically inspecting the individual parts of a text to see whether, and if so, how they can be allocated to certain predefined aspects or categories of meaning" (Rustemeyer 1992, 13). Hence, the two most important methodological problems of content analysis involve the determination of the sections of text to be categorized (the problem of agreeing on the text units) and the explication of the thematic aspects of meaning in a so-called system of categories.

In relation to these units, classical content analysis distinguishes between the recording unit, the unit of analysis, and the context unit: the "recording unit" is taken to mean the selection of those texts that are to be included in the respective content analysis. For instance, if the frequency of stereotyped attitudes (prejudices) against women in science fiction dime novels is to be investigated, the population of all possible texts consists of all science fiction novels or stories that have so far been produced as dime novels. In the light of the recording unit, it then has to be decided which concrete texts should be selected as the text (corpus) for the respective content analysis; this is therefore a problem of random sample selection for which the usual models used in the methodological theories of the social sciences, such as random selection, stratified and quota selection, and so on can be used (cf. Rust 1981, 93ff.; Lisch and Kriz 1978, 59ff.; Merten 1983, 280ff.). The "unit of analysis" or "coding unit" describes the breakdown of the text to be analyzed into individual parts that can then later be subsumed under the respective (explicated) categories of meaning. Depending on the question, these units of analysis can be determined either according to a more formal or a more content-oriented approach (cf. Lamnek 1989, 181f.; Rustemeyer 1992, 74ff.): examples of formally defined units of analysis would be words, sentences, sections of text, and so forth; units defined according to content would be symbols, values/value judgements, topics (change of), ideas, and so on (cf. Rust 1981, 107ff.). As a rule, the "context unit" is understood to mean the longer section of text (as compared to the "unit of analysis") to which the coders can and should have recourse when allocating the concrete analysis units to the respective categories, in order to avoid errors of understanding. For instance, when the (more formal) sentence is chosen as the "unit of analysis", you usually cannot tell from the individual sentence whether it is meant ironically or not; the context unit then indicates the longer section of text that should be considered in order to decide this question (and thus disambiguate the leeway for interpretation that quite naturally always exists in connection with text analysis; cf. Schlögell 1989, 254; Holsti 1969; Früh 1989, 110).

However, as is generally agreed, the real core of a content analysis is the system of categories in which the relevant dimensions or aspects of meaning are explicitly and specifically established. The optimal case of theory-directed research here certainly involves deriving the relevant perspectives of meaning from a theoretical question or hypothesis in a deductive manner (cf. Rustemeyer 1992, 43ff.); however, there is a fuzzy transition here to explorative studies that are

mainly characterized by the inductive discovery of hypotheses, so that quite often we find meaningful combinations of the deductive and inductive generation of hypotheses (*ibid.*, 50ff.). The decisive factor is that the definition of the respective categories should be regarded and properly structured as an operationalization of theoretical questions or hypotheses as well as of the main variables they contain (*ibid.*, 62ff.; cf. also Früh 1989, 80ff.; Merten 1983, 215ff.). It has proved valuable to use three steps for practical implementation here, i.e., naming/defining the category, explication/elaboration (especially of the limits of categories), and positive as well as negative examples (Rustemeyer 1992, 93ff.). Here it can also be necessary to take into account different levels of abstraction in the dimensions and aspects of meaning by introducing super- or subcategories (cf. Rustemeyer 1992, 100ff.).

Quantification as a characteristic in this context means that the intersubjective agreement between various coders in allocating the individual sections of text (units of analysis) to the thematic aspects of meaning (categories) is calculated in quantitative terms (cf. Rustemeyer 1992, 114ff.; Lisch and Kriz 1978, 88ff.). This coefficient of agreement makes it possible to assess the usefulness of the system of categories that has been developed and, if necessary, to improve on it in steps providing greater precision. However, within the classical concepts (developed by Berelson and others) quantification above all also means that the results of the process of categorization have to be summed up and processed in quantitative terms according to the theoretical question or hypothesis and move towards an "overall description of the meaning(s) of the text" (Rustemeyer 1992, 21ff.): this begins with simple frequency analyses (for instance, a frequency analysis on how often which themes are referred to in the text corpus), proceeds to contingency analyses that weigh up the relative connections existing between certain themes (e.g., how often a concrete prejudice against a certain minority is connected with which political attitude), and advances finally to more complex forms of field-of-meaning, symbol, and evaluation analysis (cf. Lisch and Kriz 1978, 127ff.; Rust 1981, 141ff.; Merten 1983, 185ff.).

Now actually this quantification is really only the consequence and manifestation of the decisive characteristic of the systematic approach that it logically grows out of. This systematic approach is characterized by the standardized course of investigation briefly described here (determination of units, explication of categories, coding, and so on) (cf. Früh 1989, 100ff.). The flexibility of content analysis is to be seen in the fact that, depending on the question and the text corpus to be analyzed, a specific system of categories has to be developed; but apart from this flexibility, the systematic procedure described here was designed as a constant application of rules in the classical approach to content analysis. That is also the reason why it was recently possible to try and devise an algorithmic elaboration for these rules for certain units of analysis, possible categories, and so on. This elaboration leads to models of computer-assisted content analysis, the discussion of which would go beyond the scope (and space limitations) of this essay (here, see Lisch and Kriz 1978, 105ff.; Merten 1983, 334ff.; Lissmann 1989, 241ff.).

Thus, from today's point of view, the characteristics of objectivity, systematics, and quantification in Berelson's classical definition can be subsumed under the overall heading of "strictness of rules". Moreover, the term "manifest content" is no longer optimal by today's standards. After all, the psychology of text processing in connection with the problem of context discussed above makes it absolutely clear that the classical concept of content analysis cannot involve concentrating on the linguistic "surface" in the sense of what is directly or literally expressed. Obviously, so-called quantitative content analysis (e.g. as in the case of indirect figurative speech acts) also involves the "depiction" of the supposed meaning (as in the example of irony above). As the psychology of text processing has proved, in principle there is no such thing as an inference-free understanding of the text (see 1.1 above); naturally this also applies to

the classical concept of content analysis. Consequently, we should get away from the term "manifest content", which, as has been mentioned, above all means the exclusion of broader inferences as to the author of the text, its recipient, and the communication situation (cf. Merten 1983, 55f.). At the most, what is involved is the scope of the inferences implied when categorizing meanings; here, classical content analysis according to Berelson and his successors certainly represents the (rather extreme) end of the spectrum where "decoding" is as free from inferences as possible. In our view, so-called "quantitative content analysis" according to Berelson and his successors - when considered in today's terms - is more adequately described as a concept involving strict rules of narrow inferences.

## 2.2 The Opposite End of the Spectrum: "Qualitative Content Analysis" - Broad Inferences with Adaptive Use of Rules

In the end, this dimension of inferences (and the range they cover) is also at the center of the controversy between so-called quantitative and qualitative content analysis. Kracauer, who first formulated the term and concept of qualitative content analysis as a criticism of the dominant "quantitative" version in 1952, uses the opposition between "manifest" and "latent" meaning: qualitative content analysis above all tries to concentrate on "latent" aspects of meaning (as expressed in inferences about the author, communication, situation, recipient, and so forth), since the units of analysis are not determined systematically and the inquiry is not limited to predetermined aspects and perspectives of a question, but should make possible the discovery of hidden elements of communication (in a more holistic, interpretative way of proceeding) which are then only grouped together in categories as a result of the analysis (cf. Rust 1981, 187ff.). This countervailing concept of "qualitative" content analysis was reconstructed and refined in the ensuing period under the heading of very different dimensional characteristics (cf. Mayring 1990, 16ff.), such as the scale level of the basic measurement (nominal versus ordinal/interval scale), the number of analyzed texts (individual case versus representative random sample), the status of the hypothesis (heuristics versus testing of hypotheses), and so on. All these aspects are in the final analysis only to be seen as consequences of the central clash of "latent versus manifest", which, as explained, primarily represents the scope of inferences made in processing the text. So in this respect the assessment is justified that so-called qualitative content analysis is the polar opposite to so-called quantitative content analysis, representing a form of analytical procedure that makes the broadest possible inferences.

However, so little is actually defined here in terms of methodological systematics (and this also applies to Kracauer's explication cited above) that it is possible to think up a whole range of different variants to fill out this concept. Hence, Lamnek (1989, 192) distinguishes between another two (sub)poles in qualitative content analysis: one form that differs from so-called quantitative analysis because of the lack of a quantitative assessment, though its determination of units of analysis and categories of meaning is comparable. By contrast, in the other form of qualitative content analysis, suitable perspectives of meaning (appropriate for the respective text) are first developed in the framework of the analysis, without any prior determination of units of analysis and categories. He includes Mayring's (1990) concept of qualitative content analysis in the first category; to be precise, Mayring above all propagates increasing the range of inclusion of context (including other texts and not just parts of the text to be analyzed), but apart from that, his approach shows a relatively marked similarity to the structure of "quantitative" content analysis. However, this structural similarity to narrow inferences and strict rules is not to be found in the second type of approach subsumed by Lamnek under the

overall heading of qualitative content analysis. According to Lamnek, this type is characterized by the "openness" of its approach, according to which "the material to be interpreted is not 'treated' using theoretical categories which are developed beforehand by the researcher and are thus extrinsic to the text" but which "grow out of the material itself as an interpretation" (Lamnek 1989, 194). By way of example, Lamnek mentions "objective hermeneutics" as developed by Oevermann et al. (1979; 1983), which represents a deep hermeneutical approach that is largely equivalent to the "hermeneutical circle" (see section 1.2 above) in its structural orientation. From the methodological point of view, the conclusion can be drawn here that the first type of "qualitative content analysis" according to Lamnek is above all characterized by broad inferences in the explication of categories (moving towards "latent" aspects of meaning in the text), whereas the second type is characterized by a premium on openness, understood as variability of rules (i.e., the avoidance of prior determination as regards units of analysis, systems of categories, and so on). If the intention is to consider "qualitative" content analysis (including in its historical sense, as in Kracauer; see above) as the polar opposite to the classical concept of quantitative content analysis with its narrow inferences and strict rules, then the most useful complementary explication of its characteristics would seem to us to be found in the terms "broad inferences" and "rule variability".

However, we are not dealing here with contradictory opposites, at least with regard to narrow or broad inferences, but in fact more with the two endpoints of a continuum. For inferences are unavoidable in understanding a text; thus the only significant question is that of the optimum or rather sufficiently justified "scope" of these inferences. Accordingly the clash between "manifest and latent contents" does not describe mutually exclusive alternatives as much as a polarization between interpretive emphases that practically call out for integration. For this very reason, the past few decades have witnessed repeated arguments (for) doing just that (Bessler 1972, 64f.; Rust 1981, 187ff.; Lisch and Kriz 1978, 46f.; Groeben 1987, 3ff.; Lamnek 1988, 229ff.; Früh 1989, 36f.; Huber 1989, 34ff; Rustemeyer 1992, 144). Even so, the controversy between "quantitative" and "qualitative" content analysis is continuously being revived (e.g., see the Educational Researcher from 1983 to 1988 as well as the special issue of *Unterrichtswissenschaft* (The Science of Teaching): cf. Huber 1989, 35; Lange and Willenberg 1989, 173). In the final analysis, this is probably connected with the whole dimension of rule strictness versus rule variability, where there certainly are not any comparable continuous transitions linking the two extreme poles; consequently, integration or rather optimization is clearly more difficult. At all events, the persistent tendency of the controversy to flare up again and again indicates its connectedness to more fundamental conflicts about methodological goals, which, for this reason, we will (briefly) analyze in the following section.

### 3 (Methodological) Goal Criteria for a Constructive Approach to Content Analysis: Adjustment of Rules with Explicit Elaboration of Inferences

#### 3.1 Methodological Stringency Versus Adjustment to the Object as Target Criteria for the Two Prototypes of Content Analysis?

The deeper clash underlying both the polarity between strict and variable rules and the conflict between narrow and broad inferences can be seen in the general tension between two different preferences or relative emphases, which is not limited to content analysis, but also exists between so-called quantitative and qualitative social research (Lamnek 1988; 1989), and even between the monistic and dualistic concepts of science (cf. Groeben 1986). What is at stake here is whether the respective methodological concept places more emphasis on systematics (and thus on the certainty of the evidence) or on the appropriate adjustment to the object (and thus on the content-based substantiality of the evidence). The "qualitative paradigm" (Lamnek 1988, 21ff.) strongly advocates the position that "appropriateness with regard to the object" should be "taken more seriously than systematics" (Mayring 1990, 102), which implies criticism of the classical "quantitative" paradigm in this way. The predominance of method in the orientation of the latter is criticized as a "restriction of experience" (Lamnek 1988, 8) that runs the risk of mistaking "epiphenomena for the thing itself" (ibid., 9), of "objectivizing" the human subject in an inadmissible manner (ibid., 14f.) and thus creating a (hierarchically structured) "distance between the researcher and his object" (as the human "object" of research; ibid., 18). By contrast, the position advocating the prevalence of the (human) object argues for openness, both in the sense of transparency with the probands and in terms of flexibility concerning the research setting and the methods to be used (ibid., 22, 27ff.). It is argued that this would lead to a position where research as a communicative process can do justice to mankind's reflectivity as the object of knowledge (ibid., 23ff.). Here, the programmatic goal is "adjusting the method to the object and not vice versa" (ibid., 97).

However, turning these preferences into a dichotomy is surely unproductive since and insofar as this would entail sacrificing all methodical systematization (and thus the certainty of the evidence to a large extent). To our mind, this in any case occurs whenever operationalizations (e.g., also the explication of categories) are completely rejected, as within the qualitative paradigm (and in content analysis), "because the direction of attack is wrong: not from theory via operationalization to empiricism but from social reality to theory" (Lamnek 1988, 140); or when a "concept of emerging objectivity" is used, according to which "objectivity arises by means of the analysis, ... out of the subjectivity of the interacting parties" (ibid., 173), without its genesis being methodically explicated and systematically secured. In this case the classical scientific critique is justified in its claim that this largely leaves unanswered how intersubjectivity is to be guaranteed and how hypotheses are to be tested as to their validity in the process of research (Lamnek 1988, 123). It follows from this that neither by adopting a rigidly methodical approach nor by giving exaggerated prevalence to the object we are put in a position to generate both a high degree of substantial and reliable knowledge. What must be aimed at is genuine interaction between methods and the object (cf. in general, Groeben 1986, 25ff.; specifically on content analysis, Groeben 1987, 13ff.; Huber 1989, 40ff.). This means, for instance, that "openness" in the sense of transparency and (the justified) explication (of both theoretical and methodological postulates) is meaningful, warranted and desirable; however, this does not imply "openness" in

the sense of unlimited variability of procedure, which would virtually exclude any methodical systematic approach and thus preclude the possibility of reaching results of general validity. In recourse to the two dimensions previously established as central to content analysis, namely narrow versus broad inference and rule strictness ("constancy") versus rule variability, the following guiding idea emerges for achieving the envisioned interaction between object and methods: on the level of inferences, those inferences established when working out a system of categories should be elaborated under all circumstances and, above all, also be justified in relation to the broad context of conclusions that is aimed at; on the level of methodical rules, the essential target of systematics should be adhered to, but an adjustment in the sense of a mutual fit between the object and the system of rules should be aimed at, i.e., an "adjustment of rules" in the twofold sense of the *genitivus subjectivus* and *objectivus* should be attempted as an adjustment of the rules to the object as well as an unavoidable adjustment of the object to the rules. An approach to content analysis that is capable of overcoming the absurd alternative between prevalence given to method and prevalence given to the object will, in general terms, be characterized by an adjustment of rules with explication of the unavoidable inferences. In the following section, we shall at least try to sketch in the detailed implications of this with regard to classical criteria, such as objectivity, reliability, validity, and so on.

### 3.2 Adjustment of Rules: Objectivity, Reliability, Transparency, and Flexibility

It is certainly true that the goal of rule adjustment already starts with the explication of the initial hypothesis during the methodical procedures involved in content analysis. As already elaborated above (2.1), arriving at a "deductively" derived hypothesis on the basis of explanations that have previously been tested is the ideal case for theory-driven research (including research in the field of content analysis). However, prior inductive exploratory studies are also quite legitimate if there are no such confirmed explanations, and this especially includes the combination of deductive and inductive formulation of the hypotheses, in order to obtain a composition of dimensions and perspectives that are as relevant as possible in relation to the respective field of objects (e.g., texts) (for greater detail, see Rustemeyer 1992, 43, 55ff.). This kind of combination of deductive and inductive heuristics gives clear expression to the flexibility of the whole procedure, and at this particular point but not only there, this very flexibility naturally requires "disclosing the procedure" (Früh 1989, 38) so that the respective concrete process is reconstructible and testable. In general terms it should be noted here that in principle (compared with some of the misleading wording contained in the "qualitative paradigm") "transparency" is not (only) to be understood as reconstructibility as a means of conveying plausibility but must mean testability in the sense of the possibility to control the methodological procedure.

As a rule this also implies that objectivity and/or reliability must be obtained according to the classical concept of explicit testing of intersubjectivity, using several categorizing processes and their (quantifying) evaluation in relation to agreement. In so doing, first of all, a basic distinction can be made between intracoder and intercoder reliability (cf. Bessler 1972, 72f.), where intracoder reliability is checked by repeating the categorizing process with the same coder, and intercoder reliability is tested by calculating the agreement between the results of classification in categories by (at least) two coders. The coefficients of agreement (see also 2.1 above) discussed and suggested in the literature on content analysis are usually based on the testing of intercoder reliability (cf. Lisch and Kriz 1978, 84ff.; Merten 1983, 303ff.; Rust 1981, 116ff.). Due to the methodical structure of the process and since it is only possible in the case of

content analysis to test reliability by means of this intersubjectivity of the classification in categories, here, the methodological evaluation criteria for objectivity and reliability virtually coincide, which is why the relevant agreement coefficients are described as a test both of objectivity and of reliability. Seen from the viewpoint of rule adjustment, here it is above all the discussion of a practical problem that is relevant, one which has largely been dealt with unfairly in the literature so far, i.e., that of finding a match between the determination of the units of analysis and the explication of categories. For instance, the units of analysis must be big and complex enough to allow certain (more far-reaching) inferences to be made (see below), but should not be so comprehensive that no sufficient intercoder agreement can be obtained (for greater detail, see Rustemeyer 1992, 83ff.). In connection with the general idea of flexibility as a goal, in complex content analyses this maxim quite often leads to a situation in which specific units ought to be determined for individual hypotheses or parts of the same as well as for certain questions; this, too, can be seen as a manifestation of rule adjustment which has been given too little attention in the literature on methodology so far (cf. an approach to this in Rustemeyer 1992, 87ff.).

This understanding of flexibility and rule adjustment, however, presupposes that a system of categories is required and elaborated as the essential core of a content analysis; such a system operationalizes the respective central thematic aspects of meaning. Doing without such an elaboration of a system of categories "because this manner of proceeding can possibly" lead "to abbreviations and exclusions" (Volkmer 1989, 136) implies striving to obtain an overall interpretation (of the comprehensive potential meaning of a text), which is really more symptomatic of hermeneutical interpretation (see above, under 1.2) but to our mind is not compatible with a systematic-empirical content analysis. After all, in the framework of empirical methodology, it is accepted as a basic, even almost an axiomatic tenet that there is no method that is able to cover all characteristics of the particular object in question; any systematic-methodical procedure will always have to emphasize certain features of an object in order to "portray" it as faithfully as possible (cf. Groeben 1986, 49ff.). In the light of this prerequisite, a system of categories for content analysis is not an avoidable limitation but only the explicit systematization of the focus on characteristic features that is unavoidable anyway. However, one can and should handle the concrete methodological evaluation criteria established to assess this systematic approach with more flexibility than is the case for the classical "strict rule" view of content analysis. The latter normally requires that, alongside theoretical deduction and precision, the individual categories have to be mutually exclusive (the criterion of exclusion or rather disjunction) and that the whole system of categories should be both exhaustive and saturated (cf. Lisch and Kriz 1978, 70ff.; Rust 1981, 112ff.; Merten 1983, 95ff.). This means that a single unit of analysis may only be subsumed under one and not under several categories, that all parts of the text have to be covered by the system of categories ("exhaustiveness"), and also that all categories must be filled up with any relevant units of analysis ("saturation"). As far as the last two criteria go, it is relatively easy to fulfil the requirement of "exhaustiveness" by introducing a residual category, even if, obviously, the latter should not be too big (Rustemeyer 1992, 104ff.). The criterion of saturation is not very useful, especially when employing content analysis to test theory-driven hypotheses, because this can always result in categories established by deduction which are perhaps not (yet) saturated by using a certain corpus of texts (*ibid.*). Nor should the criterion of the exclusivity of categories be mechanically maintained in the light of flexible rule adjustment, because in the case of certain questions or possible hypotheses it is quite probable that individual units of analysis contain different aspects of meaning (*ibid.*, 107ff.).

Therefore, in the case of a flexible approach to content analysis, at the most, the criterion of exclusivity can and should only be upheld with regard to specific hypotheses. At least the partial dropping of the criterion of exclusivity also makes it possible to include more complex

structures of meaning, the linkage of aspects of meaning, and so on, in the methodical and systematic procedures of content analysis - however, of course, only to the extent that in this way the intersubjectivity of the method (e.g., in the shape of inter-coder reliability) is not lost. This combination of a liberalization of the requirement of exclusivity and the maintenance of the intersubjectivity criterion thus demonstrates with the greatest possible clarity the kind of rule adjustment suggested here as a way of optimizing the methodical systematic approach and (sense-oriented) relevance and substantiality in content analysis.

### 3.3 Explication of Inferences: Exemplarity and Validity

As was elucidated in general terms above, the target idea of explicating inferences certainly does embrace the concept that broader inferences which go beyond the simply (adequate) decoding of the linguistic information contained in a text are significant and desirable - however, only to the extent that they can be tied in with a systematic-methodical way of proceeding (in the sense of rule adjustment). This quite adequately includes dimensions of meaning which would be described as "latent" by the "qualitative paradigm", as has been pointed out on several occasions in the quantity-quality controversy (cf. Groeben 1987, 5ff.; Huber 1989, 39ff.; see 2.2 above). These include, for instance, the classical analysis of symbols (cf. Lisch and Kriz 1978, 21f.) as well as evaluation analysis (cf. Thonhauser 1989, 73ff.), which can be used (directly or possibly also indirectly) to cover the attitudes or judgments expressed in a text. Above and beyond this, these broader inferences can also exist in a critical evaluation on the part of the subject of cognition, e.g., along the lines of a content analysis that criticizes ideology (Ritsert 1972), where certain linguistic-semantic or pragmatic characteristics of texts are classified and then criticized as indicators, for instance, of dogmatic or ideological thinking (cf. examples of both in Vorderer and Groeben 1987). In particular, this inclusion of possible evaluations, either as an object (i.e., evaluations on the part of the producer of the text), or as criticism on the part of the researcher do represent an approximation of the "qualitative paradigm" in that the representative nature of random samples which was vital in the first phase of mass communication research loses some of its importance. Instead of this, what is much more at stake here is exemplarity, which means having recourse to prototypical or rather ideally typical cases (cf. Lamnek 1988, 173ff. and, in its basic argument, the early book of Holzkamp 1964).

In relation to the validity of these broader inferences, in the case of classical symbol and evaluation analysis, the crucial problem is the adequate linguistically immanent explication and justification of the conclusions (in the sense of the semantics of meaning), which is to be secured by the accuracy, appropriateness, exhaustiveness, and so on of the definition of categories. Hence, in empirical-scientific methodology, the aspect of so-called content validity was thus characterized and described in concrete terms in connection with content analysis by Krippendorff (1980) as "semantic validity" (for which he also suggested specific testing methods, ranging from expert ratings right down to the construction of hypothetical sections of text). Especially the prospect of criticism (starting from the subject of cognition) does, however, clearly point to the fuzzy transition towards broader inferences, particularly in the direction of the author's characteristics. When bringing out the attitudes and evaluations contained in the text, these can actually usually be attributed to the respective author as personal traits of the text producer; when the researcher is critically assessing certain acts of cognition, attitudes, and so forth in the framework, say, of a content analysis that criticizes ideology, this (attributional) implication is in fact virtually inevitable - at least as long as certain situational aspects of communication are not mentioned as being more important conditions. In both cases, both that of an

inference about the author's traits and about the conditions of the setting, it is necessary to give the most explicit possible designation and (theoretical) derivation of these inferences; then the next step quite consistently implies testing their validity, for which purpose aspects of "semantic validity" are no longer sufficient. To achieve this, the concepts of criterion validity and construct validity developed in general empirical-scientific methodology should then be used accordingly.

In the case of criterion validity, the conclusions derived from indicators in the text and then deduced about the author's and the setting's characteristics need to be validated by means of an explicit further step in the testing process, using a suitable external criterion; in so doing, the possibilities of simultaneous ("concurrent") or rather predictive validity already developed can be used. For instance, if you draw conclusions from certain indicators in the text about dogmatism, this can then be confirmed by means of an explicit test on the dogmatic attitude of the authors of the text (e.g., by using a questionnaire on dogmatism) (cf. Günther 1987); or it can be predicted on the basis of certain "dogmatizing" situational conditions (such as, say, that of a minority position that can be observed empirically) and from the particularly frequent occurrence of the relevant linguistic indicators (*ibid.*). And just as such approaches with regard to criterion validation can be used for the explicit testing of inferences that go beyond the text in content analysis, in the same way this also applies to the concept of construct validation (Lisch and Kriz 1978, 101ff.; Merten 1983, 309ff.). Construct validation implies integration in a nomological network, i.e., the linking up with other hypotheses or laws that have already been tested empirically and have (relatively speaking) been proved right. Thus, for instance, in reader research in developmental psychology it is considered to be a well-established result when girls (especially with regard to their processing of literary texts) at junior high school are psychologically ahead of boys. Now if Lange and Willenberg (1989) do a content analysis on the interpretative text work of pupils on preselected literary texts (on which they had to answer open questions and imagine sequels to the story, and so on) in terms of the quality of their understanding of the text, by this means it is possible to test the validity of the system of categories developed for this purpose by comparing and validating the construct on the basis of the known difference in the understanding competence of girls as opposed to boys (*ibid.*, 185).

There is an even greater necessity for explicit testing of criterion validation or construct validation by further research steps with regard to inferences about the recipient, i.e., especially about the effects of texts; this necessity has been cogently argued for again and again (cf. Früh 1989, 45ff.; Rust 1981, 67ff.) and also proved empirically (cf. the summary by Groeben and Vorderer 1988, 230ff.). For the cognitive constructiveness of the reader, whether male or female, discussed above means that the reception of the text and its effect in fact do not only depend on the content of the text or on the "message" the text contains and therefore cannot be (sufficiently) clarified just by describing this message (cf. Vorderer and Groeben 1987; Rustemeyer 1992, 140ff.). "In order to test the effects" at all events "a content analysis of the text must be followed by the questioning of the reader, listener, or viewer, which then reveals the reaction to the text" (Rust 1981, 68). The "message" contained in a text and reconstructed by using content analysis can therefore only be understood and characterized as a "potential for effect" (Groeben and Vorderer 1988, 222ff.) on the basis of which it is certainly possible to draw hypothetical conclusions about imaginable effects, but which need to be tested by using additional research steps in the field of criterion or construct validation. Thus, as much as content analysis gains in the way of theoretical "breadth" or "depth" by means of conclusions about the author, situation or recipient (including possible effects on the latter), to the same extent, it has to be remembered that the validity of these inferences needs to be secured through additional validation steps (cf. Früh 1989, 49f.; Groeben and Vorderer 1988, 231ff.; Rustemeyer 1992, 140ff.). So within a nondichotomizing concept of content analysis, explicating inferences not

only means the explicit derivation and formulation of these theoretical conclusions but also an additional explicit testing of their validity. To circumvent the danger of overinterpretation in content analysis, we advise that the definition should not be too wide, i.e., should concentrate on the "depiction" of this "message", as does the explication given by Rustemeyer (1992, 13), for instance: "the intersubjective allocation of certain parts of a text to certain aspects of meaning aiming at a systematic synoptic description of the meaning of a text." This in no way alters the fact that as a rule this "meaning" will also include inferences about communicators, situations, and effects, which, however, need to be validated in the way discussed above.

#### 4 On the Link Between Methodical Systematics and Object Adjustment as a Way of Reconciling the Quantitative and the Qualitative Paradigm

The vital part of any constructive approach to content analysis thus consists in the area of intersection between so-called quantitative and qualitative content analysis, an area that constitutes the optimization of methodical systematization and a justified breadth of inferences. To our mind this area of intersection is the core meaning of a constructive interpretation of "content analysis", also and most especially as a link between hermeneutical and empirical scientific structures. This means that the extreme positions in the quantity-quality controversy and thus what is usually understood by "quantitative" versus "qualitative" content analysis are, at most, the marginal aspects of meaning of the concept of "content analysis"; these extreme positions can (still) be called "content analysis"; however, they do not make (full) use of the main capacity of the content-analysis method. On the one hand, this applies to the limitation to manifest dimensions of meaning (i.e., the narrow-inference version of method), which for certainly more than just historical reasons should continue to be termed "content analysis". However, this should be done with the awareness that by this means the actual capacity of the procedure is not fully realized, since overemphasis on the factor of method precludes the possibility of interaction between method and object. In a complementary manner, this also applies to the other end of the spectrum, to so-called qualitative content analysis, in which in principle only subjective processing perspectives are brought in and used heuristically because of the complete variability of rules; again, this procedure can also (still) be called "content analysis", in full awareness of the fact, however, that here, in the effort to obtain maximum appropriateness vis-à-vis the object, the factor of methodical systematization is insufficiently represented.

Contrary to this, the above-mentioned core meaning of the concept of "content analysis" as a system of rule adjustment with elaborating inferences can achieve optimum interaction between the object and the methods, a position from which it is also possible to reject the unjustified (mutual) accusations raised in the name of the two contrary methodological paradigms. With regard to the "quantitative" paradigm, we are dealing here with the devaluation of content analysis in comparison with standardized observation methods (such as questionnaires). Here, the position of Lisch and Kriz (1978, 31) should be given emphatic support, which states that such a standardization of interview and questionnaire certainly does not convey greater methodological dignity: "The very term categories of answers ... makes it clear that greater standardization of questionnaires only place the share content analysis has in the research process at its beginning ... To this extent the increasing preference given to standardized interviews and questionnaires is not, as is thought, a step towards a more scientific approach, but rather

(through the substitution of an explicit content analysis by an implicit content analysis done beforehand) amounts to a loss of objectivity and testability in the interest of having less work to do and using available computer programs in the framework of traditional data processing." However, the devaluation of quantitative analysis by the "qualitative" paradigm should be rejected just as clearly. As has been argued on several occasions (cf. Lisch and Kriz 1978, 48ff.; Früh 1989, 31ff.; also see section 2.1 above) quantitative analysis is only a (positive) manifestation of the systematic explication and use of the respective content analytical system of categories. The content-based, theoretical (and if you like, the "qualitative") substance of a given concrete content-analytical procedure (and thus its object appropriateness) is to be seen in the elaboration and justification of inferences and the application of the system of categories in the form of rule adjustment. Once "substantial" data have been collected in this way, no subsequent quantitative analysis can in any way change the substance of these data (and above all cannot result in any reductions); on the contrary, this facilitates achieving the goal mentioned at the beginning of this paper, i.e., avoiding qualitative distortion and making it possible to obtain a quantitative synopsis. To this extent (and especially for the central area of rule adjustment with explicative inferences in content analysis), the (quantitative) statistical models that have been developed and introduced up until now are entirely usable. And so this link between quantitative and qualitative characteristics in content analysis can serve as a constructive example for a synthesis between qualitative and quantitative target criteria, which can, and of course, must be worked out in concrete terms for other methods and methodological paradigms.

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