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Can generally valid sentences be formed in qualitative research, or what kind of a theory can be formed in qualitative research?

Summary: During its application qualitative research has, from the very beginning, met sharp criticism, especially from the supporters of traditional, quantitative methodology. It has been reproached, above all, for being non-scientific. Why? With their concept and nature of researching qualitative researchers have not met the basic postulates of classical methodology: meeting the demand for the independence of a subject and an object of research, proving the validity of a hypothesis given in advance, meeting the demand for generalisation, which could not be met by researching isolated cases and meeting the criteria of objectivity, reliability and validity. This paper primarily focuses on the question of the possibility of generalising qualitative research results, which directly raises the question of the criteria of quality in qualitative research, primarily the criterion of internal and external validity.

Key words: generalisation, qualitative methodology, grounded theory, validity

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Introduction

Some of the key questions confronting qualitative research and its methodology are: Can the results and procedures of qualitative research projects be generalised? Are they transferable to different relations, institutions or groups? To answer these questions an explanation of the term 'generalisation' and the purpose of generalising and transferring scientific results should be given.

The Question of Generalising Scientific Results

Generalisation expands the validity of statements from a limited area to a wider area. Two kinds of statements are known to science: those that derive from experience and generalised ones. The former witness what has happened in a particular place and time and mainly report unique and individual phenomena. The latter express what (may) happen in certain conditions. The research process should explicitly distinguish between experience (statements derived from experience) and generalisation (generalised statements). Generalisation is a step in the process of forming a theory.

While citing the reasons for generalisation, G. Glück (1987) stands by the viewpoint of scientific research as seen by traditional, quantitative science based on positivism. He claims that generalisation in the research process is so necessary that it actually needs no foundations. The claim is corroborated by the fact that without generalisation scientists would only be able to form individualised historical sentences, i.e. sentences, which would only be valid at a particular and unique historical moment and only for particular individuals. Thus a judgment on the transferability of such sentences on contemporary as well as future situations would be passed on to the readers of scientific works, who would be forced to draw the generalisation themselves. However, in that case the reader's generalisations would be far less adequate and applicable since they are not as big an expert

in the research field as the author. This is why generalisation should be part of each and every research work (ibid., p. 7). Generalisation is, according to Glück, a 'necessary level of statement forming'. The generalisation process should (and must) be processed in empirical and normative statements which can take place in a quantitative as well as a qualitative form (ibid., p. 9).

Having in mind social research or research in the education field, the results of experiments and other empirical researches are often made for the purpose of generalisation to a wider population. At the same time, there is always a doubt about such generalisations which is connected to an investigation of the reasonability of making conclusions or judgements, going beyond given information, connecting patterns to populations. Generalisation is therefore clearly connected to validity. It is one of the mechanisms through which statements regarding the truth can be justified. The classical theory of generalisation understands validity as a logical property of the research process, which vouches for our ability to make conclusions through the pieces of information or results acquired from a study.

Regarding the applicability of the criterion of validity in qualitative research, it can be established that the immediate principle the validity rests on, i.e. causative relations between phenomena, is, after all, transferable to qualitative researches, but the ways of proving such causality are essentially different.

B. Mesec claims that internal validity comes into focus when causal relations are being determined as authentically as possible, i.e., when there is no doubt that certain events are going to be followed by certain other events. The more persuasive pieces of information, which support the conclusion of a causal relation, are gathered, the more valid a research is (Mesec 1998, p. 145). Mesec therefore understands validity through supporting the principle of causality, while the path to the derivation and support of cause-effect relations lies within the phase of gathering the data, which should reveal the causality as being indisputably possible, as even the 'most favourable result is scientifically worthless unless a procedure, by which it was accomplished, hasn't been thoroughly documented' (Mayring 2002, p. 144). Qualitative researches are essentially different from laboratory, experimental and empirically-analytical researches. They are based on intensive and unrestrictive interactions between researchers and those being researched. The gathering of information is a complex phase in which several conditions are simultaneously studied, and which cannot and should not be isolated. Reduced or even omitted standardisation above all regarding data gathering instruments affect the objectivity, reliability and internal validity of a research if understood within the framework of quantitative methodology.

The possibilities of generalising results of qualitative researches are limited according to the standards of quantitative methodology. Generalisations are carried out very cautiously and are closely connected to gathered data. This paper limits itself to the question of possibility of forming generalised, theoretical statements based on the results of qualitative researches. At the same time, its starting point is based on the methodology of grounded theory where the beginning of a research process deals with themes, suppositions and empirical examples. A circular process, which includes inductive and deductive procedures,

generates a theory, which is contextually bound. The generalising power of the theory is limited as it is only valid in a certain field, types of contexts, interactions and situations.

If we closely examine the way the criterion of validity has formed within the boundaries of quantitative methodology, we see that regarding its basic elements it is inconsistent with the principles of qualitative research, primarily as regards 'remoteness' from the everyday research situation, the elimination of researched variables as well as limiting the interaction between researchers and those being researched. The concept of validity is opposed to qualitative research characteristics relative to the principles of openness, the continuous development of a researched item and the principle of contextually bonded theory. A question which emerges at this point is in what sense and in what way can the principle of validity (internal and external) be transferred to a qualitative research? The transfer is certainly possible on the level of establishing and analysing causal relations, but not in the sense of classical induction which is based on the same principle as internal validity, but in the sense of a concept of the unified interpretation of results. The latter contains a definition of views which have provoked, influenced and modified a certain phenomenon or consequently emerge from a certain phenomenon. The second view of the transferability of the validity concept to a qualitative research aims at generalisation. Within qualitative methodology, this aim is modified and bound to the fact that theories which arise from qualitative research results possess the nature of locality, which results from the social and cultural particularities of studied persons or phenomena. In any case, even such contextually bound theories generated with the help of qualitative researches need an investigation of the limits of validity. It can be observed that, in its basic logics, the concept of validity remains a criterion of quality even in qualitative research, bearing in mind that its principles and standards need to be modified.

The question which should at all times remain under close scrutiny is whether during a research process we really comprehend and perceive exactly what we have planned to study, and whether the results are authentic and credible. The paths towards answers to these questions differ due to methodological, epistemological and ontological diversity compared to traditional, empirical i.e. quantitative research.

A basic and long-standing dilemma within qualitative research in general is that this methodology requires focusing on a very small number of theatres, with a frequently existing desire to form conclusions which would have wider applicability and would also be valid for those particular cases. Regarding focusing on one particular view of complexity within consistent limitations of time and space, it is possible to construct a way of considering this view which enables us to form a theory. Focusing on the different views of such complexity can lead to the development of completely different and apparently even contradictory theories and it is possible that other researchers might develop equally comprehensible and clear yet different theories, although they all focused on the same particular view. This is very important as regards the formation of a theory in action research. Even there a lot of people with different previous theoretical matrixes

co-operate together. From these separate views and separate stories (theories) general statements should be reached using the inductive approach.

One way of thinking about a theory is that a theory operates in a simplifying way and thus limits the focus in such a way that a story can be told, a story which is connected to other stories that have used similar theories, and a story which builds beyond these theories. However, it does not mean that one can make data match a certain theory. Systematic work on the data must be monitored through the whole analysis of the data in order to enable all the data to be encompassed in the theory and for the deviations to be studied in full (Walford 2001, p. 149).

It has frequently been emphasised that strict generalisation in the statistical sense regarding qualitative research is impossible, for one case (or a small number of cases) simply cannot be an adequate sample for making conclusions for wider populations such as schools or classes. Qualitative studies can achieve transferability through a precise description. If authors present a thorough and detailed description of a particular context which they have been studying, there is a possibility of readers deciding about the applicability of the conclusions to their own or other situations. In order to be able to judge whether certain findings from a study (for example) in one school are applicable to another, it is necessary to be familiar with or know about the first school as well as the second one.

The basic idea which should always be borne in mind during a process of developing a theory is that the theory should be multi-layered, that it should represent coherent connections between phenomena in order to be comprehensive and relevant to a series of crucial questions and problems which emerge from a researched structure. It happens quite frequently that these problems and questions are not defined in a unified way. Participants in research often take practical problems and issues which concern them in everyday life for granted. They therefore might fail to detect and understand latent patterns which take place under the surface until they are conceptually identified. The task of a theory is to provide a theoretical explanation based on the reality of the lives of people acting in a certain complex system.

In the continuation of the research process a research problem is formed which needs to be articulated and defined as a basic variable; in other words, to take on the function of a central phenomenon around which an integration process is taking place. The central phenomenon represents a crucial conjunction in composing all components of a theory. Once a phenomenon is appointed and defined as a central category, then follows the connecting of other categories with the central one with the help of a paradigmatic model of relations between the categories, by therefore defining the conditions, context, strategies and consequences of these connections (Mesec 1998).

At the same time, we must not forget the procedure of coding which represents an operation where the data are first dissected, conceptualised and assembled in a new way. It is a central process where a theory is being formed out of sheer data, where they are dissected, checked, compared, conceptualised and categorised. Any further analysis and communication cannot be possible without this primary basic analytical step. During this process the researcher

faces his own and others' suppositions, while the analysis of them leads to new discoveries. Two analytical procedures bear basic importance; the first regarding comparisons, the second regarding the formation of questions (Glaser and Strauss 1967, Strauss and Corbin 1998).

A theory is formed on the basis of data. What kind of material will be used as the data as well as the way it will be collected in qualitative research depends on the researched field and possibilities at one's disposal. Procedures of observation, interview, gathering documentary material, minutes of various meetings, audio and video materials, questionnaires, opinion polls and many others can be used. It is important not to stick to just one type of data gathering but to apply a combination of various types. Strauss and Corbin remind us of the simultaneous use of memos and diagrams (Strauss and Corbin 1990, p. 198). Memos represent a written form of our abstract deliberations on the data; diagrams are a graphical representation of the visual connections and relations between the concepts. The basic technical rule in qualitative analysis, according to Glaser and Strauss, is 'to stop and memo' which means that each and every reasonable thought should be instantly noted down. The thought is therefore prevented from going into oblivion and, at the same time, an additional timeframe is added for thinking over and reshaping. The forming of memos and diagrams should start at the beginning of a research project and continue until drawing up the final report where theoretical conclusions are presented. Working notes and diagrams help a researcher achieve analytical distance from the data, therefore redirecting the focus to analytical reflections where it further travels back to the data to ground abstract notions in reality (ibid.).

Each type of coding (open, axial and selective) makes memos and diagrams look different mainly because of the different purposes of coding. Open coding puts us in front of a puzzle, with a start to be located, often with difficulties. When reading through the memos which are mostly inconsistent and scattered through the entire data one can reach new conceptual characteristics, although an entirely clear structure and significance still cannot be seen. In time, mostly by the application of comparisons and the forming of questions, memos reach some kind of form (ibid.)

Axial coding is a procedure where parts of a puzzle start fitting in with each other. Each category and subcategory has an exact place and must match the others in order to form a whole. The purpose of axial coding is to stimulate and examine relations among categories and their subcategories following the principle of a paradigmatic model, and at the same time search for different characteristics and dimensions of the categories. Memos help us put the pieces together. Searching for real links is always connected to questions regarding the conditions, causal and contextual, which are essential for a certain phenomenon. Which strategic and routine actions are in progress, and with which consequences? What happens if the conditions change? Strauss and Corbin warn that 'The paradigm features and relationships don't carry color coded flags that wave at you from the pages of your fieldnotes. You have to search for those and recognize them for what they are' (ibid. p. 212).

Gradually, during the process of processing data become ever clearer in their meaning which allows us to reach, by selective coding, the final step of analysis: the integration of concepts around the central category as well as the introduction of categories which require further analysis and processing.

The web of interconnected terms, concepts and phenomena tied around the central category is what the researcher in a qualitative research can successfully use to form a theory. Defining subordinate connections, linking categories and subcategories, examining the influence of one variable on another one by a paradigmatic model definitely represent crucial contributions which are offered to researchers by the grounded theory methodology.

Grounded theory has been chosen and more closely presented due to its ability to offer procedures which are fairly verifiable and comparable to quantitative procedures, and are in a way able to substitute it. These procedures (i.e. coding and categorising) present and process data in a way which can be compared to presenting and processing numbers in quantitative researches (Mesec 1998). That is why these procedures in forming a theory are close to the criteria of the corresponding theory of truth where accordance between a sentence and reality is involved. Empirical researching involves a comparison between the structure of a sentence and the structure of pieces of information, which are reached by an empirical research of the reality. The goal of science lies in a correspondence between reality and theoretical cognitions which can be achieved by adequate methodological operations.

However, here lies a question of in what way or how can one define codes and categories in the process of coding. The identification of codes, their naming and further interpretation is left up to the arbitrariness of the researcher. This is the place where consensualism receives its role and meaning, according to which 'truth is in accordance with researchers' (Ule 2004, p. 230). Therefore, it is about truth in the pragmatic context of consensualism. The criteria of defining central terms and codes based on gathered empirical material may be, regarding the methodology of grounded theory**,** an object of consensus between researchers or, in the spirit of action research projects, between researchers and those being researched.

Main steps or focal points in forming a theory through qualitative research

The basic guidelines for forming a theory in the form of a final research report were given by the founders of grounded theory, A. Strauss and J. Corbin (1998). At some points such a derivation can also be found with B. Mesec (1998).

- Defining a leading idea of a story. To achieve the linking together into a whole, the central issue of a story (theory) should first be formed and somehow bound to it. Why? Sometimes it happens that amongst all the data which all seem important and worthy of attention it is difficult to isolate one of them and expose it as the leading one. Nevertheless, this step is inevitable

for it represents the conceptualisation of all the others around the central phenomena of the research.

- Designing a leading pattern of a story which should be worked out in a few sentences in order to obtain a basic descriptive oversight of the story.
- Conceptualisation is built upon a description. It is necessary as well as useful to use a description first and write down our thoughts and a basic skeleton of the story. A step further is represented by the conceptualisation or analysis of the story. A name for a basic phenomenon is first found by checking our list of categories and choosing the one which is abstract enough to contain everything described in the story. This later becomes a central (core) category. It frequently happens that the researcher is unable to define a single category which would in fact cover the whole phenomenon. However, it is necessary to find a name for the central phenomenon (to define its central category).

  Even when the researcher hesitates to choose between two or more phenomena according to their importance it is necessary to choose one because this is the only way to achieve a condensed integration and the development of categories as supposed by the grounded theory methodology. When they identify the central phenomenon as well as the category, all the other phenomena and categories can be identified as being supportive and supplementary.
- Determining the characteristics and dimensions of the central (core) category. As with all the other categories, the central category should also be developed according to its characteristics. When identified, other categories can in the next step be linked to the central one, giving them roles as subsidiary (supportive, supplementary) ones.

  It has been said that choosing the central phenomenon is crucial for research. The central phenomenon lies in the middle of the integration process. It represents a main conjunction in putting together all the components of the theory. Once defined and appointed for the role of the central category, linking other categories to it, with the help of paradigmatic relation between categories, i.e. with defining conditions, the context, strategies and consequences of such connections can follow.
- *Systemising and consolidating the connections.* This procedure requires a combination of inductive and deductive thinking, when one constantly shifts between asking questions, forming hypotheses and comparisons. After identifying all the differences within a context the systematic grouping of categories according to their characteristics identified as a sample can begin. This grouping proceeds on the basis of making questions and forming comparisons. Thus the data are connected not only on a higher, conceptual level, but also on the level of their characteristics and dimensions, which represents a basis for forming a theory. Another central process in the methodology of grounded theory should be mentioned:
- *theoretical sampling*, whereby upon analytical foundations 'an analyst decides on analytic grounds what data to collect next and where to find them.

> The basic question in theoretical sampling is: what groups or sub-groups of populations, events, activities does one turn to next in data collection. And for what theoretical purpose? So this process of data collection is controlled by the emerging theory. It involves, of course, much calculation and imagination on the part of the analyst. When done well, this analytical operation pays very high dividends because it moves the theory along quickly and efficiently' (Strauss 1996, pp. 38-39). Regarding grounded theory, any group can in principle be compared contrary to the traditional comparative method where groups which are too different are eliminated as being 'non-comparable' (Glaser and Strauss 1967, p. 50). It appears that this is one of the advantages of the methodology of grounded theory as it is obvious that, in principle, similarities and differences between anything whatsoever can be found to therefore make everything comparable. Whether such comparisons are really carried out depends on the purpose of a research and not on differences between compared groups in a certain abstract conceptual field. Comparing totally different entities by maximising the differences can potentially bear fruit if one is to believe in different theories of creativity which emphasise the importance of recognising unexpected similarities in things, which are very remote and dissimilar.

Theoretical sampling is carried out in two basic steps. In the first step differences between groups are minimised, while in the second they are maximised. Emerging theory constantly controls the process. The goal of the first step, i.e. minimising the differences, lies in searching for basic categories and their characteristics. The second step, maximising the differences between researched groups, enables a researcher to study the characteristics of the categories in the widest possible range as well as to link them together within a consistent theory. The technique applied in both steps is the comparison of data with the aim of forming and developing categories and their characteristics: a certain phenomenon is continually compared to phenomena which were mentioned in the same category, the same or another group, which gives the procedure a name: 'constant comparative method' (ibid.)

The shortfall of this procedure, as seen by Alvesson and Skölber (2000, p. 28), lies in the fact that real living relations between phenomena are broken apart, which changes the former into categories. The phenomena are separated from the context of the relations where they sprang up and they are being connected to other phenomena via the researcher's commonsense instead. It appears to look like one trying to analyse a piece of music by researching how people talk about it and perceive separate tones (phenomena); in that way, one would never be able to discover a crucial element – the melody.

The methodology of a grounded theory refers primarily to its direct connection to and embedding in empirical material; these data are later connected by comparative analysis in a way which enables the verifying of the theory. If we define generalisation in the light of the abovementioned arguments, we will reform it in a way which will include a process of reflection and not merely be understood as a structure of interpretations bound to rules. It is therefore impor-

tant to understand the contextual conditions in which such knowledge has been created. The transfer of this knowledge into new frames implies an understanding of the contextual conditions of the new frames, how they differentiate from the conditions in which this knowledge was produced and includes a reflection on what consequences it bears regarding the application of actual behaviour in the new context.

Researchers who do applied research are quite often interested in generalisation because they want to know what functions or what functions the best within the given samples of a population in order to transfer these social practices from the experimental environment to a wider population of experts or from one community to another. If this is our point of view, then 'generalisation is about the rationale for transferability' (Robinson and Norris 2001, p. 303). Indeed, generalisation is contextually connected or under the proviso of context.

Here we meet the idea of so-called naturalistic generalisation (Stake 1995, p. 85), which is appealing for many reasons. It transposes the responsibility from being based upon a researcher to a greater extent to the reader-expert. This idea supports the understanding of generalisation as transferability introduced by Guba and Lincoln when they say that 'the naturalist cannot specify the external validity of an inquiry: he or she can provide only the thick description necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility' (Guba and Lincoln, cited in Robinson and Norris 2001, p. 306). In other words, the researcher's responsibility is to ensure sufficient contextual pieces of information and to give the reader an opportunity to judge whether a certain case can be generalised for their specific field of practice. It is therefore about forming constructs based on studies which contain the potential of harmoniousness with the readers' experience. Therefore 'to generalise is to resonate with prior experience or to see common features among empirically different but conceptually equivalent human experiences' (ibid. p. 307).

Conclusion

It is generally accepted that theories formed on the basis of qualitative research, due to the described limitations, never or very seldom achieve such generalising power as empirical research. The latter are made on the basis of large circumstantial patterns, with the application of standardised instruments and inferential statistics, which with their procedures enable a generalisation from a sample to a basic group. However, an unquestionable fact remains, namely that the 'task of qualitative methodology is to make procedures of argumented concluding and generalising on the basis of qualitative empirical material. Qualitative research must reveal clear and vivid description of procedure in concluding and gradual abstracting of terms of different levels of abstractness from empirical material. Origin of each and every term, pattern and conclusion in elements of empirical material must be evident' (Mesec 1998, p. 46). Regarding qualitative

researches (and quantitative researches as well, for that matter), interpretations must be supportably bound to gathered empirical data as well as to existing theory, although in this case the procedures are much looser, which can lead to a lack of defined and contextually unsupported final conclusions; here lies the reason for drawing our attention primarily to the matter of uniting empiricism and theory in final interpretations.

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