Research Article

Data Interpretation in Social Research: a Guide to Standardising Research Outcomes And Outcome Evaluation

Florentina Scârneci-Domnișoru[1]

1. Independent researcher

Data interpretation, as the last stage of social research, is neglected in literature. It is described briefly, vaguely, inaccurately, being often associated with the data analysis stage or being replaced with the description of the way in which a research report must be written. The article brings arguments in favour of addressing data interpretation as a stage in itself, it shows that standardisation is needed so that the research results are easily identified, evaluated and used and it presents a universal guide, a set of rules specific to this stage, independently of the theoretical or methodological approach of the research carried out. The article also claims the introduction of results evaluation as a mandatory process for any research in which the generalisation and the practical and/or theoretical impact of the results are valued.

1. Introduction

The steps of social research are conceived in literature in multiple ways. Depending on how detailed the staging is, some authors consider that there are five steps, others, six, seven and so on up to eleven or even twenty. If we were not to consider smaller stages (not less important!) regarding setting the objectives, documentation, or sampling, but only those referring to data, two or three big stages of the research would remain – data collection (1), data processing and analysis (2) and data interpretation (3). Briefly (see Scârneci-Domnișoru, 2018, for details), in any social research, of any type, we work with data: *we collect* data through various methods and techniques, *we process data* through classification and quantification, *we analyse data,* that is we count, we measure and we establish relationships between the processed data and *we interpret data,* that is we offer answers to research objectives.

 doi.org/10.32388/DELXFD

As I have mentioned, even the number of stages referring to data is uncertain, because there are authors who consider the stages of data interpretation and analysis as a whole (see, for instance, the chapter "Types of Analysis and Interpretation of Evidence" in Alasuutari et al., 2008) and there are other authors who speak of separate stages of analysis, of data interpretation respectively (often replacing the expression "interpretation" with results, findings, or discussions).

But the problem is not the misunderstanding related to the number of stages, but the following concerns: does the data analysis stage differ from the interpretation one? If so, how do they differ? And does this difference justify the treatment of interpretation as a stage in itself? The questions are important because the treatment of interpretation as a stage in itself would suppose giving it special attention, to specify precisely what it is, how it is performed, what the specific rules are and so on.

This special attention is not currently given to it in literature. Anyone can note that the manuals of social research methodology are unbalanced. They present in detail the stage of data collection in dense chapters on survey, interview, or observation, then comes the data processing and analysis stage in fairly generous chapters too about various strategies of managing and transforming data, of identification of patterns, of relationships between categories of data etc. (see Denzin and Lincoln, 2017 or Babbie, 2020). But on the last stage of the research, they seldom mention anything, most times the discussion about this being even replaced with chapters referring to writing the research report and to dissemination, to research evaluation, or to ethical aspects (see, for example, Tashakkori et al., 2020 or Creswell and Creswell, 2023).

Also, there are numerous books devoted to the data collection stage or even to some specific methods of data collection (see, for example, the books on interviewing), then there are numerous books referring to various data analysis strategies (see, for example, books on the thematic analysis of qualitative data), but how many books are devoted only to data interpretation? Not many. The few ones that mention "interpretation" in their title are, almost always, books on statistics. They refer exclusively to quantitative data and describe, for example, how to work with graphs and tables (see "Interpreting Data", Nardi, 2005). In fact, these are books of statistical data analysis because they enumerate various statistical tests and correlational procedures, they show how and when they apply and which their significance is, how they can be read or "interpreted" (see Terrell, 2021).

As far as qualitative data interpretation is concerned, there are texts, such as "Strategies for Interpreting Qualitative Data" (Feldman, 1994) which describe the different way (it refers to the form, to the writing style) in which research results look depending on the theoretical-methodological

approach adopted within the study. Then, there are texts, such as "Interpreting Qualitative Data" (Silverman, 2020) that do not have too much to do with interpretation. For instance, in the mentioned book, there is a single sub-chapter of 16 pages out of over 500, which refers to the final stage of the research, which does not speak of data interpretation, but of the writing of the research report.

The answer of specialists to the question "why is the data interpretation stage addressed so briefly and inaccurately in literature" is that it depends very much on the type of research performed, on the methods used, on the theoretical framework adopted etc. and that, for this reason, a unique model, a generally valid structure of data interpretation cannot be conceived. Therefore, data interpretation can only be described specifically, depending on the research design, and the examples can only be specific to each methodological approach. Consequently, we find in literature, as I have already shown, only specific examples – see the statistics books in which the interpretation of tests and procedures of statistical analysis of quantitative data is clarified, or, for instance, the four strategies of interpretation of qualitative data: ethnomethodology, semiotics, dramaturgy, and deconstruction (in Feldman, 1994) or the writing strategies specific to the five qualitative approaches to inquiry: narrative research, phenomenology, grounded theory, ethnography, and case study (in Creswell and Poth, 2018).

I would like to show, by means of this article, that data interpretation must be addressed much more seriously in our writing and research as an important distinct stage, that its standardisation is required and that a universal guide can be conceived, a set of rules specific to this stage, independently of the theoretical or methodological approach of the research performed.

2. The problem: "anything goes"?

If we were to think of those who learn how research is performed, if we were in their shoes, we could feel that, after we are guided (by books, articles, and courses) thoroughly in the process of data collection and analysis, right at the end of the research, we are abandoned, left to handle it on our own, without too many instructions. We could ask ourselves: we collected data, we processed and analysed data, now what next? Do we have to do anything else with the data or do we already have the results? Does interpretation mean anything else than the results? If so, what and how is it to be done? How should the results be formulated, what should data interpretation (not) contain?

Recommendations in specialised literature related to what happens at the end of research refer, especially, to writing a research report, and the instructions focus on form, not on the significance of

the content – for example, what style and tone should be adopted, how the ideas should be organised and so on and so forth. For things to be even more complicated, the authors mention that a research report differs depending on the type of research performed (quantitative, qualitative, or mixed methods). Additionally, they distinguish between results and findings, between discussion and conclusion etc.

A brief look at the literature shows us that, in the case of quantitative studies, the final stage of the research should contain "results" which differ from "interpretation", "discussion" or "findings": the results section "presents the data but does not discuss, analyse, or interpret them" (Neuman, 2014, p. 522). This distinction has to be made "so that a reader can examine the data and arrive at different interpretations", the author also claims. After presenting the results, the discussion should be concise and unambiguous, it "is not a selective emphasis or partisan interpretation; rather, it is a candid discussion of what is in the results section" (idem.). Then, the conclusion should be separate, being nothing else than a summary of the report. Related to a qualitative research report, Neuman shows that this has "fewer rules and less structure", but that its purpose is the same, "to communicate the research process and the data collected through the process" (idem.). Denzin and Lincoln (2017) claim that "the processes that define the practices of interpretation and representation are always ongoing, emergent, unpredictable, and unfinished" (p. 1294), and Creswell and Poth (2018) that "it is difficult to separate the activities of data collection, analysis, and report writing in a qualitative study" (p. 425). And in the case of mixed-methods research, discussions related to the research report refer to the sequence in which results are presented (first, quantitative, then qualitative or the other way round) and to their integration. The idea of a separation is preserved: first of the results, then, of the interpretation or the discussion, but the indications are limited to phrases of the sort: "in the discussion section, we find the interpretation of the results as well as a discussion relating this interpretation to the literature" (Creswell and Plano-Clark, 2017, p. 259).

The problem of discussing literature in a research report gives birth to new dilemmas for those who deal with their first research: in our research, we did not work with theories, is what we did still considered research, to what literature should we refer? Or what we found already existed in literature as theory, what does this mean, did we work for nothing? Therefore, for beginners, things are confusing, there are few answers, recommendations are vague, but this is taken by many of them also as an advantage – if there are not too many rules and indications, then it is very possible that "anything goes".

A standardisation of the way in which the results are formulated should exist, not only in order to render the final stage of research clear, but also for the results to be subsequently easy to identify, evaluate, and used by others – researchers or beneficiaries of knowledge. Every time we try to study an issue and we perform the literature review in order to discover what is known about the respective issue, how it was studied previously and with what results, we face a great difficulty. Research reports are long, full of details, descriptions, and useless accessory that hinder our understanding and unacceptably prolong the search for the main ideas, the identification of essential existing discoveries. Theories are often rendered loosely in books of tens or hundreds of pages. Knowledge in sociology inevitably suffers because the storage of knowledge is poorly made. Accumulation is problematic because the shelves are crooked, the products unlabelled, mixed, hazy, some placed in jars, others in non-transparent barrels. It is hard to produce new knowledge in a field in which knowledge up to you is completely unsystematised, in which any type of new outcome is thrown in the pantry at random.

Thus, besides the duty we have towards beginners to show them exactly the way to go in the stage of data interpretation, we are indebted to the scientific community, to financers, to those who facilitate and benefit from the production of knowledge. There are demands related to scientific research that any researcher should consider. Through research, we should produce new knowledge; this is its purpose. Therefore, the final stage in which we show what we produced is vital; it should be decisive in evaluating the research we conduct besides judging its validity, reliability, and other specific criteria that we already use.

In literature, if we were to simplify things and to present them briefly, when it comes to evaluating social research, the authors discuss validity and reliability in the case of quantitative research and other replacement terms in the case of qualitative research (credibility, dependability, confirmability, authenticity, rigour, or trustworthiness). In the case of mixed designs, the criteria are the same, applied separately, to the quantitative part, and qualitative part respectively, to which they add those specific, mainly related to the combination and integration processes. Therefore, it is considered that, these criteria fulfilled, the research is well performed and evaluation stops, most times, here.

But the enumerated criteria refer to conceiving and applying methods and techniques used in research, they refer to procedures, processes, to the backstage of the research (see, for example, triangulation, member checking, thick description, intercoder reliability and others for qualitative research), they are not criteria that evaluate strictly the results, their impact, the utility, the value of results compared to those of another research. It is true that the kitchen of the research, the backstage

is very important, but they are not enough for a complete, correct, and honest evaluation of the activity of new knowledge production. Besides the rules specific to each method and technique applied to research, beyond validity, reliability, sufficiency, and adequacy, should we not judge the research from the perspective of results? What makes research valuable? How do we decide if certain research produced new knowledge, if it was worth being performed; if it is not somehow, behind a perfect methodological realisation, a perfect waste of time and money?

The evaluation of research exclusively from a methodological perspective makes the purpose of the research negligible. This way, the function of the research becomes less significant than the procedure. Therefore, it is not surprising that there are researchers who understand that "anything goes" as long as we follow the methodological rules. Morse (2017) realising a history of the way in which the evaluation of qualitative research was addressed over time, shows that "the focus on deficits in methods, rather than the significance of the questions and the contribution of the results was harmful to the discipline as a whole" (p. 1372).

Therefore, we should be more rigorous regarding the last stage of the research, we should have more clear and firmer recommendations for it (without identifying it with the writing of the research report), we should have a standardisation for it, and we should use data interpretation or the results or findings as a criterion for research evaluation. It should become explicit that not anything goes, that we have a responsibility as researchers towards a responsible spending of money and towards the deepening of knowledge. In this article, I will present a solution for the problems raised.

3. A solution – a universal guide for data interpretation in social research

Because there is no such thing in literature, I attempt to draw up a guide, as explicitly as possible, in which to describe what data interpretation is, how it differs from the stage of data analysis, what the results or findings are, how they are formulated and how they are evaluated.

3.1. What is data interpretation and what it is not

Willig (2017), summarizing what Susan Sontag writes in "Against Interpretation and Other Essays", shows that "the term interpretation was originally used to refer to the activity of making sense of particularly difficult or obscure documents which had been revered and held sacred for a very long

time, such as mythical or religious writings. Interpretation became necessary because these ancient texts did not make obvious sense to contemporary audiences. In order for these texts to continue to play their traditional role within a culture, they needed to be made relevant again through the act of interpretation" (p. 277). Later, the term was extended to "any activity that sought to elucidate the meaning of a written text" and it applies "whenever we try to understand spoken or written language or, indeed, any human acts" (idem.).

The problem of data interpretation (as a stage of any research) arises when the data is already collected, processed and analysed. This means that the researcher has in front of him/her a huge data base (raw data), then has tables, graphs, matrices, networks, that is the raw data that he/she reduced, classified, quantified, counted, or measured; the researcher has also his/her's attempts to clarify what the answers that prevail are, what the relationship between answers and the categories of respondents are, his/her's attempts to understand in what way the answers resemble one another or differ and so on. If we were to present raw data or the schemes resulting from the processing and analysis of data as results, it would probably be very hard to understand, maybe we would generate even misunderstandings, so, for things to be clear and error free, we should do something more with them, we should interpret these schemes and drafts resulting from data processing and analysis.

Therefore, the presentation of raw data is not data interpretation. In qualitative studies, there is a temptation (that some do not resist) to present the collected data as results. Sandelowski and Barroso (2003) call the studies in which data is presented directly as findings – "no-finding reports": "the authors of these no-finding reports simply reproduced interview data, case histories, or stories they had collected in a reduced form with minimal or no interpretation of those data" (p. 910). If we only reproduce the data, regardless of how spectacular it is, it means that we report only the stage of data collection. If we only describe the cases, if we only enumerate what we observed in the field, if we only give quotations from interviews etc., then we illustrate only the beginning of research, not its end. When we work with pictures in our research, we are all the more tempted than when we collect verbal data to present them as such. Most times, images are expressive, impressive, of great impact and we cannot wait to show them to others too. For instance, Figure 1 is a picture collected in a project about the adaptation to the isolation imposed by the pandemics; the explanation related to what the lady in the picture does is even more interesting than the picture. But its presentation as such, without processing, analysis, interpretation and the rest of the procedures that we undertake within scientifical research, means only that we collected some interesting data.

Figure 1. Photograph

In other research, I attempted to discover the way in which inequality in Romanian society is perceived. This time, I used drawings and I collected in the project many spectacular images, but if I were to reproduce the most interesting of them (like the drawing in Figure 2), it would have meant that I let the viewer to draw a conclusion by himself/herself, to carry out himself/herself the rest of the research for me.

doi.org/10.32388/DELXFD

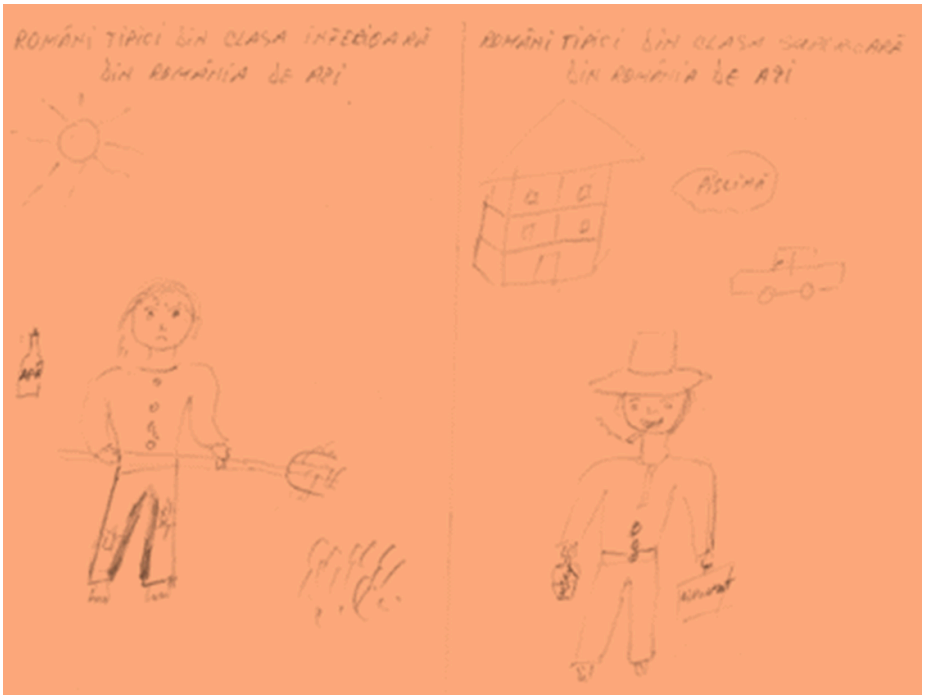

Figure 2. Drawing

It is like if a great chef presents only the ingredients, and not also the recipe and the result: we have flour, eggs, shrimps, even caviar, or Saint Jacques oysters. He/she will probably manage to stir your appetite, but if he/she does not tell you how to cook them, in what order and combination etc., it is very possible that you will not to be able to obtain an edible dish out of them.

Additionally, it is not a matter of data interpretation when we present a table of contents, a list of topics brought into discussion by the participants, an inventory of themes, possibly depending on the frequency of their occurrence. Sandelowski and Barroso (2003) call "topical surveys" the studies in which the results are presented this way, in which "inventories, frequencies, and percentages, or enumerations of the topics themselves" are emphasised (p. 911). Even if in these studies, the raw data suffers a certain transformation (see also the "thematic survey" in the classification of the authors mentioned), this only reflects the stage of data processing and analysis, not that of interpretation.

In the stage of data processing and analysis, we reach all sorts of visual representations that show distributions, variations, or relations. If we present only these as results, it is highly possible that not much is understood. This would happen if we displayed, without explanation, tables and graphs (see

Figures 3 and 4) in which, most times, we represent quantitative or quantified data and various statistical analyses of it.

Directional Measures

work place				Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
in the public sector	Ordinal by Ordinal	Somers' d	Symmetric	-.084	.100	-.849	.396
			is or is not in charge Dependent	-.079	.093	-.849	.396
			have the ability to lead others Dependent	-.091	.107	-.849	.396
in the privat sector	Ordinal by Ordinal	Somers' d	Symmetric	.285	.073	3.863	.000
			is or is not in charge Dependent	.256	.066	3.863	.000
			have the ability to lead others Dependent	.322	.083	3.863	.000
in NGO's	Ordinal by Ordinal	Somers' d	Symmetric	-.043	.236	-.181	.857
			is or is not in charge Dependent	-.038	.208	-.181	.857
			have the ability to lead others Dependent	-.049	.272	-.181	.857

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Figure 3. Table

doi.org/10.32388/DELXFD

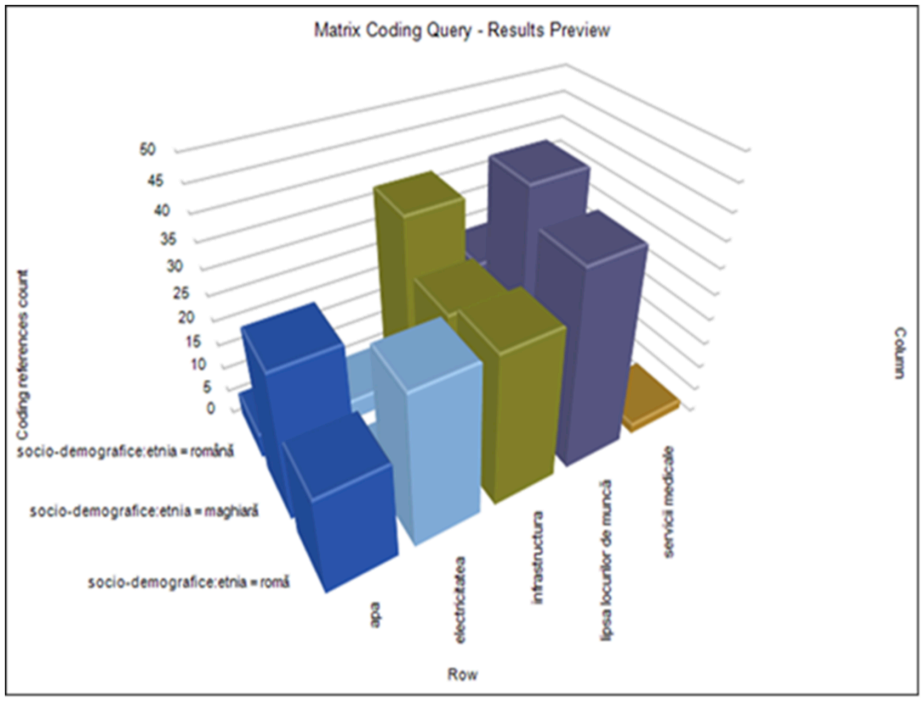

Figure 4. Graph

It would also be the case when we present matrices and networks (see Figures 5 and 6) in which classified qualitative data and the connections between it are represented.

Manager	What he/she says about himself/herself	What he/she thinks the others think about him/her	What the owner says about him/her	What the other managers say about him/her
AM (supervisor of the painting department, female)	- regarding my activity there is nothing worth mentioning; - we have always done our job; - we have successfully collaborated with everybody; - we have had only one or two complaints in 3 years (and this due to poor warehousing conditions); - I am not interested in the rule that says everything must go through the boss (it is like talking behind people's backs); - I do not send e-mails to officially name the wrongdoer.	- they reproach me I am too good-hearted and indulgent; -I think the boss considers me trustworthy.	- she completes her duties, follows regulations and does not have incidents.	*DT*: she paints everything that comes to her hand without checking it (aesthetically); it is awful when I have to ask her for something

Figure 5. Matrix

doi.org/10.32388/DELXFD

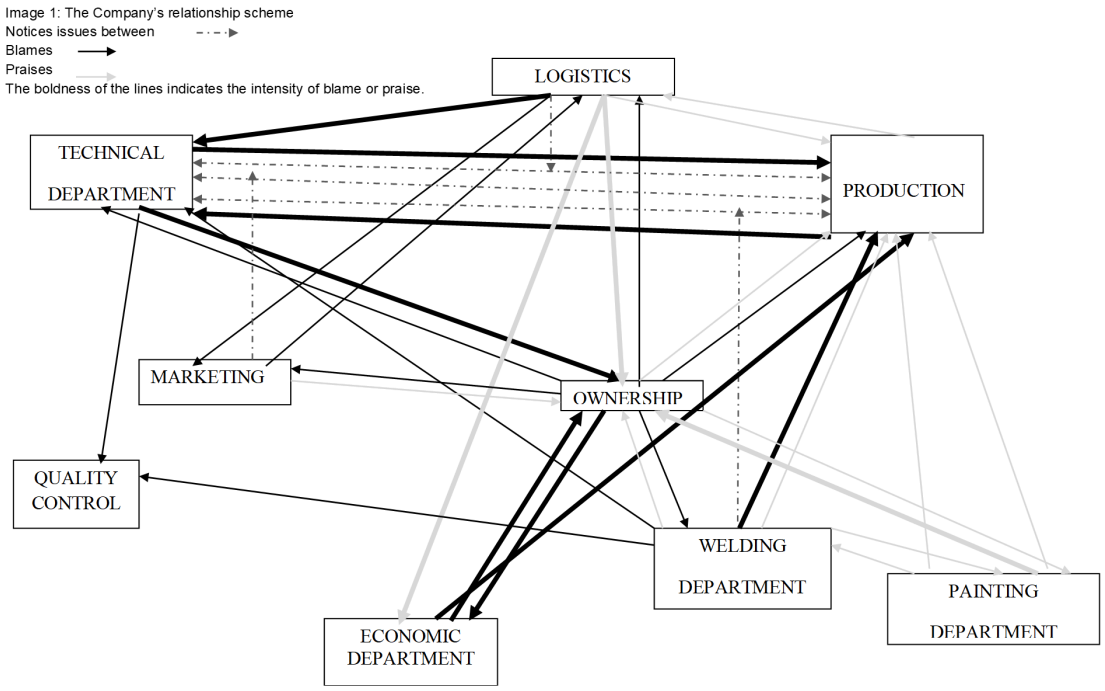

Figure 6. Network

All these are not yet data interpretations. It is like when the great chef I talked about in the culinary analogy would show you how to fry scallops, how to make the sauce etc., but would leave things as such. He/she would not assemble the outcome – he/she would not tell you to keep the sauce in the fridge at least two hours before placing it on a plate, that you should not cut the meat immediately after taking it off the heat, he/she would not tell you that the sauce is for cakes, not for meat etc. In this case, you might cook something that can be eaten, but the taste could be unpleasant, the texture could be inappropriate etc. Data interpretation is the outcome, when everything clarifies, makes sense and tastes well. Is it when the chef places the sauce where it should be, puts the elements on a plate using appropriate combinations and quantities, seasons correctly etc.

Thus, interpretation supposes data transformation (after we already transformed its shape, structure, and size through processing and analysis), bringing it to the stage of clear and precise answers to the research objectives.

3.2. Why do some authors aggregate the stages of data analysis and interpretation and why should interpretation be treated as a separate stage?

Data processing supposes bringing it to sizes, forms, and structures that enable us to use it for the purpose of providing answers to research questions. For instance, qualitative data gathered in an unstructured manner is usually huge, unsystematised collection of information. It needs processing because it is very difficult to draw a conclusion directly from thousands of minutes of video recordings, hundreds of photographs, or tens of pages of interview transcriptions. This data has to be classified (this is one of the data processing methods), that is grouped in categories, by themes in order to be easier to manage, understand, and analyse. When we collect data with structured techniques (see, for instance, the questionnaire), the data is collected while being already classified (through standard answer variants) and does not need this type of processing.

Besides classification, the data is also processed through quantification. This implies its transformation into quantitative data, into something that makes sense numerically. For instance, the indexes we build through all sorts of combinations of variables are a data quantification variant. We usually quantify the data collected through structured techniques because, in this case, the procedure is easier to perform.

We process the collected information because the classified and quantified data can be compared, its variation and correlation can be followed, because all sorts of patterns and relations among them can be identified more easily, by comparison. This means that the data processed can be analysed – the classification allows for the numbering procedure (see frequency computing), and data quantification allows for the measurement procedure (we measure, for instance, the intensity of an attitude after building an index defined as a sum of affirmative answers to a few questions).

Processing and analysing provide all sorts of data visual representations (such as those presented in Figures 3, 4, 5, and 6), and the data analysis and processing software is of great help in its generation. When we work with data collected in a standardised manner, we normally talk only of its analysis (the data being already classified) and because its analysis implies that software generates on command fairly suggestive tables and graphs, there are authors who say that these are also the research results. In their view, interpretation is only the help we offer to the public in reading those results. It is the case of quantitative research.

It also happens the same when we work with qualitative data collected in an unstructured manner – after we classify and represent them graphically in matrixes and in networks, data interpretation is for many authors merely reading these schemes. Making sense, finding meaning or other expressions are used in literature to describe the procedure by which we realise what the collected, processed, and analysed data is about. For this reason, in many specialised books, the analysis and interpretation stages are treated as a whole. Indeed, in this stage, we draw close to the end, we start to slowly grasp the idea, to outline answers, and to build an outcome.

Preserving the culinary analogy, in the case of cooking a dish that contains meat, we would be in a stage in which the chef would tell us that we have in front of us meat cooked in the oven, at 80 degrees Celsius and that the test of colour shows us the level of roasting - rare, medium rare, or well done. Then, he would state that, given the result of the test, our meat is cooked medium rare. Explicating the results is not data interpretation, it is still an analytical process, not a synthetical one (that is, we have the clear up of some processes, of some parts of an outcome, not of the product as a whole). It is, further on, only a part of the analysis, of the intermediary products and results, it continues to be part of the kitchen behind the scenes, part of the backstage.

We need a stage in itself of data interpretation to distinguish between the transformations that the data collected during the research undergoes and the final result, the outcome (between what happens in the kitchen and what finally goes on the plate). Wolcott (2009), attempting to distinguish between the stage of data processing and analysis and the stage of data interpretation, shows that the first one can be restrained to "the examination of data using systematic and standardised measures and procedures" (p. 29). So, all that suppose using standardised procedures (and their explanation) – such as, coding, numbering, and significance tests – on the collected data is something different than the stage of data interpretation.

In fact, what matters in research is the result and it is to it that special attention must be given. Coming back to the analogy, in many cases, the person who eats is not even interested in the cooking process, in procedures, significations, and labels, sometimes he/she cannot understand them even if explained at length etc. He/she simply wishes to have something on the plate and that is all. It has to be tasty, nourishing, and possibly cheap and does not need anything in addition. For this reason, he/she went to the restaurant and did not cook him/herself – perhaps he/she does not know how to do it, is not interested in cooking, does not have time to cook etc. Certainly, it is important how we reach the result, it is important to be transparent in terms of intermediary stages and open to their

evaluation, but what remains is the outcome, for which we were paid, which can be used in solving some issues, which will contribute to broadening knowledge etc. The procedure is for cooks, for methodologists, not for customers, not for knowledge beneficiaries. Data interpretation means to give answers to the research questions (showing exactly what resulted, how precise it is, to whom it applies and in what way it is new), and not to explain tables, statistical tests, procedures, or networks.

Therefore, data interpretation is a new transformation of data or as Willig (2017) says, "since all types of interpretation are carried out with the aim of amplifying meaning, interpretation inevitably means adding something to what is already there" (p. 278).

3.3. Why do we avoid saying that we perform data interpretation?

Interpreting sounds like giving a new meaning, subjectively, to something, it sounds like there could be (and this is not good at all!) more interpretations of the same aspect. This is one of the reasons why the term is sometimes avoided, and the stage of data interpretation is often eliminated or renamed. Therefore, when it comes to this procedure, the authors generally recommend that we analyse data and then write the research report, without mentioning any interpretation. This is because "the term 'analysis' invokes something sober and systematic, an activity that is carried out by technical experts who approach their work with objectivity, rigour and attention to detail. [...] By contrast, 'interpretation' is associated with the arts, with creativity and with the imagination. [...] The language of 'analysis' is associated with science whereas the language of 'interpretation' is associated with arts and humanities" (Willig, 2017, p. 276).

But would data interpretation be more subjective than other research stages? The research process is full of personal choices of the researchers, at every step a situation occurs that supposes more or less subjectivity – they decide what they study; what techniques they apply; how they combine them; what they quantify; or how they build indexes. These are choices that they can justify and that they undertake. Why would the last stage of the research be any different? The researchers are liable for both what they undertake and the results they reach. Depending on their experience, attention, or competence, it is possible to discover more or less important, spectacular, or numerous aspects. Wolcott (2009) shows that interpretation "is not derived from rigorous, agreed-upon, carefully specified procedures, but from our efforts at sense-making, a human activity that includes intuition, past experience, emotion—personal attributes of human researchers" (p. 30). For this reason, it is possible for two researchers who work with the same data to discover different things: interpretation

is translation, "but translation is not an objective act. Instead, translation necessarily involves selectivity and the ascribing of meaning" (Trent and Cho, 2014, p. 640). In the culinary analogy, with the same ingredients, it goes without saying that different chefs can create different products.

But all these mean only that research is carried out by people, with everything their humanity and professionalism imply. They can be more or less skilled, hard-working, honest, more or less attentive to details, open to new, they have a certain configuration of knowledge, interests, and expectations. And this cannot be changed. The German philosopher Walter Benjamin said that "all human knowledge takes the form of interpretation", therefore, we interpret in research even if we do not recognise that or even if we call the procedure differently.

3.4. Does data interpretation differ from findings, results, discussion, or the research report?

As shown above, in quantitative research, tables, graphs, and statistical analyses carried out on the collected data are considered results, and data interpretation encompasses "reading" it and the significances it carries. In qualitative research, results and their interpretation are called findings. The difference probably comes from the fact that results have rather numerical connotations, the results are something obtained from carrying out tests or trials.

Discussion is defined as a special section in which we reflect upon results or findings – we discuss their importance; we consider results in relation to existing theories etc. There are authors who call this contextualisation of findings in the literature, and it means "to compare the interpretations to others writing about and studying the same/similar phenomena. The results of this contextualisation may be that the current study's findings correspond with the findings of other researchers. The results might, alternatively, differ from the findings of other researchers. In either instance, the researcher can highlight his or her unique contributions to our understanding of the topic under study" (Trent and Cho, 2014, p. 651).

In the culinary analogy, discussion would mean that the chef makes various considerations regarding how one usually eats the type of meat on the plate, what kind of people prefer it and how, with what kind of wine it can be consumed, considerations regarding the changes that the cooking of the product underwent over time, the alternative ingredients that could be used, what makes that the product cooked by him/her be different than those cooked by other chefs etc.

In this article, I propose the following understanding: data interpretation is about results or findings and its evaluation is about discussions. The distinction between results and findings is rather artificial, it is really not very important whether the outcome presents numerical components or not. Dessert is dessert, it does not matter whether it has cream, chocolate, or fruit or not. What results from research can be considered a result, regardless of the form it takes, and so too what is found can be called finding, regardless of its character. Discussion is about the evaluation of the outcome, as I will show below. Therefore, in the definition and description of the stage of data interpretation, all three are included – it is the stage in which we formulate results, we set out the findings, and we evaluate them.

But the research report is completely different, and so too the ethics of the research, its evaluation (with reference to validity, reliability, and others) and other similar elements with which some authors replace the stage of data interpretation in their manuals. The research report is not one of its stages, but something we write after the study was completed. This report takes different forms depending on the public to whom it is targeted and the communication needs of the researcher. The report is written in one way for the fellow researchers, in articles, for conferences, and in another way for a financer who can be a public entity, a NGO, or a company, and differently for the general public and so on. The report is written in a certain way if we want to inform, in another way if we want to impress, and in a different way if we want to convince. The report can take various forms, from those scientifical (see PhD theses or articles written for journals, books), to those artistical (see visual essays, documentaries, novels, storytelling, or plays).

The same data interpretation (i.e. the same results or findings) can generate different research reports. If we write for a journal, we give details about the procedure, we exemplify with statistical tables, quotations from interviews, we even make the database available. If we write for a beneficiary who is an engineer or a doctor, we give details about the result, in a common language, without concepts, references to authors, or theories that could hinder understanding. If we write for the general public, we use pictures, we recount, and we dramatize so that the outcome makes sense, and it can be easily digested. Everything as in a new translation, this time for the public, but without betraying the content, the meaning of the result.

In the culinary analogy, it would be a matter of plating here. How do we present, how do we serve the product? The same dish can be placed on a golden plate, on a plateau or on a wooden board, it can be

full or minimalist, with sauce in a bowl or sauce drops on the plate, decorated with edible flowers or lemon slices and extra ketchup or mustard.

3.5. How do we formulate results and what criteria do we follow when interpreting the data?

Research is about giving answers to research objectives. The results are answers to research questions, namely some assertions. It does not matter how we collected the data, how we processed and analysed it, it does not matter that we worked with numbers, with texts, with sounds, with images, it does not matter that the texts collected were narrations, or diaries, that the collected data was in depth or surface, that they referred to daily life, to cultural aspects, to emotions, or money, to the past or the future, it does not matter that we had many or few subjects, that we used SPSS or NVivo or that we worked without the help of software. Nothing from the backstage matters when we formulate answers. The research outcome is a sentence or more, a statement or more, and only the question matters when formulating them.

If we have the "who", "where", "how many", "which" and "what" questions, then we have descriptive research, and the answers have to be descriptive sentences. If we have "how" and "why" questions, then we have explanatory questions, and the answers have to be explanatory sentences. This is the most important indication – the type of question shows us the form of the answer, regardless of the theoretical approach, regardless of the methodological choice, regardless of epistemologies, ontologies, paradigms, methods, methodologies, and others. If we ask, "how many", the answer is something of the sort – "14" or "35.9%", if we ask "where", the answer appears like - "in place X" or "in the place with the following characteristics: Y, Z, K", if we ask "why", the answer takes the form – "because A determines B".

Then, what matters is also the purpose of the questions – what do we do the research for? Do we pursue the production of new knowledge to inform public policy, to find answers that will help in solving some immediate problems, such as a decrease in productivity in a factory, an increase in dissatisfactions in an institution etc; do we seek to solve a specific problem, to find practical solutions to existing problems? Or do we seek to improve scientific theories, to enhance knowledge without generating findings that have immediate applications at a practical level? In the first case, we have applied research, and the answers to the questions in such research are rather made up of (not mandatorily) simple sentences, formulated in a common language, consisting of information

obtained scientifically. For instance, if political parties are interested in the distribution of voting preferences, a result could be like this – "65% of voters would choose party X". In the second case, we have fundamental research, and the answers to the questions in this type of research are theoretical sentences, made up (mandatorily) of theoretical terms, of concepts already existing in literature (see self-esteem, intrinsic motivation, or permissive parental style) or found and defined in the research performed. More about this in paragraph 3.6.

Therefore, when it comes to data interpretation, the criteria that matters in defining and describing results are the type of objective and the purpose of the study. These are easily identifiable criteria in any research. Any study that a social researcher proposes can be defined as being descriptive and/or explanatory and as being applied and/or fundamental. Any research, be it quantitative, qualitative, or mixed-methods, ethnographical, phenomenological, ethnomethodological, secondary, or longitudinal can be classified as being descriptive or explanatory and applied or fundamental.

3.6. What can we obtain from research?

As I have already shown, research results are answers that we provide to questions, are assertions, that is "declarative statements; they include a summary of the new understandings, and they are supported by evidence/data" (Trent and Cho, 2014, p. 650).

In descriptive research, when questions are of the "what" type, the result is a description, a sentence or a sequence of descriptive sentences. In applied descriptive studies, if we asked "what do the employees of the company X think about their management?", the answer would be of the sort "the employees have a poor opinion of the management, they talk about it in terms of corruption, theft, nepotism" or of the sort "85% of the employees have a poor or very poor opinion of the management". In fundamental descriptive studies, if we asked "what are the sources that the Romanians perceive as generating social stratification?", the answer would be of the sort "the most important resource generating social stratification, as perceived by the subjects, is material capital" or of the sort "45% of the subjects consider income, 35% social status, and 10% relational capital as generating social stratification".

In this type of research, the results are thematic or conceptual descriptions. For instance, in applied research, the types of dissatisfactions of employees can be described in a company or, in a fundamental research, one or more concepts developed from data or imported from existing theories can be described (say autonomy in managers or identity in adolescents). Descriptions are all sorts of

patterns found by researchers in data with the help of data processing and analysis – for instance, that "the dissatisfactions of the employees in a company are related to salary, to the work schedule and promotion possibilities" or that "the autonomy in managers is related to various independences, which are present in a manager's life from childhood [and here we enumerate, say the independence in relation to parents, material independence in relation to the family or even material dependence of the family in relation to the future manager], over the entire life [and again, we enumerate them here]".

In explanatory research, when questions are of the "why" type, the result is an explanation, one or more explanatory sentences; that is assertions composed of relationships between different variables, concepts, or categories. For instance, in applied explanatory studies, the answers can be of the kind "the older they are, the worse the employees' opinion of the management is" or "if they want a well-paid job, then the difficulties that the unemployed are facing in search of a job are great". In fundamental explanatory studies, the answers can be of the kind "children with precarious life conditions, with flawed family relationships and distant relationships with relatives satisfy their affiliation needs by establishing a great number of friendships". Certainly, explanations can be formulated a priori as hypotheses and tested within research (the result will then be their confirmation or rejection) or they can be found in data on the occasion of research (as in grounded theory studies).

It is very possible that research be both descriptive and explanatory or that some begin as descriptive and become also explanatory. In these cases, the results are a sequence of descriptive and explanatory sentences. For instance, in applied research it is possible that someone wishes to find out not only what the dissatisfactions in a company are, but also their causes. As for fundamental research, in a project carried out a few years ago, although I initially proposed to find only the resources generating social stratification in Romanians and Italians, respectively (descriptive research), subsequently I noticed differences between the answers of the two categories of subjects, I decided to attempt to discover the explanation of these differences (explanatory research).

I provide a few details on this project in order to exemplify better. I collected data under the form of drawings: I asked subjects, both Romanians and Italians, to draw social classes, (as in Figure 2) and I noticed that in Italians, economic inequality among the social classes drawn was more reduced than in Romanians, and that in Italians, unlike in Romanians, there also occurred non-economic inequalities between social classes in the drawings (i.e. political, cultural etc.). I asked myself why. Are there not

also in Romania non-economic inequalities between people? There surely are! Then why do they not appear represented in the drawings? I attempted to build an explanation around the idea that the sources of inequality are perceived hierarchically. Therefore, the answers to the "why" above, the results are: if, in a society, the perceived inequalities are great for the economic dimension (basic, "inferior"), then the perception of other sources of inequality is obstructed (for instance, cultural, political sources etc.), and if perceived economic inequalities are reduced, then people tend to perceive also inequalities "superior" to them (see Scârneci-Domnișoru, 2015).

In fact, this type of transformations of descriptive research into descriptive explanatory is common. Anytime during the research new questions of which we have not thought initially can be added. It is obvious that findings give birth to new questions, it is normal to modify the research objectives in the process, to adapt them to what we can find out, to what we have already found out etc. Thus, the stage of data interpretation will contain answers to all questions formulated at the beginning or throughout the research.

As I mentioned above, it is possible that the resulting sentences be made up "only" of information obtained scientifically, that is simple sentences formulated in common language, without theoretical terms. Even if we do not work with theories, it is still research and even if not formulated in theoretical terms it is still results. If we aim to find out only for whom people vote, for whom they voted, if they always go to vote, if they consume alcohol, what kind etc., then the results will be the information, found scientifically (i.e. observing rules related to how questions and answers in the instruments of data collection are formulated, how the research universe is established, how sampling is performed etc.), that we need.

Certainly, these pieces of information can be, in need, wrapped theoretically. For the information found to be published in journals, in order to draw up with their help Bachelor's papers or PhD theses or only to impress our boss or the public, we can "interpret" them from the perspective of some theories. For instance, we will not show only that emigrants have problems with not knowing the language and finding a workplace, but we will be able to describe and explain the failure of emigrants to adapt to the realities of the destination country, using terms from the theories of Erving Goffman, such as "biographical disruptions" that activate and reactivate inconsistencies between "real social identity" (characteristics possessed) and "virtual social identity" (as they appear to the others in the interaction). The "interpretation" of the same data is possible even from different theoretical perspectives (or even fields). For instance, in a study related to dwelling, to the changes that a

neighbourhood undergoes over time, theories from sociology, marketing, and social assistance can be used. But we speak here of the research report, and if we want a research report more sophisticated from a theoretical point of view that corresponds to the demands of the public in front of whom we present the results, there is no problem at all to operate any kind of "interpretation", "translation", wrapping or adorning of them. It is possible in this case for applied research to even become applied-fundamental, that is to respond both to demands of solving immediate practical problems, and to demands of enriching knowledge in the field in which the study is performed.

In the case where the research results are formulated in theoretical terms, the answers, the sentences are theoretical. It is possible that they be formulated this way a priori, when we attempt to test them through our research or it is possible that, throughout our research, by labelling themes or categories with theoretical terms, the theoretical sentences formulated this way to result. This type of research is carried out mainly in the academic environment, it is specific to PhD programmes, for instance, they are most often addressed in literature, but in fact the most frequent research that we carry out in our professional life, as specialists in the fields of sociology, human resources, not to mention the field of marketing, social work, or health, is applied research from which results mostly information obtained scientifically with the help of which important informed decisions are made.

The situations in which research changes category from applied to applied-fundamental are fairly frequent. For instance, if we ask people what makes them come to work in company X and we find out they come for money, incentives, and a flexible work schedule, then we only have applied research (because we use methods, techniques, scientifical procedures in order to find the information we need in order to solve a problem related to personnel). But if we use motivation theories in this research in order to identify or measure different variables (see needs, expectancy, and other specific terms), then we do not have only applied research because we test old theories in a new context. That is, we bring services to knowledge in general too, not only to the company. These transformations happen often because, in universities, we learn to do fundamental research, not applied, that is, we learn that the theoretical framework of our studies is mandatory. My opinion is that, if we want to know how often one goes to church, whether one drinks milk or not, what TV channel one watches, or what one enjoys in a product, the introduction of a theoretical component is not mandatory.

Therefore, from research result some assertions, some answers that need to be clear, to the point. Accompanying answers by tables, quotations, and others is an option related to writing a research report. There can be short reports that contain only the results, written simply, schematically even on

a few lines (many times, in applied research nothing else is expected or needed) and long reports, written even as books – as, for instance, ethnographical studies are presented. But data interpretation should provide only a list of sentences which are easy to go through, to understand, and to evaluate.

Of course, besides the classical results in the form of answers to research questions, there can also be other types of research outcomes. As I have already shown, the research can give birth to new questions or objectives, it can reveal new issues related to knowledge (that can be solved even in the research in question or that can be proposed for further research). Then, the research can propose as a result not only firm sentences, but also hypotheses, connections between categories or variables that cannot be verified in the research in question (for instance, because of an inappropriate number of subjects). It often happens that in exploratory research the "only" proposed outcome is some hypothesis to be tested in other larger, representative studies. And of course, there also is serendipity – the possibility (and luck) to discover things that we did not propose. It is possible to make unexpected important discoveries about one thing when searching for something else.

3.7. How to evaluate the research results?

It is normal and necessary that the research results are evaluated. The evaluation should be a mandatory process, it should be realised and presented in the data interpretation stage. In literature, research evaluation emphasises almost exclusively the evaluation of methodological procedures applied throughout the research. It should be established very clearly that an evaluation of research without an evaluation of results is not a complete evaluation. It would be normal that the researcher evaluates the results of his own research and exposes this evaluation publicly – that does not eliminate, of course, the possibility and the necessity that others make evaluations of the results in question.

The first important thing in evaluating results is related to the population to which they refer. If results are valid only for the subjects surveyed or interviewed, then the results are not very valuable, but if results can be generalised to larger populations, then they acquire greater relevance. Hans Reichenbach, a German leading philosopher of science, claims that "the essence of knowledge is generalisation", this means that results that cannot be generalised have a low value and utility in the economy of knowledge.

It is a matter of internal generalisation of results (see Maxwell, 2021), about extrapolation from sample to population. Contrary to what is claimed in most literature, this type of generalisation is not

specific only to quantitative research (see Scârneci-Domnișoru, forthcoming, for a detailed description of the generalisation procedure from sample to population in qualitative research). Any study with several investigation units (be it quantitative, qualitative, or mixed-methods) that respects itself should pursue result generalisation, even when it is a matter of small research universes, such as the students of a university, the workers of a factory, the inhabitants of a neighbourhood, or the members of a community. Even in applied (qualitative) studies carried out on small populations, there is a great difference in value between the results valid only for the ten interviewed members of an organisation, the results valid for the 30 members of a department of an organisation and the results valid for all 100 members of an organisation.

Therefore, we should state very clearly in the results (in the data interpretation stage) to whom they apply (i.e. the surveyed employees of a company, the interviewed unemployed in a town, or all the persons in a country having the right to vote and so on) in order to make the value of results obvious; the value has to be judged in terms of the possibility to generalise the results and of the level of this generalisation.

A second important criterion in result evaluation is their impact. If in applied research, we seek to produce new knowledge in order to solve some immediate problematic situations, it is natural to evaluate the result from the perspective of its utility, of the contribution it has to solving these situations. Can the results be used? How? For instance, we could find, through research, that a conflict between the heads of departments generated a decrease in productivity – this is a useful discovery that can solve the problem of the company's productivity that required identifying the causes through research. The description of problems that those who want to adopt a child encounter is equally useful, for implementing new strategies, procedures, in order to change some laws, policies in the field of adoption. The identification of the voting intention, of the opinions related to different topics on the public agenda is equally useful for building an election campaign strategy.

Regarding fundamental research, the evaluation of the impact of results is done by considering the existing theories. The existing knowledge is stored in theories – in descriptive and explanatory sentences found previously. In order to evaluate if we produced something new and valuable through our research, we have to compare the sentences that we formulated as answers to the research questions to the sentences already existing in literature. The existing knowledge is never final, it is always subject to challenge, already available theories are temporary, they have to be continually tested to see if they preserve their validity, they can be contradicted anytime. For this reason, we find

ourselves daily in the situation of being able to test old theories, contradicting them or producing some completely new ones.

So, through research, we can test existing theories. Perhaps they have not been tested in a while, maybe they have not been tested in certain contexts (on certain categories of subjects, in certain spaces or cultures). Testing theories is an achievement for knowledge. It happens most often that researchers propose from the beginning to perform these tests, but it can happen differently too. Suppose that someone tries to find a new theory in a grounded theory study. He/she labels categories, reaches descriptive and explanatory sentences that he/she compares to existing theories; he/she notes that what he/she has found already exists as theory in literature. This is not a failure, it can be said that, although unintentionally, a theory was tested, that the old theory also applies to the new research situation in which it has just been identified again. Even it is not as great an achievement as establishing a new theory, the fact that the old theory proved appropriate in another context than that in which it was initially generated (practically, it was, in fact, re-discovered) is nevertheless a gain for knowledge. This way, we bring proof that supports the old theory. In literature, this is called analytical generalisation (this time, an external generalisation in the terms of Maxwell, 2021, as transferability also is).

Comparing what we found in our studies to what already exists as knowledge, we can show not only that we tested a theory, but also that we completed one (for instance, by adding some dimensions, characteristics), that we modified a theory (for instance, by eliminating some specific themes, by changing some factors or their intensity) or that we contradicted it (for instance, by finding the opposite): "in what ways do the interpretations from this study correspond with other research conducted on this topic? Do findings/interpretations corroborate, expand, or contradict other researchers' interpretations of similar phenomena? In any of these scenarios (correspondence, expansion, contradiction), new findings and interpretations from a study add to and deepen the knowledge base, or literature, on a topic of investigation" (Trent and Cho, 2014, p. 655). The theoretical impact of results that complete, modify, or contradict existing theories can be greater than that of testing theories.

It is also possible to ground new theories (in this case, the impact of results could be even greater), it is possible that our sentences are about phenomena that have not been previously studied (for instance, some that appeared recently, such as those online) or use new approaches, from points of view that have not been previously followed or are the result of unknown correlations and so on.

It is highly probable that not only do we test old theories, but also to bring more valuable contributions to knowledge by completing or grounding new theories because the subjects of our research change, new phenomena specific to evolution and to technological progress appear. Then, the ways through which we produce new knowledge are also subject to change. For instance, studying a phenomenon only through verbal means (questions and answers) can generate partial knowledge, while using visual means for studying the same phenomenon could bring significant additions or knowledge obtained only by means of face-to-face techniques for data collection can be contradicted by knowledge obtained through online techniques.

Therefore, in order to evaluate the impact that results have in fundamental research, we will have to compare the results with those existing in literature and to show what new information we have brought – if we tested a theory, if we completed, modified, or contradicted an existing theory, or if we grounded a new theory.

Thus, the criteria of result evaluation are the possibility to generalise them and the level to which we can do that and their impact from a practical and/or theoretical point of view.

3.8. Examples of data interpretation

The model of data interpretation proposed could be more easily implemented in the case of quantitative research, because there the results are more schematical or more easily schematised. In qualitative research, we are used to encountering results – stories that are more difficult to systematise. Therefore, the exemplifications of the proposed model will comprise results of qualitative research.

Data interpretation in applied qualitative research

Objective: How are ten electoral slogans perceived by voters living in Brasov? We look for the most appropriate among them to be used in the election campaign of candidate CIP to the Town Hall of Brasov (Romania).

Results

Group interviews were carried out and for ranking slogans, two "scores" were used: one for the interpretation and consistency of the slogan – the concrete score and one of identification with the slogan – the symbolic score.

- Only three slogans obtained concrete positive scores for each group. These slogans are, in the ascending order of the size of scores: *I*, *F*, and *H*.
- The highest symbolic scores were obtained by these three slogans too, as follows (in ascending order): *F*, *H*, and *I*.
- There is a polarisation by groups of the concrete scores for slogans *F* and *H*. That can suggest a reciprocal group influencing and, implicitly, an artificial increase in the score.
- Slogan *I* does not record a polarisation by groups of the concrete scores (these, although slightly lower, are close in size comparatively by groups).
- Slogans *A* and *B* obtained average symbolic scores. This can generate a few suggestions:
  - slogan *A* can be use in the context of a manifesto, a flyer in which it is presented exactly what "different" means.
  - slogan *B* is suitable for less trained people, but scares intellectuals by the word "order", which suggests constraint.
- Negative scores for slogan *F* come from the fact that the simple intention of "making a proposition" is interpreted as a lack of responsibility, as a camouflage behind something which is not a commitment.
- Much of the positive scoring of slogan *H* come from the appreciation the word "efficiency" enjoys among the participants, regardless of the group they belonged to. This offers a suggestion: using this word in drawing up flyers, letters, and manifestoes.
- A negative aspect of slogan *H* is that it refers to the "current" issues of "the *ABC* of I.G." [the electoral slogan of the counter-candidate].
- The negative scoring of slogan *I* is not necessarily direct, but rather through implications ("always" burdens, it is difficult to realise etc.).

The conclusion is the following: the most appropriate CIP slogan to use in the election campaign is slogan *I*.

Result evaluation

Generalisation

The results are valid for voters resident in Brasov (in March, 2000) with the mention that the sampling criteria followed up to saturation were only the gender, the age, the level of education and

whether they were in employment.

Impact

Results provided a slogan to use in the electoral campaign plus suggestions of words and expressions to use or avoid in election materials.

Data interpretation in applied explanatory research

Objective: What are the childhood experiences that enhance the probability for people to become managers?

"The after-school for managers" seeks to identify the conditions (to implement within an after-school) that could increase the chance that children become managers when they grow up.

Results

- The educational environment has to be competitive.
- The general atmosphere rather authoritative and strict.
- Children have to learn what correctness, morality, respect for work and for others are through life lessons.
- Children need to have contact with various professions. To see how they are performed, and as far as possible, to try them.
- They can be paid (small amounts) for their work and left to manage their profit alone.
- The future managers must have different responsibilities. For instance, to supervise others, to look after animals, or even to do different house chores.
- Those who impose themselves in relationships with others through ideas and charisma will more likely become managers as well as those who find themselves more often in leadership roles among children (they have initiatives, they invent games, and they establish rules). These characteristics have to be pursued and cultivated by placing children in situations in which they could impose themselves.

Result evaluation

Generalisation

Results are experiences lived in childhood by persons in leadership positions in business in Romania (in 2009). The results are valid for them (all raised and educated in Romania), regardless of gender and age (only the gender and the age were used in sampling, data variations depending on other criteria were not tested).

Explanatory sentences should be checked additionally by testing them on representative samples of managers and non-managers.

Impact

Results offer suggestions related to the characteristics of the environment in which children who want to become managers have to be raised and educated, the activities that they should carry out, and the experiences that they should go through.

Data interpretation in fundamental descriptive research

Objective: What resources are perceived as being distributed unequally in Romania?

Results

- Resources perceived as being distributed unequally in Romania are economic and statutory.

Objective: What are status beliefs of Romanians?

Results

- The lower class in Romania is associated, mainly, to peasantry. Families with many children or elderly people, but also deviating categories: criminals, beggars, or alcoholics are also part of the lower class. The upper-class live in urban environments and performs office work.
- Property is the distinguishing mark of the upper class, and labour characteristics the distinguishing mark of the lower class.
- It is the lifestyle that essentially distinguishes social classes: the degree of life satisfaction and the living standards.

- The upper class differs from the lower class by consumption patterns (only essentials in the lower class and ostentatious consumption in the upper class).

Objective: What resources are perceived as being distributed unequally in an acceptable manner in Romania?

Results

- Inequality is considered to be a normal aspect of society.
- Economic inequality and status inequality based on merit are acceptable. The acceptable inequality sources are related to living standard and to professional prestige.
- The qualitative dimension of the lifestyle: dissatisfaction, discontentment, unhappiness, and ostentatious consumption are not acceptable sources of inequality.

Result evaluation

Generalisation

Results are valid for Romanians who live in the urban environment and are part of the middle class in 2015. The sampling criteria pursued (up to saturation), for which significant result variations were not noted are: gender, age, and level of education.

Impact

An old theory was tested in a new context – the theory of status beliefs has not been previously applied in Romania.

The theory of status beliefs was completed because, previously, the status beliefs were studied inductively only separately, by specific dimensions of inequality (e.g., income inequality). Here, inequality was treated as a whole.

Data interpretation in descriptive-explanatory fundamental research

Objective (descriptive): What are the perceived characteristics of social stratification in contemporary Romania and Italy?

Results

- Romanians perceive high inequality between people, Italians less.
- Unlike Romania, in Italy, the upper class is distinguishable by its political power. This dimension of stratification did not occur in Romanian participants.
- In Italy, inequality is allegedly perceived rather at a personal level (it is a matter of unfulfilled desires, conscious choices) and in Romania, at a social level (it is a matter of constraints, of membership).

Objective (descriptive): What are the perceived characteristics of social stratification in ideal Romania and Italy?

Results

- In ideal Romania, there is inequality among people, but more reduced than that in contemporaneity.
- The representatives of the two classes in today's Italy look like the representatives of the two classes in ideal Romania.
- In ideal Italy, there is no inequality between people.

Objective (explanatory): Why do Romanians consider inequality among people acceptable, and Italians do not?

Results

- The perceived level of inequality in a society determines its acceptability. The higher the perceived level of an inequality, the more acceptable it becomes.

Result evaluation

Generalisation

Results are valid only for the participants in the study. They can be used as hypotheses in larger, representative studies, in order to be tested.

Impact

The hypothesis resulting from research contradicts an existing theory regarding the legitimacy of inequality (people believe that the existing level of inequality is legitimate because they underestimate the degree of inequality in a society). This study claims the opposite: the higher the perceived level of an inequality is, the more acceptable it becomes.

3.9. Why do we need a standardisation of the data interpretation stage?

Regardless of the social phenomenon we want to study, the documentation stage is tormenting. Because there is no standardisation of result reporting (as we find, for example, some line-reporting within the summary of the research articles in medicine), because as I showed, research reports are very different in form, length, and organisation, for each documentation we have to do real research in order to identify previous results, in order to sum them up, understand them, and evaluate them. We have to read hundreds of pages, even thousands for each project that we carry out. The problem is not that we have to read, but that we waste our time for nothing. If we are interested only in the result, not in the story behind it, and not in the evidence that supports it and so on, we do not have the possibility of reading only this. The result is not formulated briefly and completely anywhere.

For instance, what I described in the previous paragraph in one of the examples of data interpretation in a few lines can hardly be found in the article on the respective research, that I published in a journal (see Scârneci-Domnișoru, 2015). The same results also exist in the article, but not in a condensed form; they are to be found here and there, in a very extended form, in the 36 pages of the article that, in the absence of a standardised list of results, those interested in inequality should read without exception.

For this reason, it is very difficult not only to identify and read what is already known about the research theme, but also to manage what we find. We have to process the materials, analyse them, precisely as in research that we have to do additionally to our own research. Most documentations that I have performed so far left me feeling that I will never manage to inventory the existing knowledge in a larger field, such as the sociology of the family, but not even that related to a complex phenomenon, such as migration, in fact, not even that related to a simple theoretical term, such as self-identity. The proof that something of this kind happened not only to me is the expression "terrorised by the literature" that circulates not only among students, but also in literature (see Becker apud Walcott, 2009).

Given that everything is already so complicated, how shall we consider the problem of evaluation of previous knowledge too? Most times, we take all studies that we find in literature for granted, without checking them. We do not have time for this either and, in very many cases, we could not even check them, because neither the result evaluation is presented in a standardised manner in reports, nor is the information necessary to evaluation provided to us. For instance, in many qualitative studies, the information regarding for what population the research results are valid is hardly identifiable or there is no information at all, then in many studies, literature is discussed superficially, mentioning authors with similar preoccupations, but not stating exactly the theory tested / completed / modified / contradicted through research.

I think we should consider research result standardisation as a proof of respect towards our colleagues, their time, their work, as a proof of responsibility and of cherishing knowledge, as an essential contribution to its development in social sciences.

Many of the theories in sociology, for instance, are unusable in research. They do not offer operational definitions for terms, do not clarify connections between concepts. They are a thicket in which researchers need to make way. We should offer results that are easy to identify and evaluate, we should offer by research operationalisations or conceptualisations of terms, we should clearly describe each of them and highlight their variations, correlations, and dependencies. We should organise knowledge.

We can do this even starting from the existing multitude of vague theoretical terms in literature. For instance, in descriptive research, I start with such a sensitising concept: from identity, defined as "an ensemble of circumstances that make a person be precisely that person". I tried to identify what the circumstances that make someone a manager are, by collecting data through interviews of the life story type. A broad conceptualisation of identity resulted, spanning life periods (childhood, adolescence, youth, and maturity), with reference to the physical environment, family, and school and related to material, professional, and relational circumstances. Conceptualisation occupies a few pages, but being schematical, it is very easy to follow and use by someone who wants to find out "the ensemble of circumstances that make a person a manager" or by someone who wishes to compare this ensemble of circumstances with those that make a person become a doctor, an engineer, or an astrologist.

Briefly, non-standardisation in presenting the research results makes them be hard to use, and new knowledge hard to produce.

4. Conclusion

I have tried, by this article, to show that there is a need to clarify the problem of data interpretation in social research. It should become clear that it is a distinct stage from the others, that it guides itself by rules, and that it has to be evaluated. It should become clear that data interpretation is something else than the research report, that the same research outcome can be presented differently, not depending on the type of research (qualitative, quantitative, or mixed-methods), but depending on the public and the communication interests of the researcher.

Clarifications are necessary for beginners, for they can understand in what consists and how data interpretation is performed, but also for researchers, in general also for the beneficiaries of knowledge, because the data interpretation stage is the one that indicates exactly what was found and if something new and valuable was found. The evaluation of the research outcome should be a mandatory part of the evaluation of any research.

I showed that a standardisation of the data interpretation stage is needed, of the way in which research results are presented. I proposed a model for data interpretation, a guide that can be used in any research, regardless of its theoretical-methodological approach. I described in detail what data interpretation should be and what it should not be, how research results should be formulated and what they should look like, depending on two relevant criteria related exclusively to objectives – the type of questions (descriptive or explanatory research) and for what purpose are the questions asked (applied or fundamental research).

I showed that the results should be assertions that describe or explain a phenomenon, that contain theoretical terms or not and that the results should be evaluated as being more or less valuable depending on how general they are and depending on their immediate practical applicability or their theoretical contribution – whether they bring more value to knowledge or not through testing, modifying, completing, contradicting, or grounding theories.

Following this model or a more or less similar one, but standardised, we can ease the process of producing new knowledge and we can contribute to its progress.

Acknowledgements

I thank, as usual, my colleagues Daniela Sorea and Carmen Buzea for the attention with which they review my articles. I am grateful to them for the pertinent and well-argued observations.

References

- Alasuutari, P., Bickman, L., & Brannen, J. [eds.] (2008). *The SAGE handbook of social research methods*. London: Sage Publications.
- Babbie, E. (2020). *The practice of social research* (15th ed.). Boston: Cengage Learning.
- Creswell, J. W. & Creswell, D. J. (2023). *Research design: qualitative, quantitative, and mixed methods approaches* (6th ed.). Thousand Oaks: Sage Publications.
- Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and conducting mixed methods research* (3rd ed.). Thousand Oaks: Sage Publications.
- Creswell, J.W. & Poth, C.N. (2018). *Qualitative Inquiry and Research Design Choosing among Five Approaches* (4th ed.). Thousand Oaks: Sage Publications.
- Denzin, N. K., & Lincoln, Y. S. [eds] (2017). *The SAGE Handbook of Qualitative Research* (5th ed.). Thousand Oaks: Sage Publishing.
- Feldman, M. (1994). *Strategies for Interpreting Qualitative Data*. Thousand Oaks: Sage Publications.
- Maxwell, J. A. (2021). "Why qualitative methods are necessary for generalization". *Qualitative Psychology*, 8(1), 111–118. https://doi.org/10.1037/qup0000173
- Morse, J. (2017). "Reframing Rigor in Qualitative Inquiry" in N. K. Denzin, & Y. S. Lincoln [eds.], *The SAGE Handbook of Qualitative Research* (5th ed.), pp. 1362-1398. Thousand Oaks: Sage Publishing.
- Nardi, P. (2005). *Interpreting Data*. Boston: Pearson.
- Neuman, L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches* (7th ed.). Boston: Pearson.
- Sandelowski, M. & Barroso, J. (2003). "Classifying the Findings in Qualitative Studies". *Qualitative Health Research*, 13(7), 905-923.
- Scârneci-Domnișoru, F. (2015). "Acceptable and Unacceptable Sources of Inequality
- in Romania. A Visual Study". *TRAMES - A Journal of the Humanities and Social Sciences*, 19(4), 367-402.
- Scârneci-Domnișoru, F. (2018). "Reflections on Social Research Methodology". *Bulletin of the „Transilvania" University of Braşov – Series VII: Social Sciences and Law*, 11(2), 91-102.
- Scârneci-Domnișoru, F. (in press). "From Sample to Population Generalization in Qualitative Research".
- Silverman, D. (2020). *Interpreting Qualitative Data* (6th ed.). London: Sage Publishing.

- Tashakkori, A., Burke Johnson, R., & Teddlie, C. (2020). *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences* (2nd ed.). Thousand Oaks: Sage Publishing.
- Terrell, S. (2021). *Statistics Translated: A Step-by-Step Guide to Analyzing and Interpreting Data* (2nd ed.). New York: The Guilford Press.
- Trent, A., & Cho, J. (2014). "Interpretation Strategies: Appropriate Concepts" in P. Leavy [ed.], *The Oxford Handbook of Qualitative Research*. New York: Oxford University Press.
- Willig, C. (2017). "Interpretation in Qualitative Research" in C. Willig & W. Rogers, *The SAGE Handbook of qualitative research in psychology*. London: Sage Publications.
- Wolcott, H. F. (2009). *Writing up qualitative research* (3rd ed.). Thousand Oaks: Sage Publishing.

Declarations

Funding: No specific funding was received for this work.

Potential competing interests: No potential competing interests to declare.