

Managing subjectivity in human science research

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Abstract

When undertaking research in the field of human sciences, a major concern of researchers is to think about and resolve the objectivity and subjectivity positions in their work. This is an important consideration because it deeply affects how research relationships are created, how the research process and procedures are set up, what data are accepted, how the analysis is conducted and how findings are presented. This paper tries to shed light on what constitutes a scientific method and what considerations a researcher in the field of human sciences needs to take into account to minimize and avoid bias in data collection, analysis and statement of results.

1. Introduction

This paper is meant to help researchers namely novice ones in their choice of instrument, data and procedure when undertaking research in particular in the field of human sciences where it is difficult to draw a distinction between objectivity and subjectivity. An appropriate methodology for human sciences must meet basic standards that justify the term scientific. At the same time these methods must be suitable for studying the range of phenomena they are intended to validate. Thus, an appreciation of how to go about research will enable the researcher to choose an appropriate methodology that meets his organizational and personal needs and at the same time lead him to findings that are more likely to withstand professional scrutiny, be comprehensible to others and have a wider application than those obtained from less robust approaches.

Before considering the characteristics of a suitable system which resolves the subjective-objective tendencies in human science research, it is necessary to examine some fundamental issues regarding what is known as the scientific method described as being objective.

2. What constitutes the scientific method?

It is widely agreed that the scientific method is a rational system for testing the validity of hypotheses based on empirical evidence. Yet, one important question to be raised when undertaking research in the field of human sciences is: *can human behavior be studied scientifically?*

In fact, those who believe that science can concern itself only with the study of external objects and events accept the view of the behaviorists that only the external manifestations of human behavior can be studied scientifically, not inner psychological experiences. Thus, the focus of the social sciences has been on studying the external behavioral characteristics of individuals and groups which can be observed and often measured 'objectively', as objects, by our senses. However, it is essential for human sciences to study and understand the *subjective* element in human experience to arrive to valid laws of human behaviour because we cannot ignore the inner subjective experience of human beings. Moreover, limiting the scientific study of humanity to externalities simply because that lends itself more readily to observation has ultimately led many scientists to ignore or even deny the relevance of psychological experience to a proper study of human behavior. This is why appropriate methodologies can and need be evolved to make that study scientific.

3. The subjective –objective dimension in the field of human sciences

Science must be objective in the sense that it is rational, logical and free of personal bias. But that does not mean science must limit itself to the study of external objects that can only be viewed 'objectively', i.e. by means of the senses and measuring instruments. The demand for empirical evidence arising from external observations in the physical world is well suited to the study of gross material forms, inanimate or animate, no matter how large or small. However, physics has long since penetrated into realms, such as zero-point energy and black holes, which cannot be observed. Their existence is only a postulate that can be utilized to explain observable results.

The rational study of inner psychological experience is no doubt difficult because it requires an extreme effort at impartiality on the part of the scientist observing the inner workings of his own mind and personality. But even the study of external objects and the evidence of the senses is subject to bias and illusion. The great achievements of science have not been based on the evidence of the senses, but rather on the application of the rational mind to overcome the limitation of those senses. We perceive with our senses that the sun is turning round the earth, but rational analysis has led us to understand that the earth is moving relative to the sun and not vice versa.

When it comes to human behavior, most of the determinative factors are subtle, rather than gross. Idea, understanding, attitude, motivation, opinions, beliefs, feelings, desires, urges and impulses are of central importance. Each of them can be observed subjectively i.e. psychologically by the person experiencing them but none of them can be directly observed externally by other people. We know, for example, how skills are formed

and we can measure precisely the magnitude of skill, but the existence of a skill cannot be directly observed.

Human Science cannot avoid a study of the subjective realms of human experience merely because they are difficult to observe without bias. Instead it needs to formulate methods for testing the validity of subjective observations by their capacity to predict objective behavior and events.

4. Methodology of human science research

Having dealt with the characteristics of a scientific method and the necessity of studying human experience which is considered as a subjective realm, one should consider what would constitute the characteristics of a valid methodology for human science research and how it might differ from the methodology of empirical science.

There are essentially two broad approaches to methodology, quantitative and qualitative. Quantitative research methods are favored by fundamental sciences. They are led by clear ideas prior to research, and the construction of hypotheses that can be tested through gathering evidence and measuring it in an empirical way. Such research is often based on complex statistical analysis of large amounts of data, carefully sampled. Such an approach may be highly appropriate for fact-finding, i.e. "What? Where? When?" But can rarely address "Why?" (Bell, 1999:14). In fact, numbers can 'prove' hypotheses but may not explain phenomena. Moreover, such research approaches are considered to be too narrow and limiting – too focussed on the specific and measurable – to account for the range of human phenomena associated with the broad field of education. This is why qualitative methodology has been adopted namely in the field of human sciences. This is described as "any type of research that produces findings not arrived at by statistical procedures or other means of

quantification" (Strauss & Corbin 1998:10). It is an appropriate approach for enquiries focusing on exploration and discovery rather than measurement or proof. Such studies may not be able to make claims to being representative, but might be illuminating and illustrative. However, they have been criticized for lacking objectivity.

In fact, in approaching any research question objectivity is perhaps best achieved through stating the researcher's position in relation to the topic at the outset, being explicit about both methodology as well as method, being transparent in reporting respondents' views and including a range of perspectives on the topic under discussion. Thus, "in qualitative research, objectivity means openness and willingness to 'give voice' to respondents" (Strauss & Corbin 1998:43, original emphasis). 'Objectivity' may remain a regulatory ideal, but any researcher will be coming from a particular stance, which will implicitly have an ethical dimension.

5. Conclusion

Despite the apparently entrenched positions mentioned above, it should be noted that "neither subjectivity nor objectivity has an exclusive stranglehold on truth" (Phillips 1993:61). The important point that emerges is the necessity for any researcher to be explicit about his own context so that others may judge how this particular perspective may have impact on research findings. In addition, he will take into account the some considerations which may minimize and avoid bias in data collection, analysis and statement of results.

In the data collection phase, problems can be minimized through pilot-testing and pretesting, validity/quality checks, triangulation and monitored flexibility. Sole reliance on subjective data, self-reports, etc. can reduce validity. Some tips to insure rigor in data collection management include training of all data collection staff

and conducting immediate post-collection coding for time/ memory sensitive data. Other methods to ensure the validity of data include tape recording interviews, performing real time data entry and editing, using paired interviewers, and implementing quality assurance for each instrument. And, to avoid further problems, incomplete, missing or unusable data should be corrected immediately.

Pitfalls related to data analysis include using ad hoc, emergent, exploratory, informal analyses that may lead to inappropriate conclusions and unpublishable results. Rigorous analysis requires an *a priori* theoretical model and hypothesis, a formal framework guiding data collection and analysis and adherence to the formal framework and research best practices.

Finally, reporting requires results structured by hypotheses and an analysis plan. Reports need to include data syntheses and summaries with a focused analysis of the data. Conclusions must have a documented basis and systematic formal analysis methods, and validity must be documented.

References

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