A Historical and Comparative Note on the Relationship Between Analytic Induction and Grounded Theorising

Martyn Hammersley

Abstract: Analytic induction (AI) and grounded theorising (GT) have long been influential models for conceptualising and guiding particular kinds of qualitative research. However, the relationship between them, in terms of both historical development and conceptual structure, is not always clearly understood. As I show in this article, there are obstacles to understanding these matters. Alfred LINDESMITH, one of the major architects and champions of AI, and Anselm STRAUSS, co-inventor of GT, were students of Herbert BLUMER at the same time, and collaborated on various projects. However, only STRAUSS, with Barney GLASER, provided a detailed comparison between the two approaches. Moreover, even this leaves us with some uncertainties about the precise nature of the similarities and differences, and the reasons for these. The relationship of AI and GT to BLUMER's methodological thinking is even more obscure.

Table of Contents

1. Introduction
2. Mutual Citation
3. A Comparison of Grounded Theorising with Analytic Induction
4. Discussion
References

1. Introduction

Alfred LINDESMITH, the leading practitioner of analytic induction, and Anselm STRAUSS, co-inventor of grounded theorising, were students of Herbert BLUMER, the advocate of symbolic interactionism and naturalistic method, at more or less the same time. Later they wrote two articles together (LINDESMITH & STRAUSS, 1950 and 1952) and collaborated in producing several editions of a best-selling text on Social Psychology (LINDESMITH & STRAUSS, 1949) plus a collection of readings on that topic (LINDESMITH & STRAUSS, 1969). All three of these Chicago sociologists made major contributions to the literature on sociological method. Yet, despite obvious similarities, there are some significant differences between their views. Furthermore, it is striking how little inter-textual reference there is amongst their various methodological writings. In this article I want to explore the differences in their orientation through examining the few references they do make to one another's work. These relate to some important, and rather neglected, features of qualitative research. [1]

1. And they may have been close friends; there is a reference to STRAUSS's wife doing "some of the editing and typing" for LINDESMITH's 1947 book (LINDESMITH, 1947, p.iii).
2. For an extended comparison of LINDESMITH's methodological work with analytic induction and grounded theorising, see HAMMERSLEY (1989).
2. Mutual Citation

As far as I am aware, aside from supplying a very positive preface to LINDESMITH's book in 1947, BLUMER never referred to analytic induction or to LINDESMITH's study of opiate addiction in any of his own published writings on methodology; though it must be said that references to any other work are quite rare in these materials. Of course, STRAUSS's development of grounded theorising (with GLASER) appeared very late in BLUMER's career, but he could have made reference to it in his chapter on "The methodological position of symbolic interactionism", written for a collection of his articles (BLUMER, 1969). By that time GLASER and STRAUSS's joint article on the "discovery of substantive theory" (1965a), GLASER's (1965) account of the constant comparative method, their first substantive book "Awareness of Dying" (GLASER & STRAUSS, 1965b), as well as The Discovery of Grounded Theory (GLASER & STRAUSS, 1967), had all recently appeared. Moreover, there were some close parallels between BLUMER's concept of "inspection", discussed in detail in BLUMER's 1969 chapter, and GLASER and STRAUSS's concept of the constant comparative method. [2]

Perhaps more curiously, there are very few places where LINDESMITH refers to the influence of BLUMER on his research, even though it seems likely to have been considerable. In the last article LINDESMITH published, he reports that his "greatest debt was to Dr. Blumer who introduced me to Meadian social psychology and related lines of thought and who got me started in the study of drugs [...]" (LINDESMITH, 1981, p.87). But in none of his work does he cite BLUMER's thesis of 1928, which would have been available in the University of Chicago library at the time he was doing his own PhD work, nor does he refer to any of BLUMER's later published articles on methodology, which appeared during the course of his career. Instead, as regards methodological influences, towards the end of his life he reported that:

"I was much taken with Mead's conception of scientific logic as implied in his account of the exceptional instance as the growing point of science and the implication that significant causal generalizations had to be formulated as universals [...]. Following Florian Znaniecki, I called the method implicit in this idea 'analytic induction'." (LINDESMITH, 1984, p.195) [3]

What this perhaps suggests is that what LINDESMITH learned from BLUMER was presented by the latter as the views of MEAD. LINDESMITH reports that other students studying sociology at Chicago at the time "obtained the bulk of their ideas about Mead indirectly, as I did, from Blumer and Faris" (p.195). [4]

---

3 This may reflect the fact that Chicago sociology was very much an oral tradition, see ROCK (1979).

4 See also LINDESMITH (1984, p.195). His study of opiate addiction was apparently started "in connection with a project being set up [by BLUMER] for that purpose"; and it was Broadway Jones "the professional thief and drug addict who wrote the bulk of SUTHERLAND'S book The Professional Thief" who suggested LINDESMITH for the task. LINDESMITH reports that "I had become well acquainted with Jones after he appeared as a guest lecturer in one of Sutherland's classes" (LINDESMITH, 1981, p.87).
STRAUSS's methodological writings on grounded theory appeared many years after LINDESMITH's discussions of method in his 1937 thesis, and the 1947 book based on it; and, in any case, the latter reported a substantive investigation of opiate addiction, rather than being primarily methodological texts. However, it is striking that there is no mention of grounded theorising in the fifth edition of the Social Psychology text LINDESMITH and STRAUSS co-authored, which was published in 1978 (LINDESMITH, STRAUSS & DENZIN, 1978), even though this included a lengthy discussion of scientific method, and despite the fact that by this time grounded theory (GT) was a major feature on the methodological landscape. That chapter was almost certainly written primarily by LINDESMITH, and what is presented conforms closely to the model of analytic induction, even though the phrase itself is not mentioned. There is also no reference to grounded theorising in a later article by LINDESMITH about causality and scientific method (1981). [5]

By contrast, STRAUSS does make several references to the work of both BLUMER and LINDESMITH, and some of them are quite detailed. There is a discussion of BLUMER's Appraisal of Thomas and Znaniecki's The Polish Peasant (BLUMER, 1939) in the very influential book that STRAUSS wrote with Barney GLASER: The Discovery of Grounded Theory. Surprisingly, they identify BLUMER's Appraisal as "an example of the kind of historical circumstance that put the generation of grounded theory into second place, and made verification the dominant orientation in virtually all sociological work" (GLASER & STRAUSS, 1967, p.12). They report that BLUMER's "major concern" (p.13) was "whether the materials adequately test the generalizations" (BLUMER, 1939, p.75; cited in GLASER & STRAUSS, 1967, p.13), and that his conclusion was that "the materials were not a decisive test of theoretical interpretations" (GLASER & STRAUSS, 1967, p.13). GLASER and STRAUSS add the following commentary:

"Blumer's critique was written during the period when Stouffer, Chapin, Lazarsfeld, Guttmann and other advocates of better (quantitative) measures for checking theory began to exert great influence in sociology. The emphasis in Blumer's critique on verification, then, fit the mood of the day. Yet the enormous influence of The Polish Peasant for two decades was less the result of its demonstrable findings than of its stimulating theory. With hindsight, we can wonder what might have happened if Blumer had focused less on the problem of verification and more on generation. He did, of course, come close to emphasizing the latter, since he raised the issue of how to theorize from data rather than from the armchair. But, as we see it, whatever his intent, Blumer threw the weight of his analysis toward an examination of verification, rather than toward the question of how to generate grounded theory. He left that latter problem largely untouched, apparently assuming that the most one could say was

5 In the first edition (LINDESMITH & STRAUSS, 1949, pp.229-32) there had only been a brief outline of the nature of scientific method, presented as a contrast with dogmatic modes of thought, and this too corresponds quite closely to AI.

6 For the most part, the references are in his work with GLASER, so attribution of views to STRAUSS himself is not entirely straightforward. However, while it is true that GLASER and STRAUSS later came to disagree about some key issues, as far as I can see these do not relate to what is being discussed here.
that good theory is produced by a fortunate combination—an inquiring mind, rich experience, and stimulating data." (p.14) [6]

At the end of this discussion of BLUMER's critique of The Polish Peasant, GLASER and STRAUSS add a footnote. They write:

"A year later, Blumer published an admirable article, addressing himself to the gap between ungrounded theories and the countless empirical studies unguided by any theories. Operationalism was then coming into dominance, and he attacked it effectively as not offering a solution to closing the gap. Closing it, he believed, would depend on 'developing a rich and intimate familiarity with the kind of conduct being studied and in employing whatever relevant imagination observers may fortunately possess. The improvement in judgment, in observation, and in concept will be in the future, as ... in the past, a slow maturing process' [Blumer, 1940, pp.718-9]. His emphasis on the meaning of the theory-data gap and on the requisite need for good qualitative data, we agree with thoroughly. Blumer's solution to getting better theory, and in close relation to the data, was—again—blunted because he was poised in too sharp a posture against verification (operationalism in this instance), and too ready to give up on the problem of how to generate better theory except by the general formula of sticking close to the data being studied." (GLASER & STRAUSS, 1967, p.14) [7]

While there is an ambiguity here as to whether BLUMER is being portrayed as supporting verificationism or as too preoccupied with challenging it, the key point seems to be the criticism that he failed to recognise the need for systematic theory generation and development, focusing instead on the importance of possessing the required personal capacities and gaining the necessary experience of human life in order to produce the conceptualisations necessary to understand social processes scientifically. [8]

As far as I can tell, STRAUSS only refers to LINDESMITH's methodological approach in two places. One of these is quite brief, and not very significant. In Qualitative Analysis for Social Scientists (STRAUSS, 1987), he uses Opiate Addiction (LINDESMITH, 1947) as one of "the readings" in a chapter on "Reading and writing publications", and here he is primarily interested in the stylistic organisation of LINDESMITH's book rather than in its conception of the logic of inquiry, which he portrays as concerned with if-then relationships. Much more substantial and important is an earlier reference, in The Discovery of Grounded Theory. [9]

---

7 GLASER and STRAUSS (1967, p.15) also note that, in replying to BLUMER, ZNANIECKI (1939, p.92) acknowledged the weakness that BLUMER had identified, but attributed it to the "excessive simplicity" of the conceptual framework used in The Polish Peasant. GLASER and STRAUSS comment that ZNANIECKI "was still thinking of the generation of theory largely in terms of a pre-existent conceptualization; he was still not emphasizing methods for generating grounded theory" (1967, p.15).

8 GLASER and STRAUSS refer to BLUMER's work in a couple of other places in their book. Here they praise him, once again, for addressing the gap between abstract theory and "miniscule substantive studies" (p.97), and they also take over his notion of sensitising concepts (pp.39 and 241).
3. A Comparison of Grounded Theorising with Analytic Induction

The importance of the discussion presented by GLASER and STRAUSS here is that it enables us to explore the similarities and differences they perceived between analytic induction and grounded theorising in some detail. In Chapter 5 of their book, these authors explicitly distinguish their conception of "the constant comparative method" from analytic induction, on the grounds that the former is not primarily aimed at testing causal hypotheses.\(^9\) They write:

"In contrast to analytic induction, the constant comparative method is concerned with generating and plausibly suggesting (but not provisionally testing) many categories, properties, and hypotheses about general problems (e.g., the distribution of services according to the social value of clients). Some of these properties may be causes, as in analytic induction, but unlike analytic induction others are conditions, consequences, dimensions, types, processes, etc. In both approaches these properties should result in an integrated theory. Further no attempt is made by the constant comparative method to ascertain either the universality or the proof of suggested causes or other properties. Since no proof is involved, the constant comparative method in contrast to analytic induction, is more likely to be applied in the same study to any kind of qualitative information, including observations, interviews, documents, articles, books, and so forth. As a consequence, the constant comparisons required by both methods differ in breadth of purpose, extent of comparing, and what data and ideas are compared." (GLASER & STRAUSS, 1967, p.104) \(^{10}\)

Interestingly, GLASER and STRAUSS locate these contrasts between analytic induction (AI) and GT in relation to two other approaches:

1. The conversion of qualitative data "into a crudely quantifiable form" by coding "all relevant data [that] can be brought to bear on a point", and then systematically [assembling], [assessing], and [analysing] these data in a fashion that will "constitute proof for a given proposition" (GLASER & STRAUSS, 1967, p.101). The quotations here are from BECKER and GEER (1960), and their work is being presented as illustrating this approach.

2. A concern solely with generating "theoretical ideas—new categories and their properties, hypotheses and interrelated hypotheses", and here the researcher "cannot be confined to the practice of coding first and then analyzing the data since, in generating theory, he is constantly redesigning and reintegrating his theoretical notions as he reviews his material" (GLASER & STRAUSS, 1967, p.101). GLASER and STRAUSS comment: "Analysis after the coding operation would not only unnecessarily delay and interfere with his purpose, but the explicit coding itself often seems an unnecessary, burdensome task. As a result, the analyst merely inspects his data for new properties of his

---

\(^9\) This chapter had previously been published as a journal article under the name of GLASER (1965), so it seems likely that he was the main author. However, given that it was reprinted in their joint book, I will take it as also representing the views of STRAUSS.
theoretical categories, and writes memos on these properties" (pp.101-2).  
What is being portrayed here is a much looser or more speculative approach to the generation of theoretical ideas than that seen as demanded by grounded theorising. [11]

GLASER and STRAUSS present both the constant comparative method and analytic induction as combining elements of these other approaches, but in different ways. Thus, the constant comparative method is designed to use the explicit coding associated with the first method in order to serve the function of the second one: generating and developing theories. They write:

"The purpose of the constant comparative method of joint coding and analysis is to generate theory more systematically than allowed by the second approach, by using explicit coding and analytic procedures. While more systematic than the second approach, this method does not adhere completely to the first, which hinders the development of theory because it is designed for provisional testing, not discovering, of hypotheses." (p.102) [12]

GLASER and STRAUSS relate their concern with explicit and systematic procedures to MERTON's (1957, p.390) call for researchers to report how they have done their analysis, so as to provide a basis for the clarifying the nature of qualitative analysis; and BARTON and LAZARSFELD's (1961) similar concern for the codification of qualitative work in parallel with LAZARSFELD's earlier codification of quantitative analysis (LAZARSFELD & ROSENBERG, 1955). [13]

GLASER and STRAUSS describe analytic induction as combining the other two approaches in a different manner from the constant comparative method:

"Analytic induction has been concerned with generating and proving an integrated, limited, precise, universally applicable theory of causes accounting for a specific behavior (e.g., drug addiction, embezzlement). In line with the first approach, it tests a limited number of hypotheses with all available data, consisting of members of clearly defined and carefully selected cases of the phenomena. Following the second approach, the theory is generated by the reformulation of hypotheses and redefinition of the phenomena forced by constantly confronting the theory with negative cases, cases which do not confirm the current formulation." (p.104) [14]

GLASER and STRAUSS produce the following table to show how these four approaches are related:
Table 1: Approaches to qualitative analysis (adapted from Table 1 in GLASER and STRAUSS, 1967, p.105) [15]

<table>
<thead>
<tr>
<th>Generating Theory</th>
<th>Provisional Testing of Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Combining inspection for hypotheses (2) along with coding for test, then analysing data (1)</td>
</tr>
<tr>
<td>No</td>
<td>Coding for test, then analysing data (1)</td>
</tr>
</tbody>
</table>

4. Discussion

If we look across the methodological writings of BLUMER, LINDESMITH, and STRAUSS, we find some significant variations in approach, not just similarities. However, the fact that there is relatively little mutual reference makes the differences hard to specify clearly and reliably. Only STRAUSS, with GLASER, provides a systematic comparison. From their discussion, we can identify the following dimensions where there seems to be significant variation in orientation:

1. Concerned exclusively with theory-testing, exclusively with theory-development, or with both.
2. Aimed at producing universally applicable versus locale-specific theoretical conclusions.
3. Concerned with producing a relatively narrow explanatory theory addressing a specific question (for instance, why do some people who take opiates become addicted?) or with generating a broader theoretical framework.
4. Tolerant of frequencies versus committed to finding all or none relations in the data.
5. Degree to which the approach relies upon systematic and explicit strategies for coding data, versus a more open-ended and intuitive approach.
6. Allows for or even requires reformulation of the phenomenon being investigated, versus no requirement for or no allowance of this.
7. Analysis requires/does not require firsthand experience and exploration of the phenomena concerned. [16]

There are several problems with seeking to locate the approaches of our three protagonists in relation to these issues. The first difficulty arises from the fact that, for the most part, we are dealing with dimensions here, and it is not always clear exactly where on these each writer is located. Moreover, dichotomising these dimensions turns differences of degree into sharp contrasts in orientation that may be misleading. Another difficulty is that it is not entirely clear what are
essential and what are "accidental" features of each approach. So, the fact that in practice a particular approach seems to have some feature does not necessarily mean that it must do so. The final problem is that the approaches prioritise different dimensions and treat some as unimportant. This arises from the fact that they do not seem to have been consciously developed in relation to one another, with the possible exception of GT. [17]

Bearing these problems in mind, the following table provides a summary comparison of the methodological orientations of BLUMER, STRAUSS and GLASER (GT), and LINDESMITH (AI) as regards the dimensions outlined above:

<table>
<thead>
<tr>
<th></th>
<th>BLUMER</th>
<th>AI</th>
<th>GT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concerned with both developing and testing theories</td>
<td>Concerned with both developing and testing theories</td>
<td>Concerned with developing not with testing theory</td>
<td></td>
</tr>
<tr>
<td>2. ?</td>
<td>Aimed at producing universally applicable theories</td>
<td>Aimed at producing locale-specific theories?</td>
<td></td>
</tr>
<tr>
<td>3. ?</td>
<td>Aimed at producing a specific explanatory theory</td>
<td>Aimed at producing a broad theoretical framework</td>
<td></td>
</tr>
<tr>
<td>4. ?</td>
<td>Any exception requires a revision of the theory until it matches data from all cases studied</td>
<td>Tolerant of frequency differences, there is no requirement that patterns be all or none.</td>
<td></td>
</tr>
<tr>
<td>5. Need for a flexible and open-ended approach</td>
<td>?</td>
<td>Systematic and explicit coding of data required</td>
<td></td>
</tr>
<tr>
<td>6. Descriptions of phenomena being investigated may need to be reformulated</td>
<td>Explanandum must be open to reformulation</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>7. Analysis must be based on first-hand experience and exploration of the phenomena concerned</td>
<td>?</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Comparing the methodological recommendations of BLUMER, STRAUSS (and GLASER) and LINDESMITH [18]

While some of the comparisons on these dimensions are relatively straightforward, others are not. In particular, specifying BLUMER's orientation on many of them is a particular problem, because it is hard to pin down the specific implications of what he writes, and there are no exemplars provided. Furthermore, it is arguable that there was a major fluctuation in his position.
around the time when his collection of articles was published in 1969. In his 1928 dissertation, his view was that a scientific approach is desirable in sociology, and that this involves developing and testing hypotheses through systematic empirical investigation, with the aim of producing theories that have the character of universal laws. Even at that time, however, he also expressed some doubts about whether this project could be successful. In 1969, he seemed to have changed his conception of science, though this is not explicitly acknowledged, and to have overcome his doubts, now advocating "naturalistic" investigation, consisting of exploration and inspection, as the scientific approach required in sociology. However, he later repeated his doubts (for a discussion of "Blumer's dilemma", see HAMMERSLEY, 2009). [19]

LINDESMITH's is perhaps the most clearly defined of the three approaches, partly because he not only spells out the character and rationale for AI, but also because this is done as part of an extended example of this kind of research. There are, of course, some questions that can be asked about the conception of science involved, and whether the approach is viable across other areas of social science. Relevant here is the fact that he is investigating social processes surrounding a fairly determinate physiological process. Moreover, as with the other classic examples of AI, notably the work of CRESSEY (1953) and BECKER (1953 and 1955), the focus is very much at the social psychological or micro-sociological level (see HAMMERSLEY & COOPER, 2009). [20]

As regards GT, there are a number of issues. One uncertainty concerns whether grounded theorising is aimed at producing locale-specific or universally applicable theory. From what GLASER and STRAUSS say in the passages quoted above, the former would seem to be the goal, but there are other places in their writings where the opposite position seems to be implied. Certainly, they assume that any theory produced through grounded theorising will be of use in many other contexts, not just in the ones studied. A second area of uncertainty concerns the extent to which GT is concerned solely with theory development. In the extracts quoted here, GLASER and STRAUSS are quite explicit that the aim is to develop and not to test theoretical ideas. However, there are other places in The Discovery of Grounded Theory where they seem to suggest that development and testing take place side-by-side (see HAMMERSLEY, 1989, pp.198-204). Furthermore, it is hard to understand how the development of theory can be effective if it specifically avoids any concern with whether or not the emerging theoretical ideas are likely to be true. But perhaps what is implied here is a difference in the threshold of plausibility that ideas must reach in order to be deemed worth pursuing? If so, what GLASER and STRAUSS are urging is that we should not be so preoccupied with testing theoretical ideas that we dismiss anything that does not seem to be immediately verified or verifiable. [21]

My aim in this brief article has been to try to clarify the links, similarities, and differences between analytic induction and grounded theorising, against the background of BLUMER's methodological thinking, which must have influenced both. The parallels and the divergences between these approaches are of considerable significance for the pursuit of qualitative research; even though, or
perhaps because, GT now seems to be the only approach of the three that currently has clear and substantial influence. Unfortunately, the issues raised here have not been resolved, or even much clarified, since the time when these three Chicago-trained sociologists were writing, in the early and middle periods of the twentieth century. [22]

References


Znaniecki, Florian (1939). Comment on Herbert Blumer’s appraisal. In Herbert Blumer, *Critiques of research in the social sciences 1. An appraisal of Thomas and Znaniecki’s “The Polish peasant in Europe and America”* (pp.87-98), New York: Social Science Research Council.

**Author**

Martyn HAMMERSLEY is Professor of educational and social research at The Open University. He has carried out research in the sociology of education and the sociology of the media. However, much of his work has been concerned with the methodological issues surrounding social enquiry. He has written several books, including *The Dilemma of Qualitative Method* (Routledge 1989); *Reading Ethnographic Research* (Longman 1991); *What’s Wrong with Ethnography?* (Routledge 1992); *The Politics of Social Research* (Sage 1995); (with Peter FOSTER and Roger GOMM) *Constructing Educational Inequality* (Falmer); *Taking Sides in Social Research* (Routledge, 1999); *Educational Research, Policymaking and Practice* (Paul Chapman, 2002), and *Questioning Qualitative Inquiry* (Sage 2008).

Contact:
Professor Martyn Hammersley
CHDL
2nd Floor Briggs Building
The Open University
Milton Keynes
MK7 6AA
United Kingdom
E-mail: m.hammersley@open.ac.uk
URL: http://www.open.ac.uk/education-and-languages/people/people-profile.php?staff_id=933470

**Citation**


Revised: 3/2010