Weitzman, Eben A. & Miles, Matthew B.: **Computer Programs for Qualitative Data Analysis.** Thousand Oaks, California 1995. 371 pages.

Anmeldt af *Ole Steen Kristensen*, lektor ved Psykologisk Institut, Aarhus Universitet.

In 1990, Renata Tesch published her very thorough review of computer software for qualitative data analysis. Since then the interest in computer software has increased. Renata Tesch made it clear to everyone that some aspects of qualitative data analysis are quite simple and routine work. Everyone with some imagination can understand how difficult it is to deal with hundreds or even thousands of pages from interviews, transcribed from tapes. In the early days, this method was named *glue-and-scissors*, not without some brutal irony -- a bottle of glue and a sharp scissors were the main instruments for the confused qualitative researcher who was trying to grasp and make sense of thousands of words, paragraphs and pages in an endless stream of consciousness. A chaotic world without any structure or table of contents to give some general knowledge. The computer became the solution, and it became the answer to the tiresome work of creating structure where no structure was found, and to keep track of all the electronic cutting and pasting.

Since 1990, new computer software has emerged and some is no longer in production. The book by Weitzman & Miles is one of many new books on computers and qualitative software and indeed a good one.

In format and graphics, the book matches very well the book by Miles & Huberman, called *Qualitative Data Analysis*. Actually, it is very easy to make a mistake -- I have already done that myself at least a dozen of times. If you look at the content, the relationship is also very close. The first book -- *Qualitative Data Analysis* -- gave us a very ambitious and very provocative survey of the field. The authors put forward a very strong formalism in their methods, and this formalism resembles the very cogent world of the computer. In the book under review here, the focus is almost solely on computer software, and the jump from the strong formalism in the first book to the cogent computer world in the second book is not a large one.

One of the first sentences in this book is: *"Which computer program should I use to analyze my qualitative data?"*. And the rest of the book is devoted to answering that question. The book is truly a user's book - one of the useful ones that you do not read from cover to cover, but a book that is very helpful as a reference book.

It is written for qualitative researchers who want to "initiate, extend, or update their use of computer software for qualitative data analysis" (p. 4). I can only appreciate that someone has done the very hard work of collecting all computer programs from the humble offices of the qualitative researcher, the place where many of the programs are created. It is also a dangerous task - books on computers are in danger of very quickly becoming out-of-date; programs are replaced by new versions, and it is almost impossible to cover everything.

Handbooks are always a challenge to the reviewer, and I also felt challenged. Would I succeed in finding missing details? With the reviewer's unfailing and reliable hand I found a program which I knew existed in several new versions, and I even found another program not even

mentioned in Weitzman & Miles. The program they do mention is reviewed in such a manner that the reader may get the impression that no further programming has happened during the last five years. -- At this point I have to confess that the programs in question are programs of which I have a special, inside knowledge. I am sure that the names Textbase Alpha, Textbase Beta and Kit look familiar to qualitative researchers in Denmark at least, and perhaps even all over Scandinavia. If not, and I cannot imagine why not, they are described in further detail in this newsletter. In Danish, I am afraid!

After this first feeling of self-confidence, I just kept on reading the book and found very thorough and illuminative reviews of no less than 24 computer programs for qualitative analysis. These are not regular manuals however much more useful. Weitzman& Miles make it possible for both future and present analysts to create a picture of the possibilities of the programes. This picture forms a basis for chosing a programme for ones own project. Although manuals should be a help to the user, they are often the final solution when you have tried every other possibility, including violence! However having an idea of the field of application of an programme is essential in choosing a program. Weitzman & Miles are remarkable in this context.

Only a few years ago the number of programs was not very impressive. At that time the existing programs - with few exceptions - had mainly the same functions and were primarily used as an electronic scissors. The fact that it is possible to choose among 24 very qualified programs - and a few more, considering the Danish ones as well - tells us something about the grand development in computer software for qualitative analysis. Weitzman & Miles emphazise the new developments within hypertext, networking and cluster analysis. Computer software and qualitative analysis is certainly no longer a question of glue and scissors!

At the moment no program is able to support all methods of analysis, and it may be necessary to get more than one program in order to carry out the analysis. The book presents several new aspects. Especially using hypertext in the analysis looks interesting. Hypertext is known from recent dictionaries and from the multimedea area. Hypertext search used in qualitative analysis methods may help the researcher to move through the text easily and thus get another perspective on the text differently from the linear way we usually read.

Weitzman & Miles describe the programs in five chapters, covering programs as text retrievers, programs as textbase managers (a kind of database search), programs building on the idea of code-and-retrieve, theory-building programs (programs which help building a hierarchy of concepts and categories), and programs for conceptual networks. On this area the program designers have had success in using the graphical programs.

The basis of Weitzman & Miles is obviously what may be called a categorising point of view on interview analyses. The text must be coded and categorised - without codes the interview analysis is not scientifically valid. The code is the essence and the basis of the development of theory in new advanced programs. You may find that during the analysis the focus may change from the text to the codes. The new programs help the researcher to create connections between the codes - a network of relations or a hierachy of concepts. This point of view on interview analysis clearly dominates the qualitative litterature. All programs I have seen have this basis.

Not only do Weitzman & Miles assist the beginner in choosing software, they also give good advise to program designers in relation to new development and revising of existing programs. Any program can be extended, Weitzman & Miles have many of good suggestions.

To complete the picture let me point out, that Weitzman & Miles are fully aware of the problems that exist in using the computer on this area, considering the fact that the introduction of computers to qualitative analyses may influence the results. One experiment shows that using the socalled code-and-retrieve programs you risk fixing the category system too early, while network programs encourage multiple and often too complex connections between codes, text and memoes. I fully support Weitzman & Miles in their hope for further studies of the consequenses of the computer.

Renata Tesch initiated the work of making it easier for us to survey the qualitative analysis methods - Weitzman & Miles carry on in the finest way.