

Introduction to SPSS

[Last updated: 19 June 2010]

What is SPSS and what does it do?

SPSS consists of an integrated series of computer programs which enable the user to read data from questionnaire surveys and other sources (e.g. administrative records), to manipulate them in various ways and to produce a wide range of statistical analyses and reports, together with documentation.

In at the (SPSS) deep end

The first time I ever used SPSS (not!) was in a desperate attempt to obtain badly delayed results from a live "Life in Oxford" survey designed and conducted from scratch (under my supervision) by students on the 1972 SSRC Survey Methods Summer School at St Edmund Hall, Oxford. By the final evening of the course we had managed to code and enter all the data and get preliminary frequency counts, but little else. I wanted to have much more analysis to give students in return for all their efforts, but Clive Payne (our resident SPSS wizard, who up to then had done all the computing) had to leave early for a "pressing social engagement" (I think it was his wedding anniversary or his wife's birthday). He handed me the only copy of the manual (first time I'd ever seen it!) and I was left on my own in the computer centre with only the operator for company. Despite heroic efforts from both us, we obtained nothing but indecipherable error messages and I was eventually thrown out at midnight as the operator wanted to go home. On top of that I missed my dinner and the end-of-course party!



(1975 cartoon by Colin Brown, then a trainee researcher in the SSRC Survey Unit, now Policy Director at the Office of Fair Trading)

To see how much stress this caused, click [here](#). These tutorials should help you to avoid all that.

The original version of SPSS (**S**tatistical **P**ackage for the **S**ocial **S**ciences) was written in the late 1960's by two post-graduate political science students who could get no joy from statisticians or computer programmers when it came to processing, manipulating and analysing data from questionnaire surveys. They brought in a programmer to help them produce something to help users write commands which looked more or less plausible social science language in English, and for the first time gave social scientists control over their own such research. Needless to say, sociologists and political scientists loved it: statisticians and computer programmers hated it (some still do!).

From humble beginnings and its first release in 1968 it became a multi-million dollar international corporation and was acquired by IBM in September 2009. It is installed in virtually every academic and central/local government computer centre in Europe. Statisticians and computer programmers have been taken on to its staff and a Windows version is now available. The rise of SPSS was due partly to its user-friendliness and partly to the wide availability of the manual, the first edition of which was also a particularly good statistics text. Its main competitors (P-Stat, BMDP, Osiris) were slow to realise this and they now also have manuals and user-friendly language. One, SAS, was developed in direct competition for IBM machines. However, SPSS thrives still, largely because of its penetration into more academic and public sector computer centres, thus enabling users who move between institutions and employers to carry on working with it with few if any retraining requirements.

There is a huge user community running into millions. If there are any bugs in a new release they will be found and corrected within days if not hours. It's not perfect, as we shall discover, but for years (until the advent of Stata and R) there was, and still is, nothing to compete with it in Europe.

These tutorials are not intended as a substitute for those provided inside SPSS, for the on-line [introductions and tutorials for SPSS](#) available elsewhere, or for the more approachable [textbooks](#), but beginners with little or no previous experience of survey data or statistical analysis, or of related computer software, may find my step-by-step approach will help to ease you gently into an exciting new world of survey analysis.

SPSS is not the only software available for processing and analysing survey data: it's not even the one I started with. That was a suite of programs I wrote with John Whittaker at Salford University in the mid 1960s to analyse the Salford Work and Home Survey: these programs were written in Algol for an English Electric KDF9 (all of 64K RAM!). In 1968, when I moved to the Department of Transportation and Environmental Studies at Birmingham, I adapted them for the departmental English Electric PDP11. All these programs used 8-hole paper tape for both input and output.

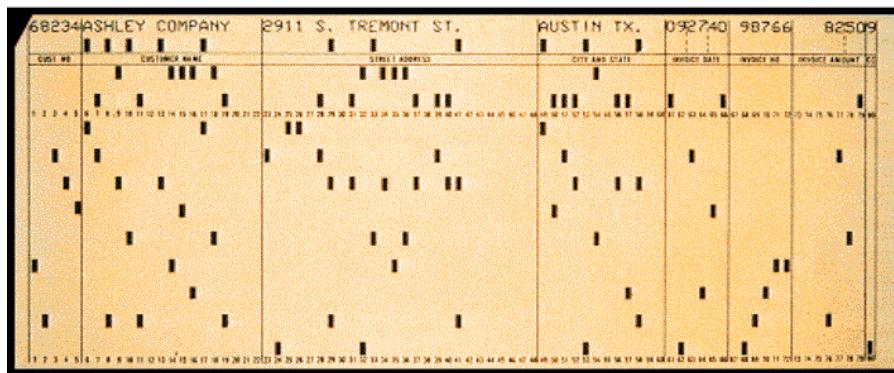


Small reel of 8-hole paper tape: some reels were enormous!

They were known as the Salford Survey Suite and were maintained at Salford until 1979 when, in view of the wide availability of SPSS, I advised they be discontinued.

In 1970, when I moved to the SSRC Survey Unit, I used to get stacks of printed output from outside research agencies commissioned to conduct surveys for us (eg Research Services Ltd., who used software by Donovan Data Systems). However I mainly used the computer facilities at LSE, especially two programs by Peter Wakeford, one for survey data tabulation (SDTAB) and another (MUTOS) for spreading out multi-punched data. All data came punched on 80-column Hollerith cards. The LSE programs were Fortran-based and also used cards for input, but at least we got printed output back.

From Computer Desktop Encyclopedia
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80-column Hollerith punched card: 12 hole-sites (0 – 9 , - , +)

For anything more sophisticated, we either went back to RSL and Donovan, or Jim Ring would write ad-hoc programs in Fortran.

This all changed dramatically in 1972 when SPSS arrived at LSE, but even then, long before they appeared in SPSS, Jim used to write ad-hoc programs (to my specifications) to analyse multiple response or handle hierarchical and longitudinal data,. Input to SPSS was still on cards, but we got back reams and reams of output (errors and all).

Since 1972, SPSS has developed out of all recognition, starting with interactive mode for mainframes and PC+ for desktop PC/AT computers, culminating in SPSS for Windows with its use of colour graphics and drop-down menus. However, in spite of having all the bells and whistles in the universe, this sometimes makes things harder to see, understand and perform.

I prefer to keep things simple, very simple, and for them to work first time. Moreover, for the most common operations in data handling and analysis, I invariably use syntax rather than drop-down menus, and that's not just because I learned it that way long before PCs, Windows, mice and SPSS for Windows!. You can see how I feel about the pointey-clickey-mousey approach in the very apposite [mouse movie](#). That said, most of my exercises are also repeated using the menus as well as syntax, so it's up to you to decide which is better for you.

See also:

[What is SPSS?](#)

[Survey Analysis Workshop](#) explains the background to the course

[Note on SPSS Tutorials](#) explains the nature of the SPSS tutorials

[Currently available SPSS materials](#) lists pages containing tutorials and support materials.

[Summary Guide to SPSS/PASW 18 tutorials](#).

[Tutorials for SPSS 15](#)

[Tutorials for SPSS/PASW 18.](#)