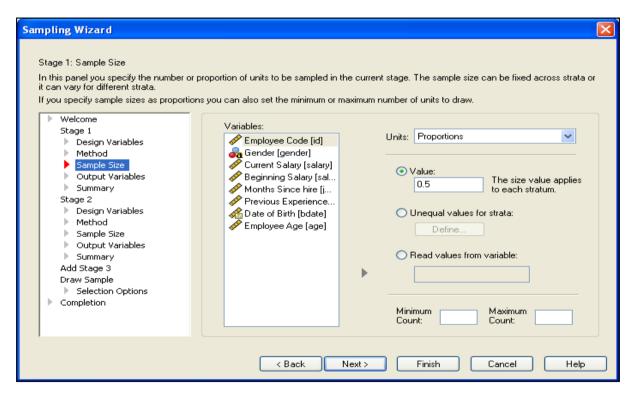**IBM SPSS Complex Samples**

- An inherent assumption of many classical statistical procedures is that the data represents a *simple random sample* drawn from the population of interest. The IBM SPSS Complex Samples module allows users to draw samples that are more complicated than simple random schemes.

- Complex Samples also allows statistical analyses to be carried out that *take account* of the complex sampling scheme used in collecting the data. An example of this would be carrying out a chi square test to see if larger households are more likely to recycle glass than smaller households. Using Complex Samples, the researchers could calculate a more appropriate test statistic based on a sample where every 3$^{rd}$ house was sampled from a random selection of 50 streets in a town.

- Complex Samples has two primary modes:

    - Using the *Sampling Wizard,* analysts can plan and carry out surveys by drawing samples according to complex designs and possibly analysing the sample later.

    - Using the *Analysis Preparation Wizard,* users can analyse sample data files that have already been obtained using complex sample designs.

The image below shows an example of drawing a 'complex sample'. In this case the procedure draws the sample by selecting every second person from three randomly chosen lines.