



## SPSS Tip 7.1

### Alternatives to the Mann–Whitney test ||||

Under the 'Settings' tab in **Figure 7.7** there are other tests available:

- **Kolmogorov-Smirnov Z:** In Chapter 6 we met a Kolmogorov–Smirnov test that tested whether a sample was from a normally distributed population. This test is different: it tests whether two groups have been drawn from the same population (regardless of what that population may be). In effect, this test does much the same as the Mann–Whitney test, but it tends to have more power when sample sizes are less than about 25 per group, and so is worth selecting if that's the case.
- **Moses Extreme Reactions:** This test makes me think of a bearded man standing on Mount Sinai reading a stone tablet and then suddenly bursting into a wild rage, smashing the tablet and screaming 'What do you mean, do not worship any other God?' This test is nowhere near as exciting as my mental image. It's a bit like a non-parametric Levene's test (Section 6.11.2) that compares the variability of scores across two groups.
- **Wald-Wolfowitz runs:** Despite sounding like a bad case of diarrhoea, this test is another variant on the Mann–Whitney test. In this test the scores are rank-ordered as in the Mann–Whitney test, but rather than analysing the ranks, this test looks for 'runs' of scores from the same group within the ranked order. If there's no difference between groups, then ranks from the two groups should be randomly interspersed. However, if the groups are different then you should see more ranks from one group at the lower end and more ranks from the other group at the higher end. By looking for clusters of scores in this way the test can determine if the groups differ.

