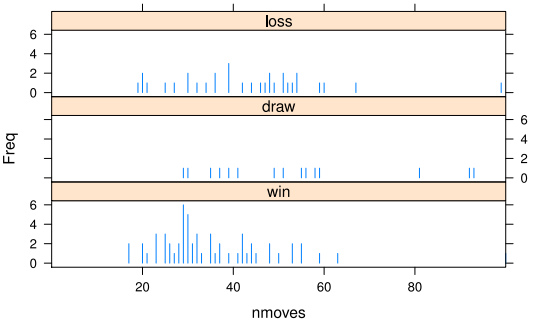

Figure 1: A statistical plot produced in R using the **lattice** package. The data are from chess games involving Louis Charles Mahe De La Bourdonnais between 1821 and 1838 (original source: http://www.chessgames.com/).

Figure 2: A free-form image of a chess pawn. This is an example of the sort of artistic graphic that is difficult to produce using statistical software.

difficult to produce an image of a chess piece, like the pawn shown in Figure 2, using statistical software.

In the case of R, there is a general polygon-drawing function, but determining the vertices for the boundary of this pawn image would be non-trivial. These sorts of artistic images are produced much more easily using the tools that are provided by drawing software such as the **GIMP** (Kylander and Kylander 1999, http://www.gimp.org/) or **Inkscape** (Bah 2007, http://www.inkscape.org/), not to mention that producing an aesthetically pleasing result for this sort of image also requires a healthy dose of artistic skill.

However, there are situations where it is useful to be able to include artistic images as part of a statistical plot. Figure 3 demonstrates this sort of annotation by adding a pawn to each panel of the plot from Figure 1, to provide an additional visual cue as to whether the games in the panel were won (white pawn), drawn (grey pawn) or lost (black pawn).

This is one example of the problem that is addressed in this article. Stating the issue more generally, this article is concerned with the ability to import graphical images that have been generated using third party software into a statistical software system so that the images