

## Chapter 5: Exploring data with graphs

### Labcoat Leni's Real Research

#### Gonna be a rock 'n' roll singer (again)

Oxoby, R. J. (2008). *Economic Enquiry*, 47(3), 598–602.

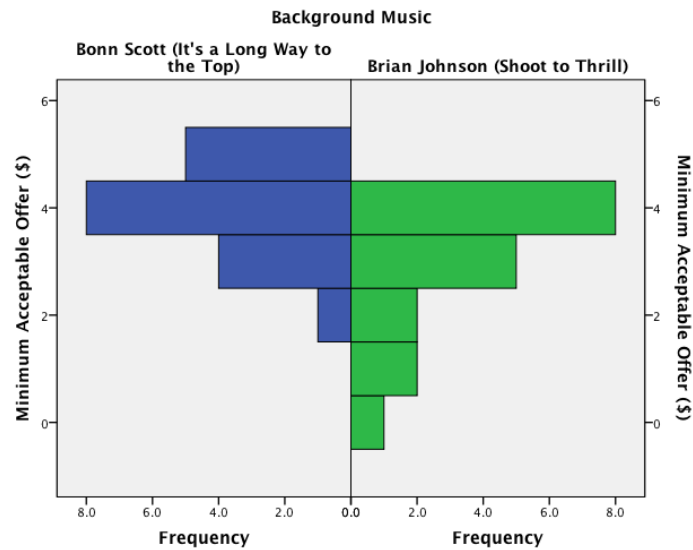


In Labcoat Leni's Real Research 4.1 we came across a study that compared economic behaviour while different music by AC/DC played in the background. Specifically, they manipulated whether the background song was sung by their original singer (Bon Scott) or his replacement (Brian Johnson). They measured how many offers participants accepted (**Oxoby (2008) Offers.sav**) and what the minimum offer was that they would accept (**Oxoby (2008) MOA.sav**). See Labcoat Leni's Real Research 4.1 for more detail on the study. We entered the data for this study in

the previous chapter, now let's graph it. Produce separate population pyramids for the number of offers and the minimum acceptable offer and in both cases split the data by which singer was singing in the background music. Compare these plots with Figures 1 and 2 in the original article.

#### Solution

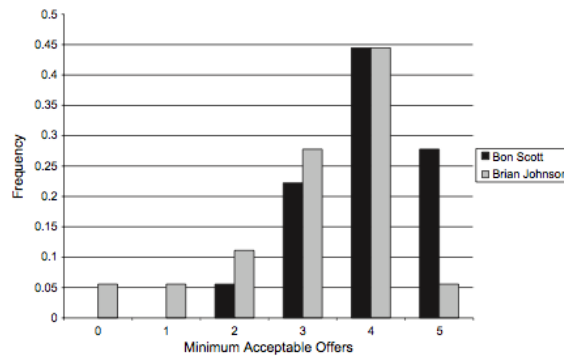
First, let's produce a population pyramid for the minimum acceptable offer data. To do this, first open the file **Oxoby (2008) MAO.sav**, then access the Chart Builder and then select *Histogram* in the list labelled *Choose from* to bring up the gallery. This gallery has four icons representing different types of histogram, and you should select the appropriate one either by double-clicking on it, or by dragging it onto the canvas in the Chart Builder. Click on the population pyramid icon (see the book chapter) to display the template for this graph on the canvas. Then from the variable list select the variable representing the minimum acceptable offer and drag it into  to set it as the variable that you want to plot. Then select the variable representing background music and drag it to  to set it as the variable for which you want to plot different distributions. Click on  to produce the graph. The resulting population pyramid is show below.



Population pyramid of minimum acceptable offers

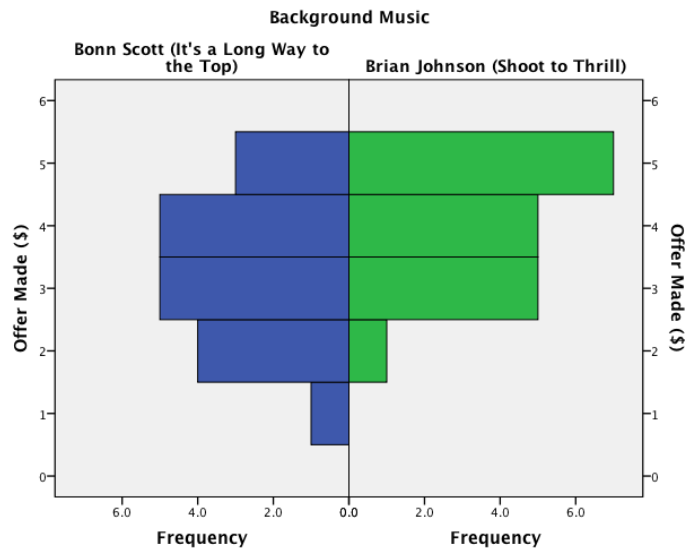
We can compare the resulting population pyramid above with Figure 2 from the original article (below). Both graphs show that MAOs were higher when participants heard the music of Bon Scott. This suggests that more offers would be rejected when listening to Bon Scott than when listening to Brian Johnson.

**FIGURE 2**  
The distributions of MAOs in the Bon Scott and Brian Johnson treatments



Next we want to produce a population pyramid for number of offers made. To do this, first open the file **Oxoby (2008) Offers.sav**, then access the Chart Builder and then select *Histogram* in the list labelled *Choose from* to bring up the gallery. This gallery has four icons representing different types of histogram, and you should select the appropriate one either by double-clicking on it, or by dragging it onto the canvas in the Chart Builder. Click on the population pyramid icon (see the book chapter) to display the template for this graph on the canvas. Then from the variable list select the variable representing offers made and drag it into  to set it as the variable that you want to plot. Then select the variable representing background music and drag it to  to set it as the variable for which

you want to plot different distributions. Click on  to produce the graph. The resulting population pyramid is show below.



Population pyramid of offers accepted

We can compare the resulting population pyramid above with Figure 1 from the original article (below). Both graphs show that offers made were lower when participants heard the music of Bon Scott.

**FIGURE 1**  
The distributions of offers in the Bon Scott and Brian Johnson treatments

