Node Link:

- Useful for visualising relational data, particularly that of a hierarchal nature.
- Each datum or group of data is expressed as a node and is connected to all its other paired nodes using some sort of visible link.
- Each node individually distinguishable, i.e. by colour/shape/label/position.
- Linking methods consistent, i.e. connected lines/arc concentric with parent arc.

Strengths:

- Nodes easily distinguishable
- Scales well if space can be used efficiently
- Clear structure given to output
- Works particularly well for hierarchal data

Weaknesses

- Large data sets can cause crossing lines if not careful
- Non- hierarchal data can be difficult to position, what works for one data set may not work for another
- Can be difficult to make aesthetically attractive and also visually clear

Matrix Graph:

- Works by dividing the space of the canvass along the horizontal axis and then the vertical axis
- Labels assigned, usually to rows so text can be read naturally
- Boxes are filled or unfilled in this grid to identify links, creating a symmetric (about the diagonal line from top left to bottom right usually) representation of the data.

Strengths:

- Solves problem of line crossing, links are given their own space
- Data with lots of connections can be easily distinguishable
- Can be used effectively non- hierarchal datasets
- Can also be manipulated to demonstrate hierarchy if necessary

Weaknesses

- Doesn't scale well (by a factor of N!)
- Not always spatially efficient, i.e. small amounts of connections result in lots of empty space
- Links can be difficult to identify, especially as scale increases

Node Link vs Matrix Graph

- Node links visualisations are especially useful for large amounts of data with small numbers of connections per datum.
- Matrix Graph visualisations are most suited to smaller data sets with large amounts of interconnectivity between each datum.
- If data can be grouped easily then it can help simplify the clutter in a node link diagram.
- Matrix graphs at a large scale make it difficult to quickly identify links as each cell must be traced back to the label for its row and column
- Node link diagrams are almost impossible to follow if the number of links per datum is large and if the data cannot be positioned easily and reliably