**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