Social Network Analysis Overview

Social network analysis is the application of network theory to the modeling and analysis of social systems. it combine both tools for analyzing social relations and theory for explaining the structures that emerge from the social interactions.

Of cause the idea of studying societies as networks is not a new one but with the rise in computation and the emergence of a mass of new data sources, social network analysis is beginning to be applied to all type and scales of social systems from, international politics to local communities and everything in between.

Traditionally when studying societies we think of them as composed of various types of individuals and organizations, we then proceed to analysis the properties to these social entities such as their age, occupation or population, and them ascribe quantitative value to them.

This allows social science to use the formal mathematical language of statistical analyst to compare the values of these properties and create categories such as low in come house holds or generation x, we then search for quasi cause and effect relations that govern these values.

This component-based analysis is a powerful method for describing social systems. Unfortunately though is fails to capture the most important feature of social reality that is the relations between individuals, statistical analysis present a picture of individuals and groups isolates from the nexus of social relations that given them context.

Thus we can only get so far by studying the individual because when individuals interact and organize, the results can be greater than the simple sum of its parts, it is the relations between individuals that create the emergent property of social institutions and thus to understand these institutions we need to understand the networks of social relations that constitute them.

Ever since the emergence of human beans we have been building social networks, we live our lives embed in networks of relations, the shape of these structures and where we lie in them all effect our identity and perception of the world.

A social network is a system made up of a set of social actors such as individuals or organizations and a set of ties between these actors that might be relations of friendship, work colleges or family. Social network science then analyze empirical data and develops theories to explaining the patterns observed in these networks

In so doing we can begin to ask questions about the degree of connectivity within a network, its over all structure, how fast something will diffuse and propagate through it or the Influence of a given node within the network. lets take some examples of this

Social network analysis has been used to study the structure of influence within corporations, where traditionally we see organization of this kind as hierarchies, by modeling the actual flow of information and communication as a network we get a very different picture, where seemingly irrelevant employees within the hierarchy can in fact have significant influence within the network.

Researcher also study innovation as a process of diffusion of new ideas across networks, where the oval structure to the network, its degree of connectivity, centralization or decentralization are a defining feature in the way that innovation spreads or fails to spread.

Network dynamics, that is how networks evolve overtime is another important area of research, for example within Law enforcement agencies social network analysis is used to study the change in structure of terrorists groups to identify changing relations through which they are created, strengthened and dissolved?

Social network analysis has also been used to study patterns of segregation and clustering within international politics and culture, by mapping out the beliefs and values of countries and cultures as networks we can identify where opinions and beliefs over lap or conflict.

Social network analysis is a powerful new method we now have that allows us to convert often large and dense data sets into engaging visualization, that can quickly and effectively communicate the underlining dynamics within the system.

By combine new discoveries in the mathematics of network theory, with new data sources and our sociological understanding, social network analysis is offering huge potential for a deeper, richer and more accurate understanding, of the complex social systems that make up our world.