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Six degrees of separation

I found myself confronting a slightly awkward truth this week when trying to recall the various jobs I had done in a 27-year career. Not one of them came from replying to a job advertisement.

Most of my job interviews arose through various tenuous connections with people who were willing to make the right noises in the right circles. Apparently this is not uncommon: Mark Granovetter, a Stanford-based professor, published a paper in the 1960s, *The Strength of Weak Ties*, that investigated the way people used social connections to secure jobs.

After interviewing dozens of managerial and professional workers, asking who had helped them find their job, he kept getting the same reply. The job contact did not come through a friend but through someone who was no more than an acquaintance. His subsequent paper proposed that when it came to finding a job our relatively weak social connections were more important than close friendships.

The reason is that our strongest friendships tend to involve tight-knit clusters of friends in which everyone tends to know everyone else. Acquaintances, on the other hand, have their own friendship clusters, so the acquaintance, rather than the friend, is likely to have the more useful connection. The same applies with close colleagues and the more distant contacts we have through our work.

The Granovetter story is related by *Albert-Laszlo Barabasi in Linked, The New Science of Networks* *. I have mentioned the book before but it deserves a broader airing for the way it explains relationships that could turn out to be increasingly significant in the organisation of work and in society as a whole.

Some months ago I mentioned the idea of "six degrees of separation", made famous in an experiment by Stanley Milgram, the sociologist, who measured the number of links it took for people chosen at random in Kansas and Nebraska to send parcels to a named recipient in Boston. They were simply asked to send the parcel to someone who they thought was likely to be more closely connected with the recipient than they were.

Although the average number of links was close to six, in some cases the parcel made it with just two links; in others it needed as many as 11. It was clear that some people were better connected than others. As Malcolm Gladwell noted in his book *The Tipping Point*, "Sprinkled in every walk of life are a handful of people with a truly extraordinary knack of making friends and acquaintances. They are the connectors."

When connections are confined to specific industries, the degrees of separation tend to be even smaller. A few years ago, a group of students from Albright College in Reading, Pennsylvania, entertained viewers of a celebrity talk show by demonstrating the close connections of Kevin Bacon, their favourite Hollywood actor. In fact Mr Bacon proved to be far less well connected than many of his fellow actors. Rod Steiger was the best-connected Hollywood actor, ahead of Donald Pleasence; Kevin Bacon came 876th.

These rankings were established by another group of students, at the University of Virginia, when they set up The Oracle of Bacon website** using statistics from an

internet database of films, www.IMDb.com . I can recommend a visit. For example, it takes just three films to connect Richard Branson, chairman of Virgin, and Shirley Temple. Shirley Temple appeared in *Hollywood Gad-About* in 1934 with Billy Barty, who appeared with Dudley Moore in *Foul Play* in 1978. Dudley Moore appeared with Richard Branson in *Derek and Clive Get the Horn* in 1979.

Unfortunately there is no website out there that makes similar connections for executives (other than those who have appeared in films, such as Michael Eisner, president of the Disney Corporation, who is connected to Elizabeth Taylor via Whoopi Goldberg). But studies have been carried out into the connectedness of board directors among the Fortune 1000. A team of academics from the University of Michigan Business School looked at the web of connections between 7,682 directors who between them held 10,100 directorships. While most of them served on no more than one board, a privileged 7 per cent held three or more directorships.

The Michigan team calculated that the members of this smallest cluster of directors were, on average, just 4.6 handshakes away from any other director of these top companies. One director, the Washington lawyer Vernon Jordon, had collected 10 directorships that put him, on average, just three handshakes away from the rest.

The ideas surrounding the strength of weak ties suggest that sector-based connections, while useful, are far less impressive than those maintained by true connectors such as Mr Jordan, who are skilled at crossing boundaries between different walks of life. These individuals act as hubs in successful networks that do not consist of randomly distributed individuals. A database is not a network . This is fundamental to understanding how networks can be exploited in the distribution of work, because it reveals that positioning is vital if people are to take advantage of potential opportunities. If we assume that there is plenty of work out there for all of us, it follows that the better connected we are, the more choices we are likely to have over the tasks we may wish to undertake.

Mr Barabasi notes that networks have a natural order, corresponding to certain rules of physics. The network , for example, can endow a greater advantage on those who are its most influential members, on the lines of the 80/20 principle outlined by the Italian economist Vilfredo Pareto. They can, in some circumstances, even promote a winner-takes-all form of dominance, which does not tend to happen in the capitalist system although Mr Barabasi points to Microsoft's dominance of operating systems.

But is the language of dominance, of winners and losers, so readily applicable to networks ? If their influence is growing in business, through the popularity of alliances and partnerships, their co-operative nature is likely to change the way we compete, possibly leading to different patterns of employment.

Even if hierarchies are retained, they too may differ, emphasising different human qualities - such as connectedness. One day, perhaps, it may be commonplace to see enterprises guided by freelance influencers or connectors, charging market rates, rather than relying on the increasingly costly presiding presence of an incumbent chief executive.

**Linked, The New Science of Networks , by Albert-Laszlo Barabasi, is published by Perseus, price Dollars 26. **see the star links section at www.oracleofbacon.org*