Richard Bach, in his book *Illusions*, states a handy aphorism: **Perspective – use it or lose it**. This periodical shares amongst recreation and tourism management professionals, such as yourself, several tools and concepts which will help exercise your perspective. This issue looks at the networks that create a small world amongst the 6.4 billion residents of earth, and how networks help support a civil society.

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Six degrees of separation

Psychologist Carl Jung is responsible for the concept of the 'collective unconscious' and the term synchronicity[1], neither of which has ever appealed to me as particularly useful ideas. Synchronicity suggests meaning can be gleaned from unrelated events, such as a dog barking precisely at midnight.

The thing about coincidences is; if they happened every day they wouldn't be coincidences. They would be habit. Coincidences happen infrequently, and as a result they are remarkable (in that you are led to remark about them). I once had a dream about coming across a burning occupied car and being unable to do anything about it. The feeling of helplessness encouraged me to buy a fire extinguisher for our vehicle. Within a week, nothing had happened. Years later and the extinguisher is now past its best-by date. Too many potential coincidences just never happen. Or perhaps I'm just excluded from the universe's collective unconscious.

My assessment has been that the appeal of synchronicity relies on our desire to find meaning in the routine[2]. However, it seems coincidence is more routine than I reckoned. Mark Buchanan's book *Small World*[3] suggests that coincidences of the human kind may have a mathematical inevitability (rather than resulting from ethereal unconscious psychological connections).

Consider 'six degrees of separation'. Back in the 1960s a psychologist sent letters to random addresses in Nebraska and Kansas asking recipients to send them to a stockbroker in Boston – for whom no address was given. On average it took just six steps for the letters to arrive at their destination. More recently a German newspaper tested the concept by counting the social links between a Turkish kebab-shop owner in Frankfurt and Marlon Brando. Same story. Other similar studies show comparable results. It appears that all 6.4 billion of us are on average six people apart. You'd think there'd be fewer wars.

How does this happen? Buchanan reviews numerous networks – human relationships, ecosystems, the Internet and World Wide Web[4], flashing fireflies, a worm's brain (and ours), electricity transmission systems – and shows how each element of these networks is

separated by only a small number of steps from any other element. It's all to do with weak links and clusters.

First, weak links. If you want to find a new job, don't ask your close friends. Ask your distant acquaintances – people with whom you have a 'weak link'. Your friends – people with whom you have a strong link – move in your circle. They know pretty much the same people that you know. Acquaintances move in different circles. The net you cast by seeking information from distant acquaintances is wide, fresh and fast. Information can travel in great leaps when it jumps via a long, weak link. Your brain operates in the same way. It would be hopelessly slow if neurons only connected with their immediate neighbours. Rather, they have a mix of short and long axons, meaning information can speed its way around the brain by leaping long distances (ditto the Internet).

Buchanan refers to a couple of diagrams developed by two mathematicians to illustrate the point. The upper image describes an ordered network. That is one in which each element can only relate to its four immediate neighbours. In this example there are four degrees of separation between the most distant elements (it takes no less than four steps to move from one side of the network to the other). By adding a few random links, the number of steps required to move from one element to another can be dramatically reduced. This would be a more impressive example if there was 6.4 billion elements. In such a situation, if we were linked in an ordered fashion to 50 people in our immediate social network, it would take about 60 million steps to move from one side of the circle to the other (that is, 60 million degrees of separation). Make 0.02 percent of those links random, and the degrees of separation drop to eight.
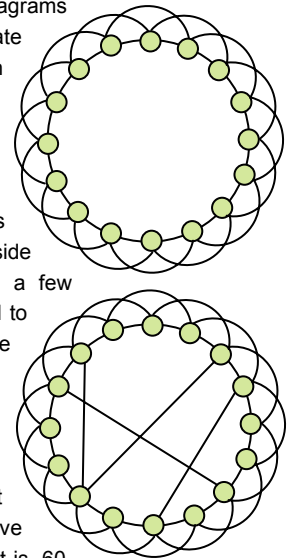
Buchanan puts it nicely: "We find here an explanation not only for why the world is small, but also why we are continually surprised by it. After all, the long-distance social shortcuts that make the world small are mostly invisible in our ordinary social lives…. It stands to reason that the shortcuts of the social world lie mostly beyond our vision, and only come into our vision when we stumble over their startling consequences."

'Clustering' is another key factor in the equation. Someone or something who is highly clustered has a relatively large number of links to other entities. For example, in the letter-sending experiment of

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[1] Carroll, Robert (2003). *The Skeptic's Dictionary*. John Wiley & Sons.
[2] This is called apophenia – the spontaneous perception of connections and meaningfulness of unrelated phenomena (a type 1 statistical error) (ibid).
[3] Buchanan, Mark (2002). *Small World: Uncovering nature's hidden networks.* Phoenix.
[4] The Net being the hardware (the *inter*nationally *net*worked computers), and the Web being the hypertext linked documents. I'd never previously picked the distinction.

the 1960s, two-thirds of the mail made its last leap to the Boston stockbroker via one person. Buchanan describes two types of clustered networks: egalitarian and aristocratic. An aristocratic network relies on a limited number of individuals who are highly linked – named because the trend is for those individuals to become richer in their connections over time until only a few hubs dominate the network. The classic example is the World Wide Web, where sites such as Google and Amazon are highly interconnected, while millions of other sites languish. Another example is sexually active individuals (which possibly explains why the averages reported in glossy magazines never make sense). An egalitarian network has a more even distribution of connections, and is therefore more robust (airports were once aristocratic, but as the main hubs have become congested a more robust egalitarian network is apparently developing). Consider what this means in terms of creating a 'Civil Society'.

Interestingly – or perhaps scarily – the network model applies to ecosystems in a very tidy manner. A well-researched 97-hectare plot of Scotch broom in southern England showed only two or three degrees of separation in the food web between its component species. On a global level, Buchanan suspects the number of degrees of separation between all species (in terms of who eats who) would not be more than ten (a NIWA biochemist I met thinks the figure would actually be less). Meaning you've probably eaten something that ate something that ate something [repeat another seven times] that ate a slug in Derbyshire. You probably have Derbyshire slug protein in your body (easier to believe if it's true that no molecule in our body is older than nine years[5]). We twiddle with such networks at our peril as we really have very little idea of the dependent links between seemingly distant species.

So, it's a small world after all. On a professional level, Mark Holden therefore offers some relevant advice[6]:

"Sow without a view to reaping. When it comes to offering advice and support, do it freely and with no strings attached. Not everyone for whom you do a favour will necessarily do one in return, but over time you will grow a critical mass of goodwill that will return to you." ❖

Civil Society

Civil Society, as a concept, appears to be all about the networks in society that contribute to, in Local Government Act 2002-speak, the well-being of a community. Michael Edwards, Director of the Ford Foundation's Governance and Civil Society Programme, suspects Civil Society is possibly the 'big idea' for the twenty-first century, although its roots go a long way back[7].
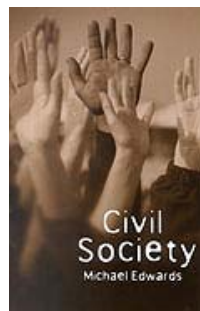
In 1381, the leader of the English Peasant's Revolt, John Ball, stated, "Fellowship is life and lack of fellowship is death, but in hell there is no brotherhood but every man for himself." Collective effort is at the heart of Edwards' concept of civil society and he reviews three approaches which describe how collective action might have effect (and therefore how best it may be supported).

The first is via an 'associational life': the third or non-profit sector. This view, which Edwards considers to be a little simplistic, considers that 'social capital' and the norms which create a civil society are created almost solely within the voluntary organisations to which citizens belong. Adherents to this theory might consider the effects of the market and politics to pollute and destroy associational life, and from these things it must be protected, and even isolated. Edwards suggests that the contemporary and historical 'love affair' with non-government organisations (NGOs) means the voluntary sector is expected to, "organise social services, govern local communities, solve the unemployment problem, save the environment, and still have time left over for rebuilding the moral life of nations."

The second is 'civil society as the good society'. The good society is one that recognises and sustains 'civility' – tolerance, non-discrimination, non-violence, trust and co-operation, plus freedom and democracy (if these two are not defined exclusively by Western standards). The concept relies on all organisations within a society solving public-policy dilemmas in ways that are just and effective. This requires institutions that are infused with 'values-based energy and direction'. "Norms and values are fostered in families, schools and workplaces as well as in associations, and political and legal ordering by government is required to secure all social contracts." The gap here is that society as a group must still have a forum within which to decide what represents a 'good society', and how to get there as conditions and circumstances change over time.

The third is the 'public sphere': "Publics are formed when we turn from our separate affairs to face common problems, and face each other in dialogue and discussion." Anyone developing a long-term council community plan (LTCCP) under the Local Government Act will recognise this. It is dialogue politics: "Dialogue politics offer … perhaps the only route to reach a legitimate normative consensus around a plurality of interests and positions, assuming certain conditions are met – equality of voice and access … and a minimum of censorship." The trouble with this one being, people are not wearing enough hats[8]. ❖

For Your Interest

Another busy 12 months. We've enjoyed an interesting range of projects, including being part of the conclusion of Project Aqua on the Waitaki River and reviewing the Local Government Act 2002 with SPARC (the final resource from that should be available in the next few months). A fascinating project was a national survey of recreation displacement for the Department of Conservation which we presented at the World Leisure Congress in Brisbane in September. Perhaps the largest project, which is still underway, has been the development of a regional physical activity plan for Canterbury and the West Coast, covering 11 territorial authorities and three district health boards. The Global Leisure Group has also been working on the same plans for the Waikato and Top of the South. We've certainly recognised the challenges and benefits of collective action on a significant issue and have really enjoyed working with some very capable steering groups on these and other projects.

And considering physical health, while recovering from a burst appendix in October, I spent a week sharing a hospital ward with many older gentleman suffering the effects of diabetes – several of whom were losing their toes due to poor circulation. While in their cases the cause was type 1 diabetes, I'd hate to be in a similar ward in maybe 30 years time when the new wave of preventable type 2 diabetes sufferers are facing such amputations. It didn't look like much fun and was a great reminder not to take one's health for granted.

We've a couple of environment court cases to assist with in the new year and more work with concession applications to DoC. Several local authority physical activity plans will continue, as will some asset management plan preparation. Over summer we'll be completing a group of interception surveys on coastal areas around Christchurch and I hope to submit a paper to an academic journal on recreation conflict using this and older data. Last year a paper on measuring significance in outdoor settings was accepted by the Annals of Leisure Research. This paper is available on our website. And a Merry Christmas.

[5] Bryson, Bill (2003). *A Short History of Almost Everything.* Black Swan. p 453.
[6] Holden, Mark (2003). *The Use and Abuse of Office Politics.* Allen & Unwin
[7] Edwards, Michael (2004). *Civil Society.* Polity Press.
[8] Monty Python's *The Meaning of Life.* Maybe the last word on dialogue politics.