

# Perspective

A newsletter for widening your point of view

2020

Issue 22



Richard Bach, in his book *Illusions*, states a handy aphorism: **Perspective – use it or lose it.** This periodical – distributed by Rob Greenaway & Associates – shares amongst recreation and tourism management professionals, and others, several tools and concepts which will help exercise your perspective.

This edition looks into a couple of positive things we can take from the COVID-19 pandemic – flying less and working from home where possible – and the passage of time. Just because a physicist might notice that a formula like  $1 + 1 = 2 = 1 + 1$  holds true, doesn't mean that time can also run backwards.

## Fly no more, my pretties

Having worked out of a home office for more than 20 years, lockdown was situation normal for us. The big difference was no flying and more Zooming, which was excellent. A new etiquette of online meetings has emerged. A couple of examples proved to me how well it can work. One was moving away from partial online meetings. It is very difficult to be one of several virtual attendees at a meeting which has more than two or three in-office participants. If you want full participation, go full Monty, even if it means a few participants are in the same building, but not the same room. And breaking long online meetings into chapters held over several days or even weeks works really well. Everyone stays awake, has time to absorb the necessary background reading, can receive easily digested potted summaries over the period, and can offer more reasoned thinking during the next session.

Long may online meetings and, where possible, working from home, remain popular. And it's not necessary to feel sorry for the airlines. John Ralston Saul wrote in 1994 about the poor economic outcome of the desire for business travel in his excellent book *The Doubter's Companion*.<sup>1</sup> This was shortly after the deregulation of the air industry in the States when 'competitive chaos' led to American airline companies losing \$11 billion between 1990 and 1993. Saul wrote:

*The air carriers tried to save themselves from the catastrophic effects of deregulation by concentrating on executive travel. The technocracy was growing, wanted to fly to do business and had to pay full fare because that is the way large organisations work.... The increased cost of sending businessmen on this class was assumed by their shareholders and was therefore a dead weight on the economy.*

You can substitute bureaucrats for technocrats, and tax and ratepayers for shareholders, as necessary. And it doesn't matter if they are cheap or expensive flights. Either way, it's a dead cost unless the trip adds more productivity than would an online meeting – taking into account the full costs of travel, especially time.

We need to use online meetings to get over what Charles Handy described in *The Elephant and the Flea* in 2001, well before the likes of Skype, Teams and Zoom had got their acts together.<sup>2</sup> He wrote:

*It is not surprising to me, although it sometimes is to the accountants, that the bill for travel expenses in an organisation does not decrease as their bill for telecommunications rises, but actually grows. You need to be acquainted with someone personally in order to know whether you*

*can rely on them, even to the degree of understanding what their sometimes cryptic emails mean.*

Handy noted that 70% of communication depends on eye contact, inflection of tone and body language, leaving only 30% for the actual words. In 2019 – pre-COVID – Doodle identified that 76% of professionals preferred face to face meetings, but that two-thirds of meetings were considered unnecessary or a waste of time.<sup>3</sup>

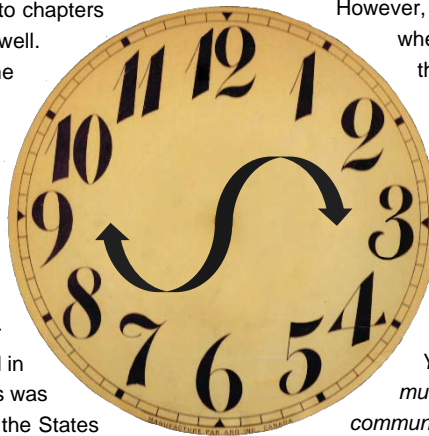
However, I've been working on a few major projects recently where I haven't had any physical or online meetings with the clients – only phone calls and emails – and I have developed a real affection for the people I'm working with. Perhaps we're all highly skilled in the art of empathetic communion, but I would like to think that technology has moved us on and the teams I work within have really good leadership. Handy writes about leadership a lot, and in a later book of his – *Myself and Other More Important Matters* – said:<sup>4</sup>

*You do not need to be a genius to see that the task is much easier if the leader knows what the purpose of the community [Handy's shorthand for any organisation with a common purpose] should be and can convince everyone of its importance. The individuals in the community must also be the right ones for the different tasks. In general, if people know what they have to do and why, if they have the skills to do it, are trusted to get on with it as best they can and are appropriately rewarded when they succeed, the community will be more likely to succeed in its mission. It is all, of course, much easier to say than do ...*

So, the question is, if you have high travel costs, and cannot enable staff to work from home where feasible and where they so desire, what pieces of the puzzle are lacking? ❖

## The arrow of time

One of the reasons I dislike flights is the passage of time. Yes, I can read on a plane, but that's not the optimal location for that activity. I can feel the minutes slipping by, never to be regained. Douglas Adams thought that time was an illusion (and lunchtime doubly so), but I see it as a more solid feature and get antsy if it's wasted for someone else's purpose. I'm happy to waste my own time for my own purposes, of course, and I've wasted plenty of it reading about what direction it travels.



<sup>1</sup> Saul, J.R. 1994. *The Doubter's Companion*. Penguin

<sup>2</sup> Handy, C. 2001. *The Elephant and the Flea*. Arrow

<sup>3</sup> <https://en.blog.doodle.com/state-of-meetings-2019-2/>

<sup>4</sup> Handy, C. 2006. *Myself and Other More Important Matters*. Heinemann

Stephen Hawking in *A Brief History of Time* posits that intelligent life can only exist in an expanding universe, where the thermodynamic arrow of time runs forward.<sup>5</sup> You might recall that the second law of thermodynamics is about the inevitable increase in entropy – or disorder – in any dynamic system. If the universe contracts, then, according to Hawking in 1988, it would start experiencing a decrease in entropy – which is not as good as it sounds – and time would reverse.

I was hoping to extract a witty parallel here about the current politics of certain nations. But if we were to blame localised contractions of the universe on the apparent loss of intelligent life there, then we should also be noting a local increase in order, which clearly is not happening. However, in 1994, Hawking retracted his idea that entropy would decrease as the universe contracted – so perhaps my aside works.<sup>6</sup>

In 1988 Hawking didn't indicate what sort of life would survive in a contracting universe, if it wasn't intelligent. Would it be confused and surprised? But, in 1994 he pointed out that when the universe begins to contract (and of course there's doubt that will occur), it would be made up of only photons and neutrinos. Apparently we also need baryons – quantum particles that give matter mass – to exist. So, in Hawking's world, we would never get to experience a time reversal. What a relief.

However, the likes of Brian Greene in *The Fabric of the Cosmos* describes various experiments with photons which suggest that time-reversal occurs now, that it also must have occurred in the past for the universe to have erupted from an ultra-low entropy state (something like a singularity), and that time is associated with space (if there is no space, there is no time).<sup>7</sup>

But, could time have pre-existed the start of our universe? Hawking thought time would have been fully 'spatialised' in the quantum state of the singularity which preceded the Big Bang, and so would not have started. Ilya Prigogine in *The End of Certainty* disagrees, and points out that no one can identify a mechanism by which you could spatialise time.<sup>8</sup> (He also points out that when discussing these points we find ourselves at the 'edge of positive knowledge' – but that never stopped an enthusiastic cosmologist.)

Prigogine refers to a raft of irreversible processes – such as radioactive decay – to come down quite firmly on the side of uni-directional and ever-lasting time. He proposes that because there is no certainty in the future state of anything – it's all to do with quantum and macro-scale probabilities – time cannot operate in more than one direction. How can an outcome be reversed if its future state can never be determined?

The Nobel laureate Prigogine sounds convincing to me. For the time-being, I'll go with that. ❖

## Constructal law

Prigogine was wrong, according to Professor Adrian Bejan in his over-reaching book *Design in Nature*.<sup>9</sup> By coincidence, I picked up Bejan's book, which at face value looks really interesting, after putting down Prigogine's, which was. Bejan's inspiration in starting an apparently whole new area of intellectual and scientific endeavour was based on hearing Prigogine assert in a lecture that the tree-like branches in river basins, our lungs and in lightning bolts are similar in design only by chance. Bejan writes, "When he made that statement, something clicked, the penny dropped. I knew that Prigogine, and everyone else, was wrong."

It might have been a big penny, and it might have hit him on the head. Bejan came up with what he calls the constructal law. This says that any persistent system will evolve so that the things which move through it do so as efficiently as possible. So, the 'designs' we see in nature are not there by chance, but they arise because they allow things to flow, and all flow systems will develop to maximise efficiency. Bejan has clearly never heard of the recurrent laryngeal nerve in the giraffe (it's a long story, and certainly longer than it needs to be).<sup>10</sup>

He uses a log floating at sea as an example. When the wind blows, the log will lie perpendicular to the direction of the wind because this is the most efficient way for the wind to transfer energy via the log to the sea. When aboard a boat at anchor at night, when there is a small swell but no wind, I note that the vessel will also always lie perpendicular to the waves, which is the most efficient means of preventing sleep.

Bejan posits that the constructal law would have predicted the invention of the wheel, since that is a more efficient means of moving mass than sliding it. I'm now so much more excited about instantaneous matter transfer – it's clearly only a matter of time. Constructal law "teaches us that trees and forests occur and survive in order to facilitate rapid transfer of water from the ground to the air."

In the mid-1800s a bright Swiss naturalist named Louis Agassiz began promoting the role that ice and glaciation had in the formation of many previously unexplained landforms – such as what we now call glacial moraines. It took a while for his ideas to gain traction, by which time he had decided that the entire earth had recently been covered in glaciers, extinguishing all life and giving creationism a chance.<sup>11</sup> Sometimes you need to know when to quit. ❖

## For Your Interest

Time has been decidedly uni-directional over the past two years, with lots of interesting projects and a good amount of time off. Our office set-up has proven pretty resilient in the face of COVID-19, and lockdown coincided with some of our busiest months. The bigger projects have included the Ngauranga to Petone shared path proposal for Waka Kotahi (NZTA) with Beca, and the Eastern Bays shared path for the Hutt City Council with Stantec, a review of the recreation values of the Manuherekia catchment for the Otago Regional Council, including an intercept survey over summer, an intercept survey on the Denniston Plateau for Bathurst Resources, marine farm proposals in Mercury Bay and the Firth of Thames (with Gascoigne Wicks), the Ngaruroro River Water Conservation Order hearings, a management plan for the forests owned by Koata Ltd, a reserve management plan for Saxton Field in Nelson, recreation and tourism impact assessments for two quarries and a mine, as well as wastewater discharge assessments in Wellington, Porirua (both with Stantec), on the Mataura River (with Mitchell Daysh) and for two ocean discharges near Waimate (Babbage Consultants and Chapman Tripp), as well as for the cross-harbour water supply pipeline between the Hutt and Wellington (with Stantec), the Orewa

seawall consent application for the Auckland Council (with Tonkin & Taylor), and some hydro-scheme consenting for Trustpower in Taranaki and for Meridian Energy in the Waitaki. With Boffa Miskell we completed a very interesting job on kauri dieback in Waipoua Forest for the Department of Conservation, and with Enspire some irrigation proposals on the Hurunui and Rangitata Rivers and Refining NZ's dredging project. Amongst other things.

Otherwise, I got the yacht fully functioning (it's a 10m keeler) and sailed it around the North Island over 37 days in early 2019. All went well, apart from having to replace the motor in Whitianga, but fortunately my genius sister and brother-in-law live nearby and made the exercise a charm. Elizabeth and I had an eye-opening trip to China later in the year, and revisited Samoa where we did a couple of projects about 20 years ago.

Now, it's time to buckle down to some more interesting work over winter, and in our fully domestic world. I had a very unhappy few days during lockdown contemplating that we will come out of this crisis having learnt nothing. It would be an incredible loss if we don't treat this as the great realisation that it should be and really change how we operate.

<sup>5</sup> Hawking, S. 1988. *A Brief History of Time*. Bantam Books

<sup>6</sup> Hawking, S. 1994. The No Boundary Proposal and the Arrow of Time. In: Halliwell J.J., Pérez-Mercader J., Zurek W.H. (eds) *Physical Origins of Time Asymmetry*. Cambridge University Press

<sup>7</sup> Greene, B. 2004. *The Fabric of the Cosmos*. Vintage

<sup>8</sup> Prigogine, I. 1996. *The End of Certainty*. The Free Press

<sup>9</sup> Bejan, A., Zane, J.P. 2012. *Design in Nature*. Doubleday

<sup>10</sup> Dawkins, R. 1982. *The Extended Phenotype*. Oxford University Press

<sup>11</sup> Bryson, B. 2003. *A Short History of Nearly Everything*. Black Swan