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SPACESHIP EARTH

'I've often heard people say: "I wonder what it would feel like to be on board a spaceship," and the answer is very simple. What does it feel like? That's all we've ever experienced. We are all astronauts on a little spaceship called Earth.'

– Buckminster Fuller

Buckminster Fuller wanted to bring humanity closer to utopia and he believed that two things, technology and good design, could help get us there. His ideas were rooted in one simple core belief: to solve a problem you need to look not just at the tiny bit of a system where the problem is, but at the whole world, because everything on the planet is connected.

GENERAL KNOWLEDGE

Fuller believed that instead of being a **specialist** (knowing a lot about one specific thing) it was important to be more general – to know a bit about a lot of things. **Generalists** were able to look at a bigger picture to get an over-arching view of an entire system, whereas specialists could only help with problems that fell within their area of expertise. He was a scientist as well as a designer, an architect, a geometrist, an engineer and a cartographer. He had wildly creative and beautiful ideas for how to solve humanity's problems and he became deeply interested in pretty much everything he came across.

LOOK FOR PATTERNS

Fuller studied basic patterns in nature in the hopes they might help with his inventions. He is probably best known for his **geodesic domes** (those giant half spheres that look like a football cut in half). Geodesic domes don't need any supporting beams. They're stable enough to endure harsh weather and efficient enough to circulate heat better than any other shape. Standing inside one, you can see that this invention isn't just strong and light, it's also elegant and graceful. Fuller said *'I never work with aesthetic considerations in mind. But I have a test:* ***if something isn't beautiful when I get finished with it, it's no good.'***

Richard Buckminster Fuller Junior (1895-1983) was born in Massachusetts, USA, to a family who were dedicated to activism and public service. Young Bucky was no different. As a child he was severely shortsighted and until he got glasses he refused to believe that the world was not blurry. Early inspiration came from trips to Bear Island in Maine, where Fuller enjoyed learning all about nature and boat construction.

NOSE TO THE GRINDSTONE

As a young man he was thrown out of university for spending too much time with friends instead of attending his exams, so he went to work at a mill. It was here that Bucky began to learn about machinery. This was followed by a stint in the Navy, where he learnt all about engineering and even invented a winch for rescue boats so that pilots could be pulled from sinking planes in time to save their lives. His invention earned Fuller the opportunity to train with the US Naval Academy, and after that he went to work with his father-in-law, where he invented a new way to strengthen concrete buildings.

DEPRESSION

Eventually the construction company collapsed and Fuller found himself without work. He withdrew, wondering how best he could help humanity. Emerging from two years of deep contemplation he concluded: **'You do not belong to you. You belong to the universe.'** His new goal was ambitious but simple, **'to make the world work for 100 per cent of humanity in the shortest possible time, through spontaneous cooperation without ecological offense or the disadvantage of anyone.'** Fuller wanted to find a way to solve all the problems in the world at the same time, because he believed that everything was connected. Fuller called this particular brand of whole system thinking **synergetics** – the study of natural relationships between objects to examine how we think about things.

Not everyone liked Fuller. His ideas were unusual and even those who supported him found he could be exhausting at times. He might start talking about one subject and, before you knew it, hours had gone by and Fuller would have covered not only the original topic, but put it into context with everything else around it. In Fuller's world a topic like ancient boat building was a vital component of the biggest issue, like the development of modern science – and listeners would find themselves not only convinced, but also inspired. *New Yorker* magazine concluded, after interviewing Fuller in 1966: *'As Fuller told it, the whole rousing saga sounded absolutely irrefutable.'*

MORE WITH LESS

Housing was a key area of interest for Bucky. He wanted to revolutionise construction in order to improve the way we live. With this in mind he invented the Dymaxion House – a cheap, mass-produced module that could be airlifted into place. The name was a blend of three other words: 'dynamic', 'maximum' and 'tension', and it became a calling card for Fuller. He went on to invent the Dymaxion Car and the Dymaxion Map.

Even today the Dymaxion Car looks like something straight out of a science fiction picture book. It had three wheels and aerodynamic rounded edges. It was long and could fit up to 11 people in it. Crucially it used very little fuel. The Dymaxion Car caused such a stir that, when Fuller drove it, he was asked to keep it off the streets during rush hour because the spectacle caused gridlock!

The Dymaxion Map shows the whole planet on a single sheet of flat paper. Bucky's idea was to encourage the public to think about the planet as one whole, rather than a number of different bits. He also developed the World Game, which used the Dymaxion Map to help people better understand how to divide the planet's resources.

Today the Buckminster Fuller Institute (BFI) exists to continue with Bucky's work. The Buckminster Fuller Challenge is the BFI's flagship programme. It offers an annual $10,000 prize to support the development of a strategy that has potential to solve humanity's most pressing problems. For more information, visit: **www.bfi.org**.