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'Waste equals food'

prof. dr. Michael Braungart

"The Netherlands is an ideal proving ground. Compared to Germany or England, Mother Nature has not been very generous to the Low Countries lately, and I think that is the reason why the Dutch have welcomed the cradle to cradle principle with an open mind." According to German chemist and colloid dust expert prof. dr. Michael Braungart, Dutch people are striving for perfection, but 'don't always succeed'. The principle, re-initiated by Braungart and American architect William McDonough in their 2002 publication 'Cradle to Cradle: Remaking the Way We Make Things', is based on a system of lifecycle development: products might be designed so that, after their useful life, they provide nourishment for something new, either as 'biological nutrients' that safely re-enter the environment or as 'technical nutrients' that circulate within closed-loop industrial cycles. Waste equals food.

*W*hy not take nature itself as our model? A tree produces thousands of blossoms in order to create another tree, yet we do not consider its abundance wasteful but safe, beautiful, and highly effective. Humans should copy that and re-invent everything they see, without producing any waste. We would not have to insist on less, economical and more efficient any longer, but instead be able to buy and throw away anything we like, without feeling guilty about our behaviour. The first steps on the path to eco-effectivity have been made, but according to Dr Braungart there is still a long way to go. "It is absurd when a government tells you to drive less to protect the environment, because that would not stop the disturbance. Lowering the speed limit means less colloid dust in the air. Combatting symptoms, that's all it is. The underlying problems won't be solved. Only totally clean forms of transport can make colloid dust go away." Plans to produce electricity by combining coal gasification with carbon dioxide capture and the use of biomass energy, as introduced by major Dutch energy company, are not helping either, says Dr Braungart. "By reducing CO₂ emissions you just make the situation less bad. It is like hitting your child three instead of five times and claiming you are protecting it. The truth is you damage your child a little less. The underground storage of carbon dioxide near the town of Barendrecht, proposed by Shell and initially backed by the Dutch government, "is a fairly stupid idea", the professor says.

"I strongly advise against it. Liquefying carbon costs so much energy, that there actually will be more instead of less emissions. The people of Barendrecht are right to be afraid. It is much better to use carbon as a component for synthetic materials or solvents. At Wageningen University, they are conducting experiments with CO₂ as a nutrient for the production of algae." Pressing the green alga 'slices' produces oil. Another example of a closed lifecycle.

According to Braungart we have to design and develop products, based on safe, fully recyclable components, in such a way that they can be re-used as nutrients for new products. "That is what I call the eternal material cycle", says Dr Braungart. "We should use harmless materials only, but I do realise that design and production processes can not be changed overnight.

There are still appliances, like television sets, that can't be produced without using toxic materials. As long as those materials remain part of the appliance, there is no danger to the environment.

They are technically useful. From now on, we should be able to fully disassemble every appliance at the end of its lifetime. That way, we can re-use all parts - even the toxic ones - over and over again in other quality products." By regarding these appliances as technical nutrients, and returning the separated parts after use to the manufacturers, we won't be damaging the environment anymore. In cooperation with a textile factory, Braungart and McDonough have

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developed the first compostable T-shirt in the world. Composting not-chemically polluted products in our biosphere is easy. After use they provide nourishment to new organic materials. Just like man, dust will eventually return to dust.

Ants

“So it’s not about minimising our ecological footprint. It’s about having a big footprint, but making sure that this footprint is useful, positive, and beneficial to all the other species on Earth. And it has to do with the creation of a natural climate that eventually leads to infinity.” The professor is convinced we’re not too many people on this planet. “If you take the total weight of the planet’s ants on one hand and the total weight of human beings on the other, you’ll see that the ants’ weight is four times higher. It is not only the number, but ants weigh out human beings. Further they have a much shorter life span than we have. And because they work much harder physically than we do, the calorie consumption of ants equals approximately 30 billion people. It is clearly not about the fact that we are too many. Ants don’t produce waste. They don’t need to minimise waste. They produce nutrients. That is what humans should do too, but we are just too stupid and keep on doing the wrong things.” Another way to protect the environment: “We can take the elevator. It takes five times less calories for the elevator to go to the next floor than for a human to take the stairs. That’s minimising our footprint. If you want to protect the environment, take the elevator.” According to Dr Braungart it’s not a matter of sustainability, which only means a stand-still because we are doing

the same things over and over again, but of design. “If you see a baby, you don’t think ‘There are too many people already’, but rather ‘Nice that you are here, welcome to this world, how can we support you during your life on Earth?’” Laughing: “If all passengers empty their stomachs before they enter the plane, the airline saves seven tons of kerosine per year on flights from Amsterdam to New York. If they all fly naked another five tons can be saved. That won’t happen of course, but environmental organisations have to realise that poisoning less only means that we are still poisoning.”

Prof. dr. Braungart has always been a scientist. “At the beginning of my career I climbed chimneys, because it was more important to protest in those days. Soon I learned that was not the right way to change things. I came up with ideas, for example on how to bleach paper without using chlorine, but I had to prove it worked first. The chemical industry changed their strategy in 1987. A big firm wanted to talk to me and awarded me a significant budget. Like Albert Einstein said: ‘It’s impossible to solve a problem with the same way of thinking that caused it in the first place’. I visited other countries and peoples that live close to nature. I learned a lot from them. They actually introduced me to the cradle to cradle principle.”

“Recently I had an interesting experience at the plant of Océ, manufacturer of copymachines, printers, ink and printing paper. They were proud, because one of their new machines produced 30 per cent less colloid dust. However, it would have been truly innovative if they had developed a printer that cleanses the air. By the way, do you know that the air in many Dutch houses is three to eight times worse than the polluted open air? Children get sick. The solution is to use carpets that clean the air.” The eco-visionary advises enterprises, develops products, researches all kinds of materials and gives lectures, with only one purpose: saving the earth from scratch. He still has a lot of convincing to do in Germany, in Holland and the United States the first green oases are emerging at the horizon. “It is not about protecting the environment, it is about eternal life .”

Prof. dr. Michael Braungart has been a professor of Process Engineering at Universität Lüneburg (Germany) since 1994, and he is also serving as director of an interdisciplinary materials flow management masters program. He is the scientific director of EPEA International Umweltforschung GmbH (Hamburg, Germany), which was founded in 1987 and co-founder of McDonough Braungart Design Chemistry (MBDC) in Charlottesville, Virginia. He co-founded the Hamburger Umwelt Insitute (HUI) in 1989, as well. These organizations share a common set of values that embrace intelligent, aesthetic and eco-effective design and seek to optimize products with the Cradle to Cradle framework. Through these activities, Professor Braungart has developed tools to design eco-effective products and business systems and has worked with a number of organizations and companies in a range of industries.



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“Nothing has a stronger influence psychologically on their environment and especially on their children than the unlive life of the parent.”

— Carl Jung —