

The Cradle-to-Cradle Philosophy

By Robin Byerly

Take a look at some of the products you use. Have you ever thought about where they come from, how they got here, what is actually in them, or where they end up when you are finished with them?

For example, that computer your child is using – did you know that it contains more than a thousand different kinds of materials, including toxic gases, toxic metals, acids, plastics, chlorinated and brominated substances, and other additives? The dust from some printer toner cartridges has been found to contain nickel, cobalt, and mercury, substances severely harmful to humans.

What will happen, then, when your family outgrows the computer? You will have little choice but to dispose of it, and both its valuable and hazardous materials will be thrown away. In the process, you will have unwittingly become party to a process of waste and destruction.

This is only one product example. The same may be true of the chair in your living room, or the carpet on your floor, or many other products we typically use or have in our homes. However, as an environmentalist, you may have conscientiously purchased a product made from “recycled materials.”

It might be important to note here the difference between a *recycled* product and a *downcycled* product. Your carpet may be made of “recycled materials,” but in many cases, those materials are things that were never designed with a further use in mind. Thus their recycling leads to only one additional use. Further, wrestling the carpet’s recycled materials into a further usable form requires as much energy, and generates as much waste, as producing a new carpet. Thus your *downcycled* rug is still on its way to a landfill, after stopping off at your house en route.

What we wish to transcend is the conventional production method of extraction, manufacture, and disposal – all of which are destructive to the natural world, a “*cradle to grave*” process. The “*cradle to cradle*” philosophy seeks, on the other hand, to find production methods and materials that emulate nature’s system of nutrients and metabolisms in which there is no such thing as waste. Products, and their production, should be designed to emulate nature by providing nourishment for something new.

Products can be composed either of materials that biodegrade and become food for biological cycles, or of technical materials that stay in closed-loop technical cycles in which they continually circulate as valuable nutrients for industry. The concept of waste is eliminated by designing things – products, packaging, and systems – from the very beginning following the ideal that waste does not exist.

Transformation to such an eco-effective vision will not happen all at once and will require plenty of trial, effort, time, and error. However, Nike is an example of a company that is taking a number of explorative initiatives, designing a new process of leather tanning that does not use questionable toxins, testing a new rubber compound that will be a biological nutrient, and finding new ways to “*upcycle*,” or take back, products to ensure that technical and biological nutrients are retrieved for reuse.

Our well intentioned concepts of recycling represent a process that is not good enough because it still ultimately creates waste and is still not wholly eco-efficient. The *cradle to cradle* philosophy represents a vision of an eco-effective world where nature itself is the model for making things. With this system of design and production, all harmful components and waste are phased out. New products can be designed from the very beginning so that, after their useful lives, they will provide nourishment for something new.

For further reading, see *Cradle to Cradle: Remaking the Way we Make Things*, by William McDonough & Michael Braungart, and *Paper or Plastic: Searching for Solutions to an Overpackaged World*, by Daniel Imhoff and Roberto Carra.