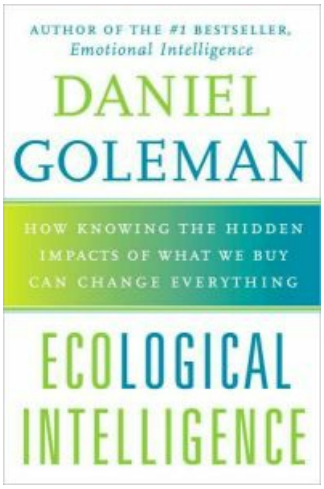

Book Ecological Intelligence

How Knowing the Hidden Impacts of What We Buy Can Change Everything

Daniel Goleman
Broadway Books, 2009

Recommendation

The manufactured world has produced incredible variety, luxury and convenience, but at what cost to the environment and to human bodies? Emotional intelligence expert Daniel Goleman persuasively argues for "radical transparency" about environmental impact. He says that if people could see at a glance the harm that the products they buy wreak upon the earth and human health, they would make ecologically sounder choices. Goleman asserts that such transparency would add to the legions of eco-conscious consumers, help the environment and even boost corporate profits. Though it is not as tightly written as his previous books, *BooksInShort* recommends this compelling, detailed work of advocacy for marketplace transparency. Goleman works hard to prove that it is an idea whose time has come.

Take-Aways

- "Ecological intelligence" is awareness of how your actions affect your surroundings, that is, the "geosphere," the "biosphere" and the "sociosphere."
- Biology conditions people to flee obvious danger, but it does not alert them to long-term, invisible threats they cannot sense, like global warming.
- Shoppers don't always make the best environmental decisions. Being informed helps.
- "Radical transparency" calls for educating consumers about the environmental, biological and social impacts of products at the point of sale.
- This will do more to solve environmental problems than government regulation alone, since knowledgeable consumers buy products with fewer damaging effects.
- No product is wholly virtuous; every manmade item harms the environment.
- "Greenwashing" hypes the positives about a product but hides its deleterious aspects.
- Until more nontoxic choices become available, consumers will remain blind to the results of their shopping decisions.
- Many customers will pay more for items they know are produced ethically.
- Suppliers that improve the materials other companies use trigger a "virtuous cycle."

Summary

Industrial Ecology: Measuring Products' Effects on the Environment

"Ecological intelligence" is awareness of how your actions affect the world around you. This includes learning the impact of various products and processes on the "geosphere," the "biosphere" and the "sociosphere," which covers human concerns, like the societal results of workers' conditions. Once you develop your ecological intelligence, you are likely to become a different kind of consumer. When most people shop, generally they aren't aware of how the items they buy are made, what goes into their manufacturing or how the company treats its employees.

> "Radical transparency means tracking every substantial impact of an item from manufacture to disposal...and summarizing those impacts for shoppers as they are deciding what to purchase."

The relatively new field of industrial ecology, located "at the cusp where chemistry, physics and engineering meet ecology," looks at manufacturing in context. It covers multiple factors, from the environmental cost of basic materials to how goods are discarded. A product's use of natural resources and the pollution it causes indicate its resource burden. Other metrics used to assess a product's biosphere outcomes include "biodegradability," "cancer impact," "loss of biodiversity," "embedded toxicity" and "disability adjusted life years," the span lopped off by adverse ecological encounters.

> "Our world of material abundance comes with a hidden price tag."

Consumers need and want this kind of information in the form of an understandable metric that explains the effect that the manufacture, use and disposal of particular goods has on the Earth. Such "radical transparency" could transform what people purchase and how they manufacture and move products. It would tie responsibility for a product's impact to its popularity and, thus, to its profits. That would bring about change more rapidly than regulation, because the surest way to get businesses to care enough to do the right thing is to present the need for change in financial terms. For example, a standard measurement that tells consumers how much CO2 a product's manufacturing emits would empower buyers to vote with their wallets and force change. Consumers long have demanded such responsibility.

> "Nothing in our evolutionary past has shaped our brain for spotting less palpable threats like the slow heating of the planet [or] the insidious spread of destructive chemical particulates."

Industrial ecology derives this kind of information. Its "Life Cycle Assessment" (LCA) mechanism "yields metrics for harmful impacts" over a product's lifetime by examining all the materials and processes that go into manufacturing, using and discarding it. For instance, the life cycle of a glass jar shows many environmental interconnections. Glass is made of melted sand and caustic soda in a chain of "1,959 distinct unit processes." Caustic soda requires sodium chloride, limestone and other chemicals, which call for mining, which uses water, energy and transportation. Generally, the farther upstream you look at a product's life cycle, the smaller the ecological penalty. For instance, about 70% of a glass jar's known carcinogenic harm comes from volatile organic compounds released while manufacturing the glass product's plastic wrapping. Glass can be recycled, which lowers its eco-cost.

Mindful Shopping

Using the label "green" to evoke environmental values in order to sell products is a tactic known as "greenwashing." It hypes the positive attributes of an item, making it seem environmentally friendly, or "greenish," while neglecting sometimes devastating consequences. No product is entirely virtuous; everything in the manufactured world adversely affects the environment at some point. At worse, greenwashing perpetuates a lie that says by recycling or buying certain "relatively virtuous" products you are doing enough. This is an illusion, since most consumer choices are harmful and limited from the outset. Sure, aiming for 100% recycling makes sense, but that means recycling toxins, too. Shoppers need more nontoxic choices, or at least a fuller understanding of the results of their decisions. Until then, most shoppers are victims of selective blindness. Too often, a purchase's environmental cost remains hidden. For instance:

- Some sunscreen ingredients "prime the growth of a virus in the algae that live inside coral reefs." The 4,000 to 6,000 metric tons of suntan lotion washing into the world's waters annually poses the risk of making "10% of coral reefs into bleached skeletons."
- As global warming causes less snow to fall each year, ski resorts manufacture more fake snow. This uses lots of energy, which contributes to further warming.
- A polyvinyl chloride (PVC) shower curtain is cheap, but it exudes harmful chemicals and degrades poisonously at the end of its utility. The curtain's ongoing toxicity pales compared to the noxious danger workers face as they manufacture it.
- Locally produced food is generally more ecologically sound. It generates jobs and circulates revenue in a community. But, "local," like "green," can be a relative term. Consider tomatoes grown "locally" in a Montreal greenhouse, but bred from a varietal developed in France and sprouted from seeds grown in China.

> "Our brain excels at handling threats in the moment but falters at managing those...in some indefinite future."

This demonstrates the interrelatedness of the world and the complexity of systems. Clearly, adjustments in one area may cause unintentional shifts elsewhere. Quantifying environmental factors as usable data to encourage people to investigate such interconnectivity is important. "Today's threats demand...a new sensibility, the capacity to recognize the hidden web of connections between human activity and nature's systems." Aware people follow three rules: "Know your impacts, favor improvements [and] share what you learn."

Information that Builds Ecological Intelligence

For "radical transparency" to work, consumers must receive information – not just ratings, but also the background data that the ratings reflect – from a credible, independent source. To be relevant and helpful, such rating systems must consider a product from environmental, biological and social perspectives. For example, GoodGuide software, the "seminal application" of radical transparency, offers information about the environmental, biological and social imprints of more than 50,000 personal and household products. You can "read" a product's bar code with your cellphone camera and instantly call up simplified ratings. GoodGuide's website provides the data behind its ratings.

> "By measuring a product's resource burden we can see how much raw material was consumed and what kind of contamination resulted or value was destroyed."

To make sound shopping decisions, people must focus on positive product-selection criteria at the point of purchase, but waves of excess stimulation compete for their attention in stores. Information services like GoodGuide or Skin Deep – an Environmental Working Group that, among other activities, rates personal-care products – cut through this clutter to provide mindfulness. Such awareness and the improved ecological intelligence it fosters adds the invisible consequences of manufacturing's components and approaches to a buyer's decision-making equation. Increasing mindfulness is inherently pleasurable, so paying more attention to product choices should enhance the shopping experience, create the desire for further enlightenment and enable shoppers to prioritize environmentally sound, wholesome products. Sharing concern about a potentially hazardous product encourages people to seek more eco-friendly, healthful alternatives.

> "Ecologically intelligent companies will be proactive: businesses will want to...know about epigenetic data, collaborate with suppliers to make shifts, see marketplace feedback as actionable information and perceive the change as a business opportunity."

Young buyers turn to their peers for feedback and opinions about products. Often they communicate online, where recommendations and negative reactions get magnified and spread quickly. The power of the web is now available to average consumers, giving all shoppers a way to amplify their voices. One angry customer can unleash an online tsunami of discontent.

Consumers Fight Back

Evidence shows that many consumers – particularly those who equate higher prices with better quality – will pay more for items they know are produced ethically. Cost always matters, but how meaningful are labor ethics to bargain hunters? Evidence suggests that consumers prefer items accompanied by clear statements of a company's ethical principles, but they find such corporate claims more credible on slightly more costly items. Additionally, shoppers may truly heed a product's ecological dimensions only if the data is easily available at the point of purchase. Radical transparency is the only way to bring about change at this scale.

> "When Wal-Mart asked its truck drivers not to idle their diesel engines anymore – and installed smaller generators just to power the truckers' cabins – the company saved $25 million a year."

Most people make buying choices based on emotion and, according to Nobel Prize-winning economist Herbert Simon, customers often use cognitive shortcuts, basing their purchase selections on what seems "good enough." Unfortunately, this can make shoppers feel all right about products that have negative, but not obvious, side effects. Both facts and expectations contribute to a buyer's perception of a product's quality. These reactions often become associated with a brand, with obvious consequences for the marketplace. Informed consumers are likelier to reach for products with a lower environmental penalty and avoid those with harmful effects. To understand the power of consumer information, consider these examples:

- **Carbon footprints and the impact of greenhouse gases** – Tesco, the U.K. supermarket chain, labels all 70,000-plus items it carries with carbon footprint data that it asks its suppliers to track. This influenced the British government to develop a standard for measuring products' carbon footprints in hopes of creating a global model.
- **Trans fat** – For nearly 100 years, commercial bakeries used trans fats liberally in most baked goods and snacks to help preserve crispiness and keep products moist. Yet as soon as scientific data linking trans fats to heart disease became public, Americans virtually eliminated these damaging fats from their diets within a 10-year span. Once manufacturers had to identify trans fat content on labels and data became widely available, shoppers voted with their wallets, and food makers found ways to do without trans fats.
- **Toxic chemicals** – Regulators once measured toxicity based on the potential harm of short-term exposure, but evidence now suggests that continuous exposure to even small amounts of toxic chemicals can be damaging. European Union regulations are based on the "precautionary principle," which means if regulators have reason to suspect that a chemical could cause harm, they restrict its use. The European Chemicals Agency now publishes evaluations of industrial chemicals, including more than 60,000 chemicals that, in 1979, the U.S. Environmental Protection Agency declared safe for use without testing. In the intervening decades, regulators have reviewed only a few hundred of these chemicals still in current use in the U.S. "The rest are mysteries," since the U.S. does not regulate many chemicals used in products and foods.

> "The business rule of thumb in the last century – cheaper is better – is being supplemented by a new mantra...sustainable is better, healthier is better and humane is better, too."

Warnings of danger provoke the brain's oldest survival response: avoidance. This emotional reaction comes from the amygdala, which is not soothed by rational analysis. "When cognition and emotion are involved in a decision, emotions outrule cognition most every time," explains marketing professor Baba Shiv of Stanford. While biology conditions people to flee obvious danger, it does not alert them to long-term, invisible threats they cannot sense, like global warming. "A neural snapshot of the shopper's radar for danger comes from the new field of neuroeconomics," which studies how the brain makes buying decisions and examines other shopping-related issues, such as how warnings influence purchasing.

The "Virtuous Cycle"

In the past, business has responded to the call for greater sustainability and precaution by fighting it. Tobacco companies offer perhaps the most glaring example of an industry unwilling to acknowledge the harms its products cause. But as customers begin to expect responsible corporate behavior, such knee-jerk negative responses will shift to a dawning understanding of the cost benefits of sustainability, and then to the full embrace of sustainability as a corporate strategy. For instance, Procter & Gamble found that the use of hot water created by far the largest ecological cost in the life cycle of its laundry detergent, so, to cut that usage, it designed Tide Cold Water, at the same price as its hot water detergent. The successful product costs about as much as customers save by not using hot water – a great win-win situation.

> "Everything connects to everything."

Some production cycles are long and repetitive, or "asymptotic": Forging steel requires electrical power; building an electrical plant requires steel. A supplier that improves the materials other companies use increases its clients' sustainability profile, generating a virtuous cycle. As more companies and governments come under mandates to improve sustainability, pressure for the right supplies will increase. The online, open-source database Earthster builds on combined life cycle assessments to offer overviews of entire manufacturing systems. The idea: Businesses all along a supply chain can report on their environmental picture, combining useful transparencies to create an "information commons" – one more link in the chain of ecological intelligence.

About the Author

Two-time Pulitzer Prize nominee **Daniel Goleman** wrote the bestsellers *Primal Leadership*, *Emotional Intelligence* and *Social Intelligence*, and covered science for *The New York Times.*