

**An interview with Judy Layzer**

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## An Urban Planner's Dream

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The Linde Career Development Associate Professor of Environmental Policy in the Department of Urban Studies and Planning at MIT, **Judy Layzer** co-directs the Environmental Policy and Planning group's Society, Business and the Environment Project. She also directs the soon-to-be-unveiled Urban Sustainability Project at MIT.

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Judy Layzer isn't, by any common definition, a futurist. But after a conversation with her you might feel you've just spoken with one.

A political scientist by training, Layzer now teaches and writes in MIT's urban studies department, where she has become increasingly focused on sustainability and the built environment—especially the ways that that environment is going to change. The way she tells it, change sounds like possibility (however hard it may be to achieve). As she says after enumerating some of the “healthy changes and opportunities” that will result from higher energy prices, “all of this is in some ways an urban planner's dream. It's the way we thought people should be living anyway.”

For the MIT Sustainability Interview series, Layzer spoke with *MIT Sloan Management Review* editor-in-chief Michael S. Hopkins.

## How do you define sustainability?

I have a definition of sustainability, one that reflects my values, which is that we have to operate within the physical and biological limits of the Earth. And within that, we need to develop social

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## LAYZER'S SUSTAINABILITY TAKEAWAYS

### DEFINITION

#### How do you define sustainability?

- Operating within physical and biological limits of the Earth
- Developing social systems that are fair and economic systems that can work over time
- Shifting measures of development from amount of quantity to level of quality

### DRIVERS

#### Which sustainability issues will have the biggest implications for managers?

- Cost of fossil fuels and changes in how they're captured and assessed
- Effects of climate change, especially on food systems
- Climate instability and social instability
- Water shortages and water quality

### THREATS AND OPPORTUNITIES

#### What threats and opportunities will sustainability-related concerns present?

- Threat: World inequities and resulting instability of societies and supplies; resistance to need to use less
- Opportunities: Massive shift to non-auto transportation; greening of buildings through retrofitting and new construction; green-infrastructure thinking; development of bioregional energy, waste, and food systems; surge in biomimicry and products that increase simplicity; focus on quality over quantity

### IMPEDIMENTS

#### What obstacles keep organizations from acting on sustainability problems/opportunities?

- Mindsets that value growth and wealth
- Belief that we can invent our way around problems rather than having to consume less

### ETC.

...CRITICAL NEED TO DRAMATICALLY REDUCE TAX ON LABOR AND RAISE PRICE OF NATURAL RESOURCES AND NATURAL CAPITAL ...“WE HAVE TO CONSUME A WHOLE HELLUVA LOT LESS” ... MARGINALIZATION OF ENVIRONMENTAL COMMUNITY THROUGH CARICATURES IS OUTDATED ....

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systems that are fair and economic systems that can work over time—that don't destroy themselves and the resources that they depend on.

For me, it's about the life support systems. I'm a Herman Daly person. I take his sustainability definition as mine.

**What would you say is the generally-held public definition of sustainability?**

Well, of course, everyone complains that there is no general definition. But the reason that the word works is because, like 'community,' like 'equity,' like 'efficiency,' it's a political word that people define differently. You get into fights over it. But at least most everyone can agree that it's important. And that's politically valuable.

The conventional definition is the three-legged stool—that social equity, economic development, and environmental regeneration all are essential components, and there's that sweet spot in the middle where they all come together. I don't use the three-legged stool. I don't find it useful. My preferred metaphor is the *container*. That is, our social and economic systems have to operate within the constraints of a healthy, resilient natural system; the natural system is the container for the social and economic systems.

But that definition is not only controversial, it's also antithetical to the way the world is currently organized in terms of how we run our global economy. If we tried to implement my definition, it would involve a transformation of a kind that very few people can really imagine.

**...A transformation that few people can imagine?**

Let me back up. What people who believe what I believe are up against is the standard economic model, which says almost nothing about natural systems—and, in fact, assumes that the products of human ingenuity are infinitely substitutable for natural capital. I don't believe that. Of course, it's much more comfortable to think we can become sustainable without giving anything up.

My view is that we have to consume a whole helluva lot less. Irreducibly, we rely on some things that we can't *make*—many more things than I think people acknowledge. Ecosystem services are so elegant that even though we have spent decades trying to reproduce them, we aren't even close to succeeding. I don't have faith that we ever will be. Other people do; I don't.

**It's commonly said that comfortable beliefs won't change until people start feeling direct effects that test them. When gas prices go up enough, maybe I'll drive less; the feedback mechanisms are there, and I suffer the effects personally. Climate change, not so much—right?**

## THE MIT SUSTAINABILITY INTERVIEW SERIES

The MIT Sustainability Interview appears every other Wednesday.

The interviewees will include thought leaders from arenas as diverse as management, urban studies, history, energy science, civil engineering, and design.

The conversations will be wildly varied, but at root their goal is to help leading managers answer just two questions: "As sustainability—economic, environmental, social, and personal—becomes the defining business issue of our times, what decisions will I need to face, and what will I need to know when I face them?"

Well, water issues—many of which are driven by climate change—are on the top of the agenda in the Western United States.

**But even if people can't water their lawns as often, they still get the water that they need, right?**

Increasingly, that's not true. People's wells are running dry. In California, for example, I would say water is the number one environmental issue, along with wildfires. Californians aren't more sustainability-oriented just because they have an environmental ethos; it's also because they're experiencing the effects of climate change, with water problems and wildfires that have become more extreme and more frequent. Their daily lives in many cases *are* being affected.

**Which sustainability-related pressures do you think are going to have the biggest impact? What's going to cause people to change their behaviors soonest?**

I think in the United States it's going to be energy prices. That's pretty clear. Because we are wealthy enough that we will desalinate water and rebuild infrastructure to deal with water issues. And we have the money to clean up local air and water pollution. Globally, environmental challenges are much more interrelated in the short term than they are in the United States, but here it will be energy prices.

There are a lot of healthy changes and opportunities that will come out of higher energy prices, of course. In cities, there will be a massive shift away from the car. There will be more emphasis on walking, biking, mass transit. Also a greater emphasis on funding infrastructure that supports those ways of getting around, as opposed to car-based infrastructure. For buildings, I expect a dramatic interest in retrofitting. I expect there will be more efforts to moderate immediate environmental problems in the city, like heat islands and stormwater

problems, which means more green roofs, green streetscaping, planting trees.

I think people will be moving back into the cities, and to the extent they're commuting, they'll be commuting in other modes. The long, car-based commute is on the wane and should be.

All of this is in some ways an urban planner's dream. It's the way we thought people should be living anyway.

### **What do you think the impediments to addressing those issues are going to be?**

The single biggest impediment is the fact that none of the things that are limited in our natural system have prices. We don't price carbon, we don't price ecosystem services. If we're really going to do this—I mean if we're *really* going to do this—then we need to put a price on what's scarce.

### **Starting with prices on finite natural resources--**

You have to start there. You say, what is scarce now in the world? And it's not human beings and it's not human-made capital. We're swimming in financial capital. But what is increasingly, frighteningly scarce is natural capital. And we have barely begun to talk about pricing it.

If I were dictator of the world, the first thing I would do is dramatically reduce the taxes on labor and instead price natural resources and natural capital. Raise revenue that way. That to me would be the single most important thing we could do to put ourselves on a path to sustainability.

The political obstacles, obviously, are enormous. First of all, the people who currently have a lot of political power don't agree with me. That's a problem, because they're the ones who'd have to actually put the price on natural capital. And industry plays on the cultural desire to have all this stuff for free, although there are some people in industry, a handful of people, who really get sustainability and work for it in earnest.

This isn't my original thinking, by the way—Herman Daly's been saying it for 30 years, along with a handful of other ecological economists.

### **Wouldn't the classical economic prediction about this be that we won't seriously begin to price things until we begin suffering the consequences of not pricing them?**

Yes—but. There are a couple problems with that. For one thing, globalization masks the true costs of environmental degradation for a long time, because wealthy countries can appropriate resources and labor from those who are least able to resist.

The other problem is that natural systems don't move smoothly. They move abruptly. So markets—and therefore prices—won't reflect problems until it's way too late. You can have a functioning natural system that goes from seeming to be okay to suddenly being completely destroyed. And by the time you recognize the harm, it's really too late to do anything.

For instance, we've essentially fished out many of our marine systems, but you'd never know it if you looked at the price of seafood. Look at the Chesapeake Bay, which is a 6,000-square mile watershed. A hundred years ago, the oyster population filtered that bay in a 72-hour period. But the oyster population is virtually extinct now, as a result of overharvesting and pollution. There was this rapid transition from the oysters keeping up, keeping up, keeping up—and then they were done. So there's a danger in just relying on the signals sent by the market.

### **It doesn't send signals fast enough?**

The lag time is a big problem.

### **If relying on the market isn't the answer, then what is? Don't most people still think they have a legitimate choice between thinking short-term and long-term, as it suits them?**

Well, I think the long-term is closing in on us. Think about the projections that scientists have been making about climate change. Every one of them is coming true much, much faster than scientists predicted. Between that and the rate of population growth, I think what used to happen in ten years now happens in two.

The other thing is, I feel like I walk around knowing the seriousness of this all the time. That's why *I* say we don't have a choice but to deal with it. But you're absolutely right: people could continue to ignore the impact of sustainability problems, continue to think that the consequences are all far off. I think that's completely wrong. So, personally and professionally, I feel like I don't have a choice but to work on these problems. I want to try to do something useful.

### **Do you see sustainability-related developments that you find promising?**

Yes. One area that presents real opportunity is this push in the environmental community for bioregionalism.

### **What's "bioregionalism?"**

Bioregionalism would be creating units that are based on some sort of biophysical character—like the Chesapeake Bay, which is a watershed. The Northeast is another bioregion.

For a long time environmentalists have been interested in having almost everything happen at the bioregional level, in-

cluding building economies around those levels. To me that's abundantly sensible. It wouldn't result in total bioregional self-sufficiency, but we'd end up would organizing our food systems and our waste systems, for example, within these ecological regions.

**Isn't that in direct contrast with every globalizing-markets trend that we know about?**

Yes. Although, with energy prices going up, we're already becoming aware that it's cheaper to get food produced locally than to ship food produced 6,000 miles away. You can make the same arguments about transportation, about buildings, about energy. Think of regional energy opportunities, for instance. In New England, you'd do a lot of deep-water wind. In Arizona, you'd do a ton of solar. There are parts of the Rockies where you'd do a lot of geothermal. But the point is you would *think like that*. I feel like the potential in terms of human dignity and actually being connected to the people that live where you live is huge.

**You mean it would be a step back toward the preindustrial village—that sort of interconnectedness and community interdependence....**

We're in a different place now, so we're not going back to the past, but we could invent something new that managed to accommodate these billions of people on Earth and made them more connected with one another. I think that we need a new model of development for a world of 9 billion people. Admittedly, here I run very much counter to mainstream economic thinking, but bioregional thinking is a lot more common than it used to be.

**Are there ways that companies can begin capitalizing on these trends and accounting for them in their strategic plans?**

Well, I'm a huge fan of biomimicry—that is, developing solutions by imitating and learning from natural systems. I think we should have a biomimicry lab at MIT. Also, there's great opportunity in innovations that make products *simpler*. Many studies show that adding bells and whistles to products doesn't actually enhance user experience. People end up ignoring them. I'm a testament to that.

**Feature creep, sure.**

Tiny example here, but...one of the few things I bought this year was this fantastic clothesline. Somebody really figured out how to manufacture it out of relatively benign materials and make it so it will last forever, so it's a really high quality thing. And now I don't have to use my dryer. This product has actually simplified my life.

Companies that figure out how to make things in a way that takes into account both the biological stream and the tech-

nical stream—a way that considers the life cycle of the product—are going to succeed. I think there's going to be demand that comes in a surge for products like this. That's my guess.

**Sounds like you're describing products and experiences that resonate with us for reasons we may not even understand—except that they're, frankly, just *pleasing*. You think those benefits will increasingly be recognized, and paid for?**

Yes. And sometimes things are pleasing because of how much sense they make. Sometimes we can *feel* that—and eventually we'll assign value to it. An odd but useful example: think of composting. It's incredibly satisfying to do because cities aren't going to have a place to get rid of all this food waste and it's ridiculous to remove nutrients from the soil and not simply put them back in. There are huge opportunities here in services: Somebody has to know how to do the composting and help other people in their communities do it. I have students working on that kind of project.

Food represents another opportunity. We see, demonstrably, that given the opportunity, people would rather shop at a farmers' market. Farmers' markets are better for the farmers and better for the consumers, and they're taking off. Now, of course, there's work to be done in making these opportunities equally available to low-income communities.

A sustainable economy is not going to be driven by an urge to consume as much crap as possible. It's going to be driven by the urge for less stuff but really good stuff. Good food, good products, things that last.

This really is a different model. And, you know, people aren't going to get rich. But more people will live moderately

well and how much better would that be? Who really needs to be rich?

**Well, a lot of people want to be rich.**

That's where I think we have a real sales job of persuading people that it's just not necessary for happiness, or well being. Research has conclusively shown that it's not. Plenty of us are living proof that it's not. I turn down opportunities all the time to make more money because I'd rather have the time. There are no more things that I need.

**You realize how groovy you're sounding, right?**

Yeah. But what's so funny is you look at me, and I couldn't be less groovy. I don't fit the model. I don't live in some yurt, as the caricature insists. And most people who feel the way I do don't fit that model, either. It's a silly caricature that was a very effective way of marginalizing environmental concern. It worked very well for a while, but, you know, I think we're done with that.

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