A Romantic View of Technology Design

... but not romantic in the lovey-dovey sense.

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Caspar David Friedrich's *The Wanderer Above the Sea* (Wikimedia commons)

Designers and entrepreneurs have long imagined a world where everything is digital. Here, lamps, clothes, furniture, and all sorts of accessories of modern life would communicate with their users and with each other, creating a network of smart technology that goes way beyond phones and computers. Examples of this are already cropping up in nascent iterations of the Internet of things, which currently include applications that tell you when you're running out of eggs, etc.

This dream presents a serious question: What's the point? Do "smart" objects have a raison d'*ê*tre? One obvious answer is that it might be cool if homewares could talk

(because who wouldn't want to live in a world like *Beauty and the Beast*?). Another potential answer: Making everyday objects "smarter" could increase efficiency by streamlining energy use, reducing the number of gadgets necessary in everyday life, and preventing user error in cars and elsewhere.

But a third explanation lurks in the background: Technological progress could create a world that more closely resembles what it "should" be. During a talk at the Aspen Ideas Festival, two graduate students from MIT Media Lab offered interesting versions of what this "should" might look like, painting a remarkably un-techy theory of technology design: In the best world, digital creations would facilitate a "return to nature" and create aesthetically moving experiences. In other words, they believe that the next generation of technology should serve the same purpose as art, at least in part.

But more on that in a minute. The first designer to offer up one of these perspectives, Lining Yao, said that her work actually fights against the tidal wave of digital information. Soon after arriving at MIT from her home of Mongolia, she realized that "there are so many smart people on this planet trying to add even more information to the real world. They are trying to put information on mobile phones... and even on glasses nowadays. And I started to wonder: Instead of adding more information to reality, could you try to maybe subtract some information at some point? Maybe by cleaning up all the noises you can pay better attention to the things you really care about."

This has led her to work on a few different projects. The most interesting is her team's effort to create material -- literally, cloth -- that can be digitally programmed to respond to human touch and shift into different shapes for multi-function use. For example, aquatic adventurers could wear sandals that transform into seaworthy flippers - maybe not the top priority for most commuters, but a fascinating option nonetheless.

"We forget about the richness, the poetry, the beauty of the world -- but sometimes it takes your breath away."

For Yao, all of this is part of a deeper philosophical drive to create technology that mimics nature. "Could it be that material is so smart? Could it be expressive, responsive, and so intelligent as to interact with humans? Well, if you look at nature, the natural material actually talks," she argued. For her, nature provides a roadmap for man-made technology, which is an unexpected throwback to Romanticism in late 18th and early 19th century Europe. Instead of the steady forward march of man v. nature, in which technological progress is a way of beating back, outsmarting, and dominating the natural world, Yao is describing a theory of tech design that shows deference to and even takes tips from nature's playbook.

Tech-loving romantics aren't operating in the same environment as Goethe or Delacroix, though, arguably because virtual reality has created a new layer of separation between the tech user's everyday world and the untamed wilderness Romantics so admired. As our sensory environments get flooded with more and more digital information, does that mean the world around us is less "real"? Yao thinks so. She explained that her work is "really an effort of trying to go closer to the spirit of nature, which is simplicity. If you look at all the projects, what we do is really try to create this visual perception for people to see the real world. On the other hand, [digital] perception is fake. But if you look at nature, nature never cheats. When I was a kid I used to run into the forest every time after rain because the air is fresher, I can smell the sun, I can touch the leaves and even feel the soil under my feet. It's a multi-sensory experience which exists in the real environment."

This brand of tech-driven neo-romanticism, then, exists in subtle contradiction: Even as Yao and her colleagues at MIT, along with inventors at Google, GE, and others, dream of a completely digital world, this kind of world seems less "real." According to tech romanticism, the more pervasive technology becomes, the more it needs to look like it's not technology at all.

Another MIT graduate student, Xiao Xiao, took tech romanticism to an even more artistic level: The ultimate purpose of tech design is to inspire and move the user, she argued.

"Funnily enough, whenever we think about the digital world, we tend to only care about the convenient, the useful, the constantly available streams -- no, deluge -- of information flowing through our eyeballs into our brains. And we forget about the richness, the poetry, the beauty of the experience in the world, an experience often flawed and always fleeting, but sometimes it takes your breath away. And I am here to tell you that after the years and iterations of working on this piano, there are times when you must look past just the convenience, the usefulness of the digital world. If you're able to do that, you can even craft the most abstract information into visceral experience, which is ultimately what design is all about," she said.

As the digital footprint on our built environment grows, new tech creations might serve a functional purpose, but Xiao envisions a world where using technology will be more like looking at great art: It should inspire and resonate at a deep, emotional level. This seems very different from the more utilitarian goals one might associate with technological progress, including efficiency and convenience. If not anti-rational, this take on technology is at least non-rational, carving out lofty goals for design that aim to battle what some see as a fractured, lonely, tech-y world.

Although applications of these MIT Media Lab projects still seem pretty theoretical, the prototypes are mesmerizing. You can see brief clips of the two students' work below.

Here, Lining Yao demonstrates the way that programmed air bladders and flexible metal can create vine-like plastics and new forms of lightbulbs:

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And in this video, Xiao Xiao uses video imaging to create an interactive piano-playing experience among a trio of players who aren't even there:

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For full coverage of the Aspen Ideas Festival, see here.

ABOUT THE AUTHOR

EMMA GREEN is a staff writer at *The Atlantic*, where she covers politics, policy, and religion.

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