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Helping the mind to cope with novelty and overload

By Alice Rawsthorn

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NEW YORK: What's the difference between human beings and chimpanzees? We know we're related - at least we were a very long time ago - but how different are we now? A group of scientists discovered the answer in 2005, when, after years of research, they succeeded in comparing the human genome (the DNA coding of all of our hereditary information) with that of chimps.

Their conclusion was that 98.77 percent of the information is identical, meaning that just 1.23 percent isn't. Intriguing though that is, it's hard to imagine what it means, especially if, like me, you had to look up "genome" in the dictionary. Enter the American software designer, Ben Fry. He has devised a charmingly simple, but accurate, way of explaining the distinction. Using the 75,000 letters of coding in the genome, he has created a photographic image of a chimp's head in which nine letters are depicted as red dots to illustrate the difference with humans.

"Humans vs. Chimps" is one of 200 images, objects and concepts in "Design and the Elastic Mind," an exhibition starting Sunday at the Museum of Modern Art in New York. The show is orchestrated by Paola Antonelli, the charismatic senior curator of architecture and design at MoMA who, in her 12 years there, has emerged as the most influential design curator of our time. Rather than play safe by celebrating what it now seems rather quaint to call "good design" as many of her peers do, Antonelli breaks new ground by interrogating the changing role of design now and in the future. In past exhibitions, she has explored its impact on new ways of working, and personal safety. Her most ambitious project to date, "Design and the Elastic Mind" is a manifesto for design - and designers - in the 21st century.

"One of the most important issues of today is how we respond to innovations in science and technology, which are hitting us at a faster pace with greater impact than ever before," said Antonelli. "Designers are the ones who are best placed to interpret innovations, by translating them into things we can use. Look at Ben Fry's visualization of the genomes. Pow! The data comes alive."

There's nothing new in the idea of designers interpreting the work of scientists and technologists for the rest of us. They've done so throughout history, starting with polymaths like Leonardo da

Vinci, who combined all of those roles in Renaissance Italy, and the 17th-century British architects-cum-scientists Robert Hooke and Christopher Wren. Throughout the 20th century, designers translated technical breakthroughs into things we could use every day. Without them, the Internet could still be a labyrinth of indecipherable code; and 3M would own the patent for a type of glue that isn't quite sticky enough to stick permanently on paper, but wouldn't have invented the Post-it.

The difference between then and now is the unprecedented speed at which innovations are emerging. "It's almost overwhelming," said Antonelli. "We're being pulled back and forth all day long at different speeds, different scales and in different time zones." Whereas once we needed adaptability to embrace these changes, she believes that we now need even greater flexibility - or elasticity - to cope with the velocity, and that designers require the same quality to help us to do so.

One consequence of this is that designers no longer need to control the entire development process and, increasingly, act as catalysts rather than the creators of complete works. Sometimes they cede control to nature, as the young Slovak, Tomáš Gabzdil Libertiny, did by casting a vase in beeswax, and placing it in a beehive where 40,000 bees created its final shape. Or they find ways of controlling it, which is why the Portuguese designer Susana Soares devised a means of using the bee's sense of smell to detect diseases.

Other designers are allowing technology to introduce random elements to their work. Furniture designers are experimenting with rapid prototyping production processes, which are so fast and precise that each design can be customized. Another example is the One Laptop per Child educational computer, which the American software designer Lisa Strausfeld has programmed to encourage kids to network. The more kids they network with, the more resources their laptops can access.

The exhibition also explores how designers are tapping into fertile fields of science, such as nanotechnology, which builds structures atom by atom, or molecule by molecule. Eventually nanotechnology could enable designers and architects to develop objects and, even buildings, that can adapt to changing conditions. Prosthetic limbs could be made more lifelike, and devices developed that could be injected into the body to cure illnesses.

Not all innovations are positive, as the exhibition acknowledges. A huge problem is data overload, and the show suggests how design can help us to cope with it. It also proposes design solutions to the psychological problems caused by the frenzy of contemporary life. Many are conceptual projects developed by students and teachers on the Design Interactions course at the Royal College of Art in London, such as the machine developed by Noam Toran to soothe lonely singletons by snatching their sheets during the night, as their long lost lovers might have done.

If designers are to embrace elasticity, they will have to work more openly and collaboratively. Although, as Antonelli notes, many are doing so already thanks to the popularity of open source development, whereby research is publicly accessible and critiqued. She practiced what she preaches in the preparations for "Design and the Elastic Mind" by holding a series of salons,

organized in collaboration with the science magazine Seed, to discuss the issues explored in the show.

The result is a thoughtful and provocative collection of ideas, theories and experiments, which raise dazzling possibilities for the future. Some will work. Others probably won't. But that's part of the fun of an inspiring exhibition that poses (at least) as many questions as it answers.