

Cloaked Bacteria and Yeast:
Rendered biology seen through a hypothetical object.

by Jennifer Rose Sciarrino

An invisibility cloak is a speculative object, meaning that it is only a theoretical or potential object, pliable in terms of how it can exist in our imaginations. Its scale and texture are malleable. What will it look like, other than the space behind that which it attempts to mask?

It is probable that this technology will be used in warfare or defense. If this is the primary drive for its development, what will come next? Will it become an effective personal privacy cloak? Or have medical applications in surgery? Will it be a favourable garment in fashion? A valuable tool for industrial designers and essential for architects? Will it only be used for exploitation of capital and violence?

A cloak will be placed over an object, organism or space that someone intends to hide or make unseen. The intention is not simply to conceal, but to hide something so well that it would seem like it ceased to exist. The object will, in a way, disappear and dissolve, either permanently or temporarily.

The first advances in cloaking will be on a micro scale with the possibility of enlarging the technology to cloak larger objects. The development of cloaking is dependent on advancements in metamaterials that manipulate light: bending it through refraction so it no longer casts a shadow, while projecting what is behind the object into the foreground. This process will be seamless. It will inhibit and distort the light being described to our eyes.

If a cloak were to be caught in the wind, how would we find it? We could bump into it and feel its texture, as changing light refraction would not diminish the sense of touch. The outline of what the cloak attempts to make unseen would not be comprehensible. If it were visible, what shape would it take? Perhaps the shape of a few yards or a couple of square micrometres of fabric.

On this page is one possible shape a cloak could take, presented as an absence or void. From this side, you can see the shape framing a written piece by artist and writer Aryen Hoekstra. If the page is turned back to the right, the shape frames a 3D-rendered image of probiotic bacteria. Looking through one visual to another: What are the possible contingencies?

The image on the right appears as though it was captured using a scanning electron microscope. This is a

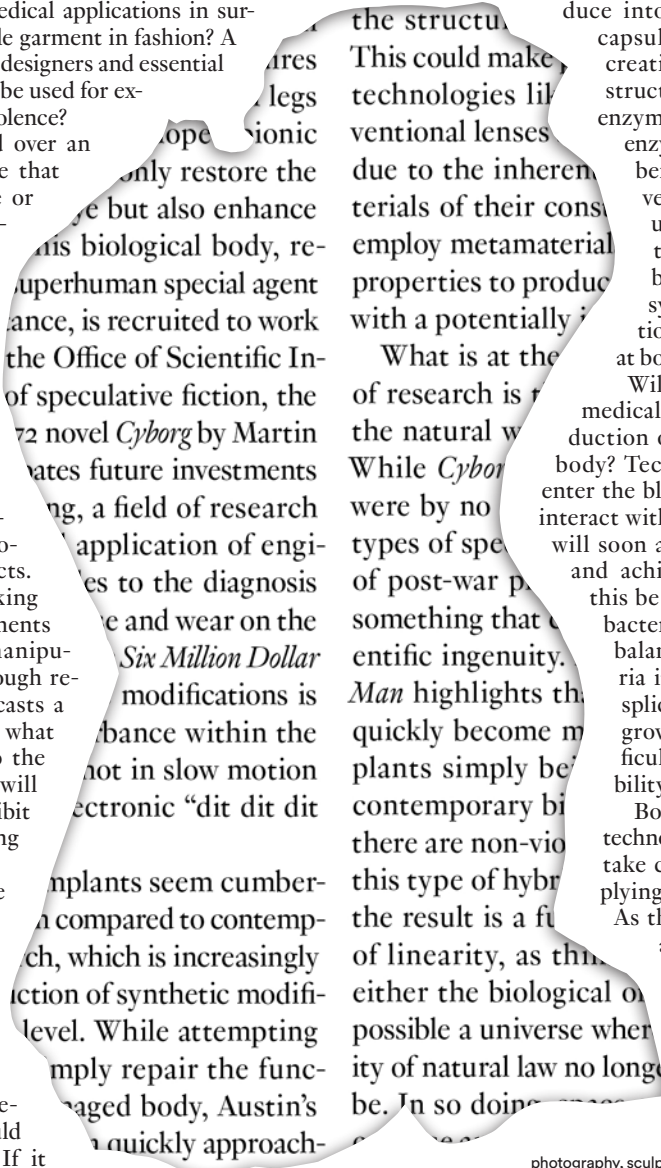
visualization model that captures the appearance of the bacteria on a microscopic level, as if each cell had been injected with ink (the colours rose quartz and serenity), texture mapped to look similar to the cell's archetype, and stylized.

L. acidophilus, *B. longum*, *B. bifidum*, *L. fermentum*, *L. rhamnosus*, *L. casei*, *L. reuteri*, *L. plantarum* and *L. gasseri* are all probiotic microorganisms that we introduce into our bodies via food or capsules, with the intention of creating a bioengineered infrastructure in the gut. The elated enzymes in the gut can influence enzymes in the brain, causing

benefits such as mood improvement. Probiotics can regulate our circadian cycles, treat and prevent disease by bolstering the immune system, and improve digestion as well as vaginal health at both a micro and macro level. Will adopting this type of biomedical therapy lead to the introduction of nanotechnology in the body? Technology small enough to enter the bloodstream, repair cells or interact with the neurons of the brain will soon allow us to alter the body and achieve desired effects. Will this be as easy to accept as using bacteria to restore the natural balance of the gut? The bacteria itself could be altered and spliced with a metamaterial to grow something that is as difficult to visualize as an invisibility cloak.

Both of the aforementioned technologies are grounded in and take cues from nature while applying advancements in science. As this type of bioengineering and metamaterial technology become possible, who will have access to it? Will it be largely determined by where and by whom it is developed?

What is at the heart of research is the natural world. While *Cyborg* were by no means types of speculative post-war products of something that scientific ingenuity. *Man* highlights the quickly become modern plants simply because contemporary bio there are non-violent this type of hybrid the result is a full of linearity, as this either the biological or possible a universe where the possibility of natural law no longer be. In so doing



Jennifer Rose Sciarrino is a Toronto-based artist working in photography, sculpture, video and installation. Sciarrino's work engages visualization technologies and contemporary object-making to examine the continually shifting line between real and 3D-rendered surfaces. She is interested in ways the digital vernacular affects current and future modes of production, shifts in socio-economic concerns, cultural consumption/participation and the inevitable environmental consequences of these forces. Sciarrino has exhibited her work nationally and internationally in group shows, including *Talking Back, Otherwise* at the Jackman Humanities Institute, Toronto; *NADA* art fair in New York; *trans/FORM* at The Museum of Contemporary Canadian Art, Toronto; *To What Does This Sweet Cold Earth Belong?* at The Power Plant, Toronto; and in solo shows, including *Cloak* at 811 Gallery, Toronto and *Patterned Recognition* at Daniel Faria Gallery, Toronto. In 2013, Sciarrino was one of the winners of the Toronto Friends of the Visual Arts' Artist Prize. She is represented by Daniel Faria Gallery.

