Towards a Scalar Identity Politics: Bacteria and Embodying the Molecular Self

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A phase photomicrograph showing a strain of the mammalian oral bacterium, Simonsiella

Leonardo da Vinci, Vitruvian Man, 1490
Rethinking Identity in Terms of Scale
from *homo sapiens* to *homo microbis*

Simon Park, I am Legion, 2017
https://exploringtheinvisible.com/2017/09/30/i-am-legion-microbiomic-tissue/
Let us recognize the “holobiont”— the multicellular eukaryote plus its colonies of persistent symbionts — as a critically important unit of anatomy.

From “A Symbiotic View of Life: We Have Never Been Individuals,” Scott F. Gilbert, Jan Sapp, and Alfred I. Tauber
As Mayeri tells us, “In the alimentary canal there are no heroes, only the multitudes.”
Lynn Margulis’s revolutionary research on symbiogenesis


“We Have Never Been Individuals”
A Symbiotic View of Life by Scott F. Gilbert, Jan Sapp and Alfred I. Tauber (2012)
A biofilm of *Escherichia coli*. A team of material scientists and microbiologists at Harvard studied the gut bacterium E. coli., which has many flagella that stick out in all directions. The researchers found that these tails can act as biological grappling hooks, reaching far into nanoscale crevices and latching the bacteria in place.

bacteria
de-gendering
bacteria re-gendering

1. Donor
2. DNA Polymerase
3. Relaxosome
4. Old Donor

Taylor Yocom, Hostess of the Mostess, 2015
Extended Mind
and the
Gut-brain Axis
Gut Instinct: Art, Design, and the Microbiome

a virtual exhibition curated by Charissa N. Terranova and David R. Wessner
during their participation in The Bridge 2015-2016, SciArt Center's residency program
Ken Rinaldo, Enteric Consciousness, 2010-11
Kathy High, Kathy as Bowie, Proposed Fecal Exchange project with David Bowie, 2015
Dear David Bowie

I have a hobby for you. I am writing you with a strange request. I am a life-long fan.

I have been following your career since I was little. I was born in 1964, so not that much younger than you, but enough so that I feel like a younger sister.

I offer these photos to you — re-enacting famous images of your career, I know thousands of fans have done the same — 106a, probably the best, but I thought of them among the others.

I was hoping these photos might capture your attention for a moment.

I want to exchange these for a throw-away item. Your poi.

I want to construct a backwards ornament with your body — implanting your body into mine, and my colon.

This pose against all the 'rule' — it should be someone close to you, someone under 66, pre-teen, etc., but I know we will be compatible.

And basically if I could become you, well, say no more...

I know people who know people who know people, who can probably get this letter into your hands.

I hope you will look upon this strange request favorably. I have Crohn’s disease and you could change my life for ever — although you already have!

Sincerely await your response.

Your fan,

[Signature]

Lizzy
SCALAR IDENTITY POLITICS
Toggling between scales of identity politics within art to bring home a thesis on holism...

It is difficult if not impossible to think the molecular self separate from the embodied self.

Together, the molecular and embodied self constitute a holism.
Other holisms include...
Above: Zygote – Fertilized Ovum
Right: Damien Hirst, The Virgin Mother, 2005, painted gold, silver, and bronze

Zygote, Blastula, Embryo and Mother’s Body
The major organelles and other cell components of a typical eukaryotic animal cell.
Faith Ringgold, *Hate Is a Sin* Flag, 2007

Anna Dumitriu, “Engineered Antibody,” 21 amino acids, polymer clay, Coomassie Brilliant Blue dye, jewelry wire, cotton calico, vintage tatted linen lace, silk, and embroidery, Based on research by Liu Lab member Xiang Li. 2015-2016

**Embodied and Molecular Scales of Identity and Self**
Faith Ringgold, Hate Is a Sin Flag, 2007

City. I was passing out flyers about the Whitney's discrimination against Black artists when a white man told his daughter: 'Don't go near that Nigger. That was 59 years ago in 1968. Slavery is hate. Hate is a sin.'
Anna Dumitriu, “Engineered Antibody,” 21 amino acids, polymer clay, Coomassie Brilliant Blue dye, jewelry wire, cotton calico, vintage tatted linen lace, silk, and embroidery, Based on research by Liu Lab member Xiang Li. 2015-2016

The shapes and forms of Dumitriu’s work elicit meaning within and beyond gender. The artist-scientist collaboration at work in all three pieces embodies an equally if not more powerful meaning-maker than sexual categories, even while the presence of Dumitriu – a woman and artist – in the lab is a resounding, even revolutionary, symbol of open frontiers and progressive thinking. A result of her residency working with researchers in the Liu Lab for Synthetic Evolution at the University of California Irvine, Dumitriu’s “Engineered Antibody” plays on the metaphor that amino acids are the “beads of life”: the idea that scientists enlist to describe structures of proteins constructed from chains of amino acids. The work is a necklace made up of 452 handmade beads containing the actual 21 amino acids of an antibody purified from the blood of an HIV positive patient.
David Alfaro Siqueiros, El Coronelazo (Self-Portrait as “Big Shot”), 1945

Gilberto Esparza, Nomadic Plants, 2010
Right: David Alfaro Siqueiros, El Coronelazo (Self-Portrait as “Big Shot”), 1945
Left: Photograph of David Alfaro Siqueiros and his wife Angélica Arenal with Siqueiros’ El Coronelazo
Marta De Menezes with Luís Graça, Immortality for Two, 2014

Kara Walker, Gone: An Historical Romance of a Civil War as It Occurred b'tween the Dusky Thighs of One Young Negress and Her Heart, 1994
Left: Marta De Menezes with Luís Graça, De Menezes’s cells from Immortality for Two, 2017

Below: Kara Walker, Gone: An Historical Romance of a Civil War as It Occurred b'tween the Dusky Thighs of One Young Negress and Her Heart, 1994

molecularization of race
Materializing Philosophies of Scalar Identity through Bacteria
Gilbert Simondon [1924-1989]
On the Mode of Existence of Technical Objects

GILBERT SIMONDON

Translated by Cecile Malaspina and John Rogove

Univocal
PROMOTIVE AUTOMOTIVE

TECHNOLOGICAL MEDICATION AND THE CAR IN CONCEPTUAL ART CHARISSA N. TERRANOVA
Ontology and Bacteria

Preindividuation

Individuation

Transindividuation
The holobiome is the material nexus of transindividuation.
Conclusions based on Simondon, Bacteria, and Art

a.) Identity is labile and multiple.

b.) Determinism is rooted in an individual will tempered by situation and relations.

c.) There is complexity-based reductionism in art and science.
THE LIFE CYCLE OF TOXOPLASMA GONDII
RACHEL MAYERI
2015
Rachel Mayeri’s 29-screen video installation examines The Life Cycle of Toxoplasma Gondii and the memetic proliferation of cat videos. *T. gondii* is a parasite spread by cats, which is present in 30% of the human population. The microbe reproduces in cats, and is spread fecal-orally. When imbibed by other animals, the parasite produces cysts in muscles, even the eyes and brain. Mice and rats with toxoplasmosis lose their innate fear of cats, and are instead aroused by the smell of their urine, causing a “fatal attraction.” The cats can capture and eat these docile rodents, and thus the parasite completes its life cycle—through mind control.

From: http://rachelmayeri.com/blog/2015/07/10/toxoplasma/
Klauss Spiess and Lucie Strecker, Spitparty, 2014
Heather Dewey-Hagborg, Stranger Visions, 3D Face Prints and Sample Boxes, 2014
Heather Dewey-Hagborg, Stranger Visions, 3D Face Prints, 2014
Anna Dumitriu, Make Do and Mend, 2017
Anna Dumitriu made the installation, “Make Do and Mend,” as part of The FEAT (Future Emerging Art and Technology) residency programme. The piece references the 75th anniversary of the first use of penicillin in a human patient in 1941 and takes the form of an altered antique wartime women’s suit marked with the British Board of Trade’s utility logo CC41, which stands for ‘Controlled Commodity 1941’ meaning that the use of materials has been deemed to meet the government’s austerity regulations. The toy sewing machine belonged to the artist’s mother. Born in 1929, she played with it in WW II, doing “Make Do and Mend” projects. The artist also played with it when she was a child.
The holes and stains in the suit have been patched and embroidered with silk patterned with E. coli bacteria grown using a dye-containing growth medium, forming pink colonies or spots.

The genomes of these E. coli bacteria have been edited using a technique called CRISPR to remove an ampicillin antibiotic resistance gene and repaired using a technique called homologous recombination to scarlessly patch the break with a fragment of DNA (converted into ASCII code and then to base 4) encoding the WWII slogan “Make Do and Mend”, which encouraged housewives to repair their clothes during the wartime rationing period.
Thank you.