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Exhibiting the Human/Exhibiting the Cyborg: "Who Am I?"

Exponiendo lo humano / exponiendo lo ciborg: "Who Am I?"

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Abstract

The role of the museum in shaping our relationship to science and technology, particularly cyborgization, is illuminated by a close examination of the Who Am I permanent exhibition in the Wellcome Wing of the Science Museum of London. This innovative exhibition raises real questions both about the human-technology-science relationship but also about museography. In the context of the history and current practices of museums engaging contemporary technological developments the evidence suggest that even as the Who am I? exhibit did break somewhat from previous approaches, especially the didactic presentation of the socially useful, it has not changed the field as a whole.

Keywords

Museography, Science Museum of London, Wellcome Trust.

Resumen

Ilustramos el papel de los museos a la hora de configurar nuestras relaciones con la ciencia y la tecnología, especialmente en el proceso de ciborgización, a partir de un análisis pormenorizado de la exposición permanente del Museo de la Ciencia de Londres titulada Who Am I? (¿Quién soy yo?). Esta exposición innovadora plantea preguntas de gran calado acerca de las relaciones entre la tecnología, la ciencia y lo humano, además de cuestionar el propio concepto de museografía. La evidencia indica que la exposición Who Am I? rompe en parte con las tendencias anteriores presentes a lo largo de la historia y que persisten en las prácticas actuales de los museos interesados en los avances tecnológicos contemporáneos. Esta ruptura es notable en el aspecto didáctico de su utilidad social. No obstante no consigue transformar sustancialmente la disciplina.

Palabras clave

Museografía, Museo de la Ciencia de Londres, Wellcome Trust (Fundación Wellcome).

Summary

Introduction

Museums have long cultivated an exhibition style that has maintained enormous voids in the public understanding of the contemporary relationships between mankind and science and technology. While it is true that science museums dot the cultural landscape illustrating the work of science, it is quite unusual for them to truly address the effects that science and technology have on individual human beings, and much less on whole societies. In an unusual departure from the usual science exhibit, a sophisticated presentation of technologies intimately affecting our bodies is evident at *Who Am I?*, a large permanent exhibit at the Wellcome Wing of the Science Museum in London. It is an exhibit that goes beyond the placement of uncanny biological objects soaked in formaldehyde to a discourse that—aided with a powerful script and lots of British humour—elicits questions and generates a multiplicity of responses about the implications technological advances have on our lives. However, even if it is novel in its approach, does it truly approach the quandaries we face regarding such advances, or does it fall into the trap set by trendy museography?

Background

While our physicality has been exhibited ad nauseam in bits and pieces in medical history museums, human beings have been exhibited together with their technologies only if they were considered to belong to "primitive cultures." Ethnographic exhibits appearing in anthropology or natural history museums have long illustrated "simple societies" through dioramas illustrating strangely frozen moments of an ideal past perceived to be quickly fading away. In other cases the enthusiasm for preserving the rural "essence" of certain regions has resulted in popular living history museums that can be witnessed in the third world, old Soviet states, or in the midst of the American scene at places like Colonial Williamsburg, where people act as cobblers, weavers, soap makers, tailors, printers, etc. in quaint mock villages set up as open air exhibits.

Most North American and European science museums have turned themselves into spaces for amusement that are content to illustrate natural phenomena or simple experiments while

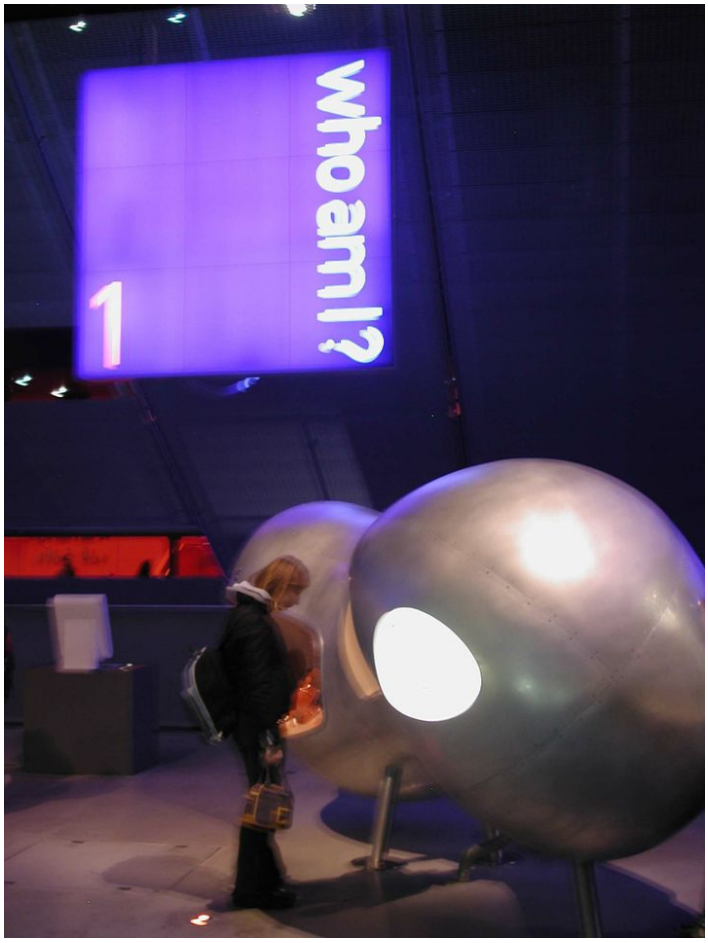
not addressing how we, humans, are rapidly changing from what once was an order of flesh and bones into creatures intimately altered by medical technologies. It is surprising to find that scientific advances continue to be illustrated in museums almost completely devoid of human agency, despite the fact that all the objects in storage areas and displayed in museum halls are undoubtedly artifacts created by our ingenuity, passion and quest for knowledge. Exhibits on modern science and technology that could easily be made humanly and socially relevant illustrate the last hundred and fifty or so years *of human* accomplishment in social vacuum; a vacuum that has effectively erased the effects that scientific and technological advancement have had had on human life. That is, they largely leave people out, except for the bust of the extraordinary characters that have contributed great feats to humankind and who are generally acknowledged as geniuses. We, either as a society or as individuals and being the end recipients of such "triumphs," have not been allowed in exhibit halls except for very specific and quite rare instances.

We'd Never Been Modern

It was not until the end of the twentieth century that two major exhibits on science and technology—illustrating the impact they have had in our social life and on our bodies—appeared in the museum world. *Science in American Life* (SAL) was an exhibit at the National Museum of American History, at the Smithsonian Institution, Washington D.C., that, inaugurated in 1994, illustrated scientific and technological accomplishment together with their social implications. That proved to be daring; even before the opening it received a fair amount of negative attention from the media and paradoxically many of the important scientific institutions that participated in its creation became ultimately uncomfortable with its perspective. After the curator for the show refused to alter the initial script for the exhibit, the text was reworked by peers and remained on view. Its museography was powerful. However, the exhibit closed its doors early 2012.

The second was *Who Am I?*, which opened at the Science Museum in London within two years of the former and which still stands today, albeit modified from its original version. Both events were absolute firsts in the approach they took towards the implications of scientific work and its many powerful and variegated technologies in relation to us humans. Besides the

many similarities they shared, and while *SAL* gave due credit to human agency as well as the effects that the applications of technologies have on all of us, *Who Am I?* differentially illustrates the effects that medical technologies have on physical human beings. It departs in many ways from the traditional medical exhibition detailing how our nature is increasingly dependent on a wide array of prosthetics and medical applications—such as pharmaceuticals or genetic engineering—for its reconstruction and well-being.



Who Am I? Mediating two realities. Photograph by Sophia C. Vackimes.

Cy-Fi for Real?

The *Science Museum* has two main areas. One is the traditional museum created in 1928 heralding the history of science which has an emphasis on the inventions that sparked the Industrial Revolution: locomotives, steam engines, mechanical looms, etc., and a second section, inaugurated in 1995. The later is in the museum's new Wellcome Wing, situated in a state of the art addition to the old building; it houses exhibits aimed towards the public understanding of modern science. Created to deal with contemporary scientific and technological topics, it was funded by The Wellcome Trust, a private medical research charity and the Heritage Lottery Fund as well as: Intel, Agra, BBC, Pfizer, EPSRC, the Engineering and Physical Sciences Research Council, gsk Glaxo Smith and Kline, which are large medical and technological corporations.

The new hall's postmodern architecture features a structure made of concrete columns with steel trusses supporting the various suspended creating the illusion that the exhibition floors are floating in space which is an effect that "heightens translucence and transparency within the interior" (Museum 2001:6). The area also features uneven room shapes, an abundance of aluminum fixtures, exposed ducts, cement flooring, a combination of direct and indirect lighting, neon colors, etc., as well as the incorporation of art into the museographic script.

The ground floor has introductory exhibitions dealing with contemporary science and subjects that cause social concern such as the MMR (measles, mumps, and rubella) vaccines or blood transfusion technologies. A key feature on this level is titled *Antenna!*, a section continually updated to contain electronic news streams with news headlines projected onto a big screen, where four of five small exhibitions a year feature on the latest science news, while two feature exhibitions which explore new developments in more depth plus a demonstration area where visitors can meet the scientists behind the news conform the space (Museum 2001:20).

The first floor remains as it was when it was inaugurated. Titled *Who Am I?*, it questions what a human being is and exhibits a gamut of scientific explanations on the topic: issues on physical variation, medical and technological advances, popular conceptions and misconcep-

tions of scientific work, innovative concepts, historical blunders and breathtaking breakthroughs. The second floor was once titled *Digitopolis*; it illustrated the impact that digital technologies have on our daily lives. Digital scanners, musical instruments, interactive exhibits, future machines, all illustrate glimpses of the digital future and the past in a setting full of interactive artworks (Museum 2001:34); currently it is titled *Atmosphere: Exploring Climate Science*. The third floor was titled at the time of this research project *In Future*; it had no artifacts on display, but rather, a set of interactive stations. This area is now empty.

You Are an Animal

Who Am I? was created through collaborations with lay individuals who were asked to participate with the museum staff in order to create its content. The curatorial team broke museological ground not only by including those individual's as part of the exhibition concept but went further than any other major contemporary museum had previously done by charting and illustrating how the human body is and continues to be decisively altered—physically and psychologically—by new technologies.

Divided into sections titled with catchy phrases, the exhibits imminently demonstrate that whatever was learned or witnessed at any other museum is outdated. Countering the dogmatic and outdated information presented in nineteenth-century style science museums that continues to refine and reify structures of learning *inflicted* on the individual (Foucault 1977) novelty abounds. Jars with eyes, lungs, fingers, or dead fetuses, wax molds illustrating all sorts of skin diseases, or human remains showing signs of osteoporosis, or heart and lung diseases shown by the hundreds at typical medical exhibits, and which serve as updated medieval moral plays condemning our quite human proclivities, are practically absent from view. Here, instead of being lectured on the unbearable illness of being, we face the modern and daunting question: Can you be rebuilt?

Back when the exhibit opened, intertwined into a text that acknowledged the deep interdependence that exists between science and technology and their effects on humans. The objects presented were articulated to illustrate technologies that are not only elements of our everyday lives but also intimate parts of our bodies. Instead of merely heightening the aesthetic value of new imaging technologies, or providing us with a view of "wonders" of nature such as pictures

of twin siblings, or putting down bad science as "outdated" blunders, as with the cases of racialized intelligence tests and WWI military fitness probes, or dazzling us with a machine called Deep Blue that can play chess better than any human being (if it doesn't have to follow the same tournament rules), the encounters with the subtle and the not so subtle exemplifying that we are no longer mere flesh are compellingly private. Those alterations to the human body come in the form of vagina and penile prosthetics, cochlear implants, bionic vision restoration mechanisms, an assortment of artificial limbs and brain function simulators.

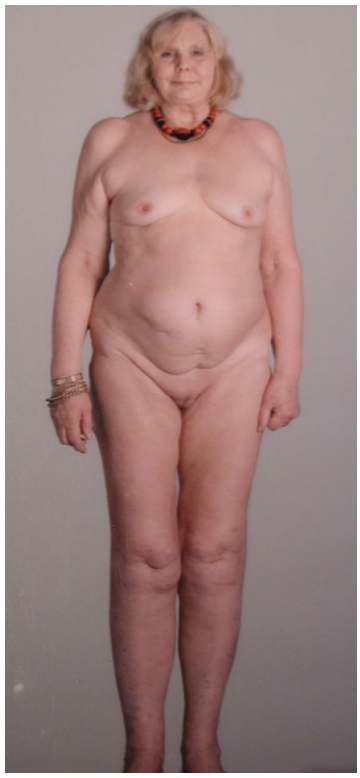
Can you be rebuilt? Why do you look like that? Will you be the first person to live for 1000 years? Are you acting your age? What are you afraid of? Is that face familiar? Can the dead tell tales? What is the recipe for someone like you? Some of the gallery sections display a totality of the contemporary scientific enterprise where visitors are subtly but powerfully guided through various realms of knowledge and experiences allowing inspection into the gaps of today's science while illustrating its ubiquity. Thus, all in all, those objects, prosthetics, physical aids, in front of us—appearing in different research categories such as genetics, anthropometry, and neuroscience—make scientific advancement quite personal. Each and every case study presented gives us a previously almost unfathomable exposure to the bionic opportunities as they exist today; suddenly, the number of spare parts that impacts the body becomes overwhelming, and the issue of whether or not our bodies are affected by science and whether they have changed inevitably becomes moot. However, the promise has gone from posing unanswerable paradoxes to the realization that whatever was human does not matter anymore.

You are human?

In 1995 as one entered *Who Am I?* a group of individuals represented by their photographic images told stories about objects dear to them. They beckoned us to visit this area as they discussed their interrelationships with science, encouraging the public to consider how science and technology had altered them. Those visitors were the first human beings to symbolically participate in a narrative in a science museum thus investing the script the social dimension of scientific advancement. This section began with a statement that boldly read: "YOU ARE AN ANIMAL." Next, the life-size photographs of the citizen volunteers that participated in the de-

sign and content of this floor introduced their interests, lives, physical appearances, and family backgrounds, all of which gave the floor a conceptual framework. The information on each was succinct but subtly hinted at what was going to be presented in the floor's various sections. The nude photograph of a woman was accompanied by this text:

> Selena Hart-Lubanov, Born on May 9, 1930 in Chelmsford, Essex. Her occupation: retired consultant. Portrayed in a life-size nude photograph, her only decoration is a necklace. The following items are included next to her: MRI brain scan, a DNA STR profile, and a psychological profile.



Serena: When we were human. Photograph by Sophia C. Vackimes.

After her, and shown in same fashion, were Simon Peter Trimarco, Melissa Chantra, Chiang Men, David Gregory, and Pupak Narabpour, all of whom were naked save one. Personal mementoes like books, records, music tapes, an orthopedic shoe, face scans, thermal images, Y chromosomal analysis, and other therapeutic and personal objects illustrated their lives.

The area as a whole has remained more or less the same for the last fifteen years and the curators continuously refine issues regarding what is natural and what is culturally defined about our nature, what science can reveal about us and what it cannot, while daintily moving onto what it can fix or alter about our physique and what it wants to achieve but still cannot. A look at a few sections gives us a glimpse of how the exhibit works as a whole.

"Genetics of the face" engages facial recognition. It traces that technology to the history of photography and describes how composite photographs produced by Francis Dalton and Charles Darwin—both of whom unsuccessfully in trying to define the facial characteristics of different criminal or indigent types—gave way to the development of dangerous pseudo-sciences while they also provide the inspiration for the high tech facial recognition technologies of today. The discussion describes how working with various families that visited the museum geneticists studied DNA samples extracted from them and created 3-D computer models in order to identify which genes influence facial features.

"Why are you male or female?" explains how sex is determined by our biological mechanisms. The text reads, "my dad determined my sex: he contributed an X chromosome to the conception mix where my sex was determined." Such choice-making is illustrated with equipment used in IVF in-vitro fertilization: pipettes, a catheter (used to place embryos back into the womb) Petri dishes and equipment commonly utilized to incubate embryos. "Prove you are a woman" discusses how sexuality is a complex issue, and how, for example, some times female competitors at the Olympic games have to prove they are *not* males. Sexual identity is further discussed with a topsy-turvy situation: "Sarah and Liam, both transsexuals got married." On view are: a wedding certificate, Sarah's old passport as Adrian, Sarah's birth certificate as Adrian, and Liam's name change certificate. The discussion also takes up the culture/nature debate: "Your gender is a crucial part of your identity. But why are men and women different?" and differences as cultural phenomena are illustrated with all sorts of objects: a Barbie doll, pink tea

sets, a toy cosmetic make-up set, and a baby doll, toy tool kits, trucks, and scale model cars.

"Are your insides unique?" brings up issues of the body's permeability; its defense boundaries are explained via the functions of the immune system. We read, "Its tiny agents watchfully patrol the body distinguishing what belongs to it and what does not. That's how we are protected from disease." "Defending the Body" discusses vaccines against polio, gonorrhea, mumps, rabies, and a large assortment of needles and syringes, making the point that most of us have been inoculated ever so clear.

"Could you resist the effects of ageing?" is illustrated with graying hair, sagging flesh, and rattling teeth, which explains why few of us look forward to getting older, while "Stay Young and Beautiful" provided some solutions to what many see as a problem. "My Skin Needs Ironing" displayed an array of lotions, creams and an assortment of other age deterrents: Oil of Olay, Lancôme products, acrylic dentures, cosmetic collagen injections and an assortment of cosmetic surgery scalpels. The labels explained how people have always searched for "elixirs" of youth, and how many of these treatments, although based on the "modern science" of their day, could have been deadly.

In "Identify yourself" the text explained how each of us is strikingly different, but remarkably alike to any other human being, and how modern science is providing new insights into our similarities and differences. "Body Coloring" touched on the topic of skin color illustrated through a group of albino animals, and a particularly attractive dissected white peacock. Skin and eye color, the labels continued, are determined by a chemical called melanin. "Adapt and survive" provided a beautifully assembled collection of white butterflies. The label read "butterflies that belong to a single species can have many different patterns and colors on their wings and as few as six genes control these differences." Color choices, the script added, could be soon made to customize the biological features of future generations of humans.

Rebuilt: The cyborg on view. Photograph by Sophia C. Vackimes.

> "Could there be another you?" Related how the cloning of the first sheep, Dolly, changed scientists' understanding of cellular biology and presented us with ethical challenges about our own identity. On display were a cutting of Dolly's fleece and synthetic reproductions of the first cloned pigs. A case next to this section asked, "Are You Related to This Iron Age Man?" The story told here indicated that by studying the skeleton of a man who lived 2,000 years ago, geneticists identified four of his living relatives. Archaeologists, medical artists and other experts also helped to reveal fascinating details about the man's physical traits and details about his lifestyle.

The exhibit cycle closes by returning to "Human Animal" explaining how we are all animals with conscious brains that work at an astonishing rate and it is our wide range of abilities that separates us from other creatures. We read that the use of language is one of our uniquely human characteristics, jokingly adding that we have a "greedy way" with words. This is followed by a discussion titled "*Potential Cure for Dementia*" that includes a demonstration on

how doctors use a TMS (Transcranial Magnetic Stimulation) machine that allows the tracking during surgery of the magnetic fields deep inside the brain. A case across from this one holds various other machines—working or outdated—used for detecting, measuring, and altering brain functions.

Various other case studies fill the room presenting different sciences dealing with our physicality as well as the cultural interactions that help make us into what each one of us is. The case studies go back and forth, either recalling medical history or announcing new discoveries, while pointing out along the way the fact that scientific and technological advances (that might have initially appeared uncommon to us but which have by the end of our visit made been made evident) have forever changed the nature of the human body.

Change of Heart

The section that initially served as introduction to the area *Are You an Animal?* was replaced in the last couple of years by one titled *Can You Be Rebuilt?* Now, instead of being greeted by a group of human beings discussing their physical dis/abilities, dis/likes, backgrounds, and personal desires we find that the human reality the museum is presenting to the public is quite different than what it once was. Little more than a decade has lapsed between the creation of *Who Am I?* with the inclusion of real human experiences as part of the museum script, and the acknowledgement of the changes prosthetics or artificially induced changes such as vaccines effect on the constitution of their bodies. This is made clear through objects on view such as pacemakers, prosthetic limbs, or many a drug or genetic therapy, and itmade the museum experience enthralling. It gave the "overall effect of an extraordinary symbiosis of humans and machines" (Gray 2002: 3). Now the fantastic probability that an individual would have to rely on one of those scientific apparatuses has suddenly been replaced by the stark announcement that we are all almost entirely rebuildable units, and what a visitor takes home after a visit to the museum is entirely different.

The many brain computer interfaces, functional electrical stimulation electrodes implanted into the brain, artificial retinas and cochlear devices to relieve individuals from total eyesight or hearing loss, the genetic engineering used to create organs to order such as heart valves, tracheas and a wide assortment of bones, groundbreaking blood vessel scaffolds for the

reconstruction of various organs due to damage suffered from catastrophic events, bioreactors utilized to grow human organs to supplement them when ailing, bones and skin grown and harvested by processes involving the manipulation of stem cells, test tubes used in the process of in vitro fertilization, fanciful electronic nebulizers utilized to help people breathe, etc. demonstrate that "[w]hatever you call it, the living system we are part of is clearly both organic and machinic—and is evolving" (Gray 2002 :11).

And evolving it is indeed, however, the jump this museum has made from its previous position (a position far from that held by most science museums around the world) which went from completely ignoring humans and the adverse consequences of the applications of science and technology to making a touching humanistic statement to the now overwhelming and perhaps problematic display of flashy announcements claiming a complete change of terrain (Badmington 2003:53) make the museum's position on the nature of being human a bit suspect, in that it underscores that it was never really necessary to include real human voices in its halls.

It would seem that in the rush to be ever more modern—in the scramble to create trendier and trendier exhibits—a quite problematic but resounding statement about the human body as a whole is being made. That is: either what it means to be human as a corporeal and sentient entity aided when needed by artificialia, the Cyborg, is not worthy of being pondered in a science museum, or that we are not modern enough to be shown in a science museum if not altered (Fineman 1999:99). The rhetoric thus adopted underlines an ideology that exacerbates the uses of the metaphor 'repairing' rather than 'healing' (Gray 2002: 84).

The imminent changes occurring today to the human body were already alive and well in the previous version of the exhibit. They had been announced through many of the details expressed in the gallery's text, as well as the juxtaposition of objects contained in the cases but the overarching statement made today about our nature is completely different. The act of erasing those human beings that were the hosts to the exhibition, individuals who were the inspiration in the creation of the different case studies, through their physical characteristics and life vicissitudes, as well as contributors to the curatorial take on what we are today is vexing for the multisemantic and humanistic attitude the museum had taken has abruptly disappeared. "[A]ll scientific knowledge-claims have a provenance: they originate from some place, and

come from there" (Gieryn 2001:1), and in this case the provenance of all the claims in the room is, or rather, used to be, the human body.

> The ever increasing speed of technical, scientific, and cultural innovation produces ever larger quantities of obsolescence, while objectively shrinking the chronological expanse of what can be considered the *cutting-edge* present at any given time
>
> Huyssen 2000:32, original italics).

It is evident that here, it us that have become obsolete

A "breathtaking theatre" the Wellcome Wing once promised to be an environment for exhibitions on key topics in contemporary science and technology that allowed visitors to have their own say on some of the hottest science issues of the day (Museum 2001:4). Though the stagnating educational technologies used in previous generations of science museums that articulated quite specific "didactic" (Bennett 1988:82) exercises are partially gone, the fresh and daring invitation to personal introspection and social awareness *Who Am I?* presentedthe public so briefly has now been superseded by an "avant-garde of forgetting" (Virilio 2000:12), that sadly underscores not a "revolutionary necessity" or inklings of truth but rather sad "culturally desirable goals" (Fineman 1999:99).

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