AFTER EFFECTS: ART AND TECHNOLOGY, THEN AND NOW

BY JOÃO RIBAS

The advanced technologies that inspired postwar artists have now evolved to fit in the palm of your hand. With the widespread expansion of information networks in the late 20th century, digital and mobile media have come to play a signal and infrastructural role in everyday life. Yet the effects of this digital revolution were at the core of the intersections between art and technology in the 1960s and 1970s. Is the legacy of these practices reflected in the digitization of contemporary art? The impact of digital technology on contemporary art, as João Ribas proposes, reaches far beyond art forms that deal explicitly with the technological. The economic, biological, and geopolitical “after effects” of the digital revolution take the form of evolving connections between bits and atoms.
The relationship between art and technology that confronts today’s artistic practice has filled the pages of both online and print media in the last year, accompanied by an increasing number of exhibitions that attempt, in divergent ways, to articulate the digitalization of contemporary art. Set off by a growing corpus theorizing a supposed "post-internet" condition,4 this constellation has centered on the art world’s ambivalence toward the digital,5 as well as its impact on such technology on practices, bodies and minds, and so forth in forms of art that deal explicitly with the technological.6 What has emerged from this extended inquiry into the aesthetic, social and affective dimensions of digital technology is a historical blind spot: the legacy of the art and technology movements of the 1960s and 1970s, in which many of the themes and critiques of today’s technological condition were rehearsed, is barely acknowledged. As a result, the genealogy of recent practices has been constructed in terms of a binary opposition between "art" and "technology," with the former receiving a historical origin—in a sense emerging from within the explosion of consumer-grade technologies in the 1990s. The origins of today’s interaction between art and technology therefore lies between the de-materialization of its object and its immaterialization through the digital.

In the recent Venice Biennale, for example, short-circuited this historical narrative by asking work from the 1960s and 1970s, by artists such as Stan VanDerBeek and Otto Piene, alongside the recent work of artists like Helen Marten, Simon Starby and Ed Atkins. While sidling particular differences and critical debates, also a leveling not only suggests the relation of these two histonous modes of interaction between cultural production and the impact of information technologies. As earlier forms of technologically inflected art sought to articulate the effects of technological change—both on the perceptual apparatus and on society—much of today’s practice confronts data flows as our everyday sublime, the ontologies of informational space, and the myriad biological and social effects of the interfaces and decentralized networks that shape daily life.

The effects of such contemporary hypomnesia—the forms of extenuation of memory and knowledge—were at the core of the interactions between art and technology in the 1960s and 1970s. This included the naturalizing of cognitive and biological demands made by the computerization of knowledge. The legacy of these practices reflected in the “post-internet” condition of contemporary art. Recent artistic practices are of course informed, and shaped by the specificity of the digital. With the widespread expansion of information processing since the late 20th century, digital and mobile media have come to play a crucial role in our daily lives. Daily life is pervaded by emails, messages, texts, Skype calls, screen-based interactions and social networking updates. This mediation presents a new set of relations between social, biological and political realities that are arguably not entirely addressed within the contemporary art practice. Yet such practices also contain an ongoing dialectical relation of technology to culture, while in many cases perpetuating a set of historical failures.

In the 1960s, novel interactions between art and technology provided artists with unparalleled access to the emerging technologies of the coming third industrial revolution. As multi-disciplinary tendencies in postwar art converged with the technological innovation afforded by the Cold War, new forms of artistic practice relied on the increasing collaboration between artists and scientists, as well as the intervention of artists in the realms of science and industry—from the physics laboratory to the coastline. The fostering of such collaboration paired artists with technologies whose creative potential was still largely undeveloped, yet which necessitated the rarefied expertise and resources of universities, universities and research centers, including Experiments in Art and Technology, MIT’s Center for Advanced Visual Studies, LACMA’s Art and Technology Program, and Bell Laboratories.8

The resulting artistic production continued a technological fascination found in the art of the early 20th century, with a new urgency driven by the horrors of war and the rapid social and economic transformations of a post-industrial society. As Maurice Tuchman wrote of the LACMA program: "Much of the most compelling art since 1910 has depended on the materials and processes of technology, and has increasingly assimilated science, and industrial advances. Nevertheless, the isolated circumstances have artists been able to carry out their ideas or even initiate projects due to the lack of an operative relationship with corporate facilities."9

The art produced from within these new collaborative frameworks was in fact unique for its "slam of ideology" and corporate origins.10 With the widely praised "Talism" of the Art and Technology exhibition at LACMA in 1971 as the founted project,11 and the perceived association between these new technologies and the Vietnam War, art and technology was effectively discredited as a particular tendency, as Brandon-Lee has argued.12

The perceptions of such artistic practices as well as their understanding of the relevance and urgency of the technologies employed from an actual engagement with the effects of technological developments on society,13 it is a difference that accounts for skepticism on the one hand, and fixation on the other. The "failure" of such art ultimately rested, of course, on the constitutive paradox of postwar technology: how could technologies linked to war and violence be redefined through their use in art?


The attempt to do so grounded the ethical project of art and technology in the 1960s and 1970s "humanizing" science. As an "inquiry on the materials and/or concepts of technology and science," such art sought to challenge, in the words of Edward Shanken, "systems of knowledge (and the technologically mediated modes of knowing) that structure scientific methods and conventional aesthetic values."14 Part of this entailed defining the position of the artist within the technocratic society Marrese describes.15 Much of the technologically grounded art of the times, its distinctions and politics still debated today, seemed sustained by a perceived potential for social, cognitive, or metaphysical transformation in technology itself (against its alienating proliferation). Or perhaps merely by a supposed ability, or a desperate need, to mitigate the consequences of technological change. Technology was, in short, a pharmacological thing: what wounded, also cured.16

Providing a further interesting parallel to today’s conversations around contemporary art and the digital, such an approach was taken to task for not clarifying the...
Mousse 40 ~ Tailing About

(D) Stan Vanderbeek, Pennies for the Wall of the World, 1967. Installation view, Osmagju Art Biennale. 2010
(E) Jacoby Satterwhite, Bullying Desire 5 (detail), 2010. Courtesy: the artist
Rather than a paradox, perhaps a constitutive relation: such a condition stems from the fact, already proposed by Heidegger in the late 1940s, that the essence of technology somehow remains vaguely out of reach. Its intent to diminish the game that thought technology might affect experience was lost in a mechanist whirl of spectacle, while art predates itself, for relevance, the insipid shininess of the new (from lasers to robotics). The response was measured by degrees of technolorphic euphoria (mental disarray).

The advanced information technologies nascent in the 1960s have now evolved into the palm of our hand, no longer requiring mediation to assert their productive potential. Today's celebration of contemporary art—which includes, as Louis Doulas points out, the "digitalization and decentralization of all contemporary art via the internet"—relies almost exclusively on consumer grade technology for its production and dissemination. As a result, contemporary art is primarily concerned with consumptive effects: on attention (and thus scaling a performance-enhancing regime); on the body (as a public health issue or operations of biopower); and on forms of socialization.50 Or rather, its productive conditions that underlie it are largely represented as those of a particular "cognitive"—a great Gramscian intellectual muse—as in the discussion around the processes of capital that mobilize affect and sociality into the sphere of work. Under a process of real subsumption:

"effects and feelings, linguistic abilities, modes of cooperation, forms of knowledge, expressions of desire all these are appropriated and turned into sources of capital value...this means that labor, subjectivity, and social life are no longer female capital and antagonistic to it. Rather, they are immediately produced as a part of it."

In reducing new forms of precarious and flexible labor require the cognitive effort to "socially produce," a process that "in turn dissolves the mathematical measurement of labor time and value," in Franco "Bifo" Berardi's description.51 If "industrial exploitation deals with bodies, muscles and arms," post-Fordist production "takes the mind, language and creativity as its primary tools for the production of value."52 "Exploitation," as he writes, "is exercised mentally on the semiotic flux produced by human time at work."

Yet while cyberspace is a network that is continuously expanded and accelerated, producing at superhuman speeds, cyberspace, as he explains, is not. The latter is "essentially lived reality, linked to an organic support (the human body and brain)." Its limits are "connected with the intensity of experience that the conscious organism relates to the elaboration of knowledge coming from cyberspace," and so "cannot go faster than what is allowed by the physical material from which our brain is made, or the slowness of our body, the need for rest and affection."53

There are, of course, other bodies. The elision of production that grounds many discussions of the digital extends in particular to the modes that support the mystification of immateriality. This serves to obscure the cost to the body that produces the interfaces of the digital revolution, as Harry Sanderson has aptly pointed out. For example, the N-Hexane that is used in the manufacturing of touchscreens is a highly toxic chemical widely reported to cause blindness and nerve damage in the arms and hands of workers through contact inhalation.54 The infrastructures of the digital largely involve vast amounts of labor, power and raw material to support it—mobile technology and cloud architecture in particular—even as these are increasingly subject to deregulation or disinvestment. On the one hand, the "hyperindustrial stage" of the exertion of memory that the digital represents, as Bernard Stiegler explains, creates a proletarianisation in which it is "the consumer who is deprived of his memory and knowledge."55 On the other, people now die to "improve the sharpness of a film."

Where the use of technology in artistic practices once relied on expertise, is the only requirement now merely being a subject of "semicapital," with all the network dependencies involved? To be a moused in the swarming digital mass of the collective think? Is there any form of production that does not bear the effects of an encounter with the digital?

Contemporary practices have precisely failed to address digital technology "as a repertoire of practices and effects that increasingly lodges capitalism within the body," as Claire Bishop contends.56 "While many artists use digital technology, he writes in a manner reminiscent of the critique of the practices of the 1960s and 1970s, "how many really confront the question of what it means to think, see, and feel affect through the digital?" As a result, "the appearance and content of contemporary art" has been "curiously unresponsive to the total upheaval in our labor and leisure inaugurated by the digital revolution." This even as "the digital...a deep level, the shaping condition—even the structuring paradox—determines artistic decisions to work with certain formats and media."

The impact of digital technology is felt as much in these hollowed out mountains as in data crashes and garbage piles, and with the contemporary return of objects and ecology. The economic, biological and geopolitical "after effects" of the digital revolution take the form, then, of technological initiatives that mitigate these IRL effects, including reliable safe water systems; health initiatives to combat the deteriorative results of rare earth mining; AED/Defibrillator and energy drinks; carbon emissions taxes; or legal platforms that seek to address invasions of digital privacy. These connections between hits and atoms are only set to further increase within the evolving "Internet of Things," or "the use of sensors, actuators, and data communications technology built into physical objects—from roadways to pacemakers—that enable those objects to be tracked, coordinated, or controlled across a data network."

The resulting changes to contemporary art, including its circulation and distribution as it becomes increasingly experienced or discovered online or on smartphones, is evident in the ontology of transitional states that result. Within a network space of mutable digital materials, the work of art is subject to the lack of a fixed state. As Artie Washkun writes:


"In the Post-Internet climate, it is assumed that the work of art lies equally in the version of the object one would encounter at a gallery or museum, the images and other representations disseminated through the Internet and print publications, hologram images of the object or its representations, and variations on any of these as edited and recommercialized by any other author."

This condition is seen to extend to everything, "as everything is anything else," objects now existing "in flux between multiple instantiations." The digital turns any threshold between organic and inorganic, thing and code, information and metabolism, "into a set of transitional states of exchange—the commodification of information. While data is taken from "everything we feel, think, and do," Steven Slavicek explains, "financial derivatives, for example, "float in a hyperspace of secure contingency, free of indexical relation to any 'underlying' what's present." Coming to terms with such states perhaps means becoming attuned to the accidents, slippages, and cross-hatches that result from the sublimity of big data to 3D printed human organs.


As Artie Vierkant writes, "Post-Internet Art" is a term coined by artist Martin Olson and developed further by writer Gene McHugh in his critical blog "Post Internet" during its activity between December 2009 and September 2010. Under McHugh's definition, it con- cerns "art responding to a condition" described as "Post-Internet" - where the Internet is a novelty and more a habit. Perhaps, closer to what Guthrie Lonnergan described as "Internet Artwork" - or when the photo of the art object is more widely dispersed [4] viewed than the object itself.

There are also several references to the idea of "post-net culture" in the writings of Lev Manovich as early as 2001. The term, as Vierkant explains, "(a) large social relation to technology and the network. (b) The Image Object Post-Internet, http://www.arburton.com/wp-content/uploads/2011/03/image-object-postinternet.pdf.


4. As Louis Doublas has written, the term does not refer to the fact that it is "strictly computer/Internet based, but rather, can be identified as any type of art that is in some way influenced by the Internet and digital media." See Louis Doublas, "Weks Post-Internet, Post One http://pooled.info/post/post-internet-part-one.


7. As Michael Sazima writes, "the radically increasing accessibility of the network and the permutation of portable devices on which dramatically higher levels of visual information are at hand" are particular to our historical moment. Sazima, "2011: Art and Technology.


10. These initiatives, while sharing similar concerns and technologies, had, of course, very different methodologies and perspectives. As Brandon Joseph writes, "I've always been interested in using technology to explore the human condition, but when you first start using it, you have to keep that in mind, because some people are going to get the wrong impression." See Joseph, "Engineering Marvel," Amherst, March 2004, accessed online.


14. "The show, on view at LACMA from May 16 to August 29, 1971, was almost a by-product, and not the initial goal, of the project developed by the museum's staff long before in 1967, when senior curator of modern art Maurice Tuchman posed these questions: What if art form had access to the materials, expertise, and manufacturing processes of the day's most advanced technologies? What if they were free to experiment with these materials and processes, and what if they could collaborate with the engineers and corporations who had developed them?... "Of the twenty-three collaborations that had been approved to go forward, the work of fifteen artists appeared in the LACMA exhibition. The other projects funded: the proposals were not feasible, collaborations failed, or artists' interests drew them elsewhere." http://phystricke.blogspot.com/2012/02/an-and-technology-program-1967-1971.html


22. As Trousdale writes, "It is because technology and the Internet have changed the way we understand, conceptualize, curate, appreciate, create, and critique that we can say that the future of all art, in and eventually bound to be, the product of these societal, cultural and technological arrangements." Louis Doublas, "Weks Post-Internet, Post One http://pooled.info/post/post-internet-part-i/.

23. "The effects of the 'digital revolution' have been analyzed for the most part in terms of their individual effects on individual consumers, rather than from the perspective of the pressures currently charged with their production." Harry Sacks, "Art and Technology," Min, April 4, 2013 http://www.minmagazine.org/editorial/articles/human-revolution-water-shortage/438-McCann-Concept-for-bringing-sandersons-eye-to-my-attention.

24. As Gracian writes, "the term intellectual must be taken to mean (the Johns) social mass that performs functions of orientation in the broad sense: whether in the realm of produc- tion, culture, or public administration." Prince Nisidike, 1:47.