CYBERNATED AESTHETICS
Lee Bul and the Body Transfigured

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The sculptural work of Lee Bul generates a compelling visual incongruity within a cluster of aesthetic divergences. In her 1998 exhibition at Artsonje Center in Seoul, Korea, the suspended, white, and partially constructed representations of cyborg bodies, though unbounded by traditional biological gender, appear as female due to their hourglass shapes. But between them stands a monster. *Monster: Black* (1998), the many-tentacled amorphism, the great glittering pile of excrement. Visually incommensurable, the clean, sleek, resolutely contained surfaces of the female cyborgs resonate tensely against the unwieldy, seven-foot tidal wave of abjection that has gathered up its full force and threatens to crash down, subsuming all in its environment.

Much more subtle—but perhaps most relevant for this discussion—are Lee's *Monster Drawings* of 1998 in which proliferating forms mimic the octopus, the insect, the chrysalis, nerve endings, plant growth, and organs in a confusion of internal and external parts. The diagrammatic outlines of these India ink drawings add to the ambivalence of the forms, since the contours and the descriptive lines do not necessarily resolve themselves into discrete entities. The three-dimensional versions of these 2-D renderings, though compelling, do not hover between cohesion and dispersal in the same way. They float within the space of the viewer as distinct objects, as though clinically suspended in liquid. Lee's fleshy monsters, on the other hand, endanger the very sanctity of discrete entities by suggesting in a visceral way that their edges might bleed into ours. That is to say, these piles built up in the space, suggesting ordure and entrails, and threaten the idea of the autonomous subject.

Born 1964 in Yongwol, South Korea, Lee is widely known in the contemporary artworld and is recognized by many as the leading contemporary Korean artist of her generation. She has participated in the Istanbul Biennial, the Venice Biennale (for which she was one of two Korean representatives), as well as numerous exhibitions in venues such as the Walker Art Center, the Solomon R. Guggenheim Museum, Spain's Domus Artum 02, and the 21st Century Museum of Contemporary Art, Japan. The artist mounted solo exhibitions in Salamanca, Spain, as well as in Seoul, Korea, and among many other accolades was short-listed for the Hugo Boss Prize

in 1998 as well as selected to exhibit at Fondation Cartier in November 2007. Her work was recently included in *Global Feminisms* at the Brooklyn Museum.

It is broadly acknowledged by critics that Lee's production since 1998 bears much in common with Donna Haraway's "political fictions"—namely cyborgs, monsters, and hybrids—as strategies for stepping out of restrictive binaries that order much of Western intellectual thought.[1] According to Haraway, the construction of the cyborg, being post-gender, operates beyond both the sex binary and the social realities that accompany it. This positions the cyborg as a possible metaphor for standing outside of phallocentric, rational thought. Lee's work, as both a staging ground for ideas and as aesthetic expression, forms a bridge for the consideration of representations of postmodern dissipated structures and liminal entities. The cyborg and its many manifestations in cultural expression demonstrate models of identity that do not adhere to static nation-state, gender, race, or class. Monsters and hybrids, too, speak to those unauthorized aberrations and unlikely cross-pollinations that straddle clear categories, especially within rigid systems of definition.

The trope of the cyborg has been mobilized successfully within the context of technology as a political metaphor for outstripping the binary limits of the human/machine dualism. As a part of a discussion into the broadened possibilities for technology as shaping contemporary thought, metaphorical constructions like the cyborg comprise useful models through which the complex struggle with advanced technology finds some of its most potent articulations.

In order to develop an aesthetics that accounts for the impact of electronics and the digital, a "cybernated aesthetics" so to speak, it is necessary to look outside of traditional modes of analysis such as art history to consider other models for relationships to technology. By "cybernated aesthetics" I invoke artist Nam June Paik's term "cybernated art," from his manifesto of the same name.[2] In it, the Korean conceptual video artist advocates the fusion of art and technology as a strategy for drawing attention to the impact of life that is increasingly saturated by modern technology, or "cybernated life." His term is useful because while it addresses an aesthetic of information exchange, it is not limited to literal electronic and digital forms. This allows for an understanding that pushes beyond formal attributes, into a more nuanced understanding of the ways that, as literary theorist Steven Shaviro eloquently expressed:

> computational technologies have penetrated and transformed the real itself. (It's important to maintain that these technologies are themselves thoroughly real, constitutive and constituent of the real, in short part of the very fabric of the Real; against the fashionable claims that they have murdered the real, denatured it, reduced it to spectacle or simulacrum).[3]

So well captured by Shaviro, computational technologies come to be a part of experience so much as to be inextricable. With the term "cybernated aesthetics" I wish to extend Paik's idea to include the fusion of art scholarship with the study of

aesthetics that integrates the impact of machines, electronics, and the digital.[4] In both Paik's usage and my own, the term is contingent upon a finite cultural moment in which the joining of these is the most pronounced because of their friction. Each of their boundaries grates against the other and it is there that "something begins its presencing."[5] I also intend it as a loaded term that implies a problematic, monstrous hybrid or a valuable augmentation, depending upon the viewer's relationship to technology. Never was the grammar of machinery neutral, and with each successive medium, its language builds upon former media, expressing the concerns of its age and recalibrating perceptions according to its ideological underpinnings. That is to say, development of new media forms are not completely erratic, but situated within the set of possibilities set forth by its ideologies.

If there is such a thing as cybernated aesthetics, then in what form(s) does it manifest itself in a reality that has been transformed by information and communication technology? As one might characterize the informational era as ushering in a space of flows, or a feedback system between various elements, I suggest that cybernated aesthetics are demarked by the presence of multiple flows between the aesthetic object/experience and the agent-viewer. Rather than a model of aesthetic experience in which there is an object/experience endowed with unidirectional "aura" unto which passive viewers must render themselves, art becomes a mutual exchange, a negotiation. This model takes into account interactivity and renders us into the flow of cybernetics, or the command and feedback of bodies and machines. It immerses us. Therefore I see the term "cybernated aesthetics" as much more suggestive of multiple flows between art object/experience and artist/agent, while also evoking technology's interpenetration into human experience.

However, cybernated aesthetics do not stringently assign particular material qualities that are typically invoked in discussions of new media art. Many have described new media in terms of its apparently distinct traits. New media theorist Lev Manovich chose five conceptual qualities that he felt were uniquely attributable to new media: numerical representation, modularity, automation, variability, and transcoding.[6] At a 2005 conference on new media and art history, new media curator Christiane Paul enumerated a list of terms often used in reference to new media's materiality: computability, process-oriented, time-based, dynamic, non-linear, networked, real-time, interactive, hypertextual, modular, variable, generative, and customizable were among those qualities listed—although these were but a small sampling of a sprawling list of descriptors.[7] Theorist Roy Ascott's "telematics" has come to describe a certain aspect of new media production related to the extensions of one's self using informational and computational technologies. Jack Burnham—a critic, curator and writer on art and technology in the 1960s and 70s—wrote *In Beyond Modern Sculpture* (1968): "[The] cultural obsession with the art object is slowly disappearing and being replaced by what might be called 'systems consciousness.' Actually, this shifts from the direct shaping of matter to a concern for organizing quantities of energy and information." In an essay entitled "Systems Esthetics," published in *Artforum* 1968, he similarly suggested that there would be a move from "an object-

Top: Lee Bul, *Live Forever II*, 2001. Fiberglass capsule with acoustic foam, leather upholstery, electronic equipment, 254 x 152.4 x 96.5 cm. Collection: 21st Century Museum of Contemporary Art, Kanazawa, Japan. Photo: Will Brown. Courtesy Fabric Workshop and Museum; Bottom: *Cyborg W4*, 1998. Installation view, Venice Biennale, 1999. Cast silicone, polyurethane filling, paint pigment, 188 x 60 x 50 cm. Photo: Rhee Jae-yong. Courtesy Artsonje Center, Seoul.

oriented to a systems-oriented culture. Here change emanates, not from things, but from the way things are done."

These terms and ideas have all stretched the limits of traditional, object-based approaches by reaching beyond *material* aesthetic qualities of art that integrates new media, and instead considering *conceptual* aesthetic categories.

Subjectivity and technology are linked in new media art, since the viewer becomes participant/agent in the formulation of the aesthetic experience. Therefore, special attention must be paid to those cognitive frameworks that do not disavow identity, nor seek to neutralize it under the banner of utopian egalitarian notions. Is it possible to engage with technology and still acknowledge the shifting, multifarious subjectivities of postmodernity? How can this be applied to a critical model that acknowledges the filtration of cybernated aesthetics into material cultural production? That is to say, I refer not merely to electronic and digital media forms per se, rather to the general influence of advanced technologies on aesthetic production at large. While models existing outside of art discourses may not be suitable for wholesale appropriation, they may still provide useful, productive languages.

But what of Lee Bul's cyborgs and monsters? The artist's work has evolved since the 1980s into a veritable obsession with the monster and the cyborg as tropes for (in her own words) "our fear and fascination with the uncategorizable, the uncanny."[8] Early on, Lee's performances were enacted in costumes that allowed her body to assume extra appendages, orifices, tendrils, and viscera. She presented her own female body as monstrous, abject, informe, indeterminate, excessive. In example, *Sorry for Suffering—You think I'm a puppy on a picnic?* (1990) consisted of a twelve-day performance around Tokyo in which Lee inserted herself as an abject female presence into various urban spaces. Since then, her works have evolved into sculpture, installation, and interactive pieces that exacerbate the tension between proliferating aberration and the utopian promise of futuristic technology. Both are embodied in the cyborg and the monster, two prominent constructs appropriated by the artist to investigate technology and female subjectivity. The Japanese manga-based fantasy of the cyborg female body was first taken up by Lee in 1997, but continued as a dominant theme for the next several years. Concurrent with this production were her monsters, exhibited in the form of drawings and sculptures.

Her *Cyborg Drawings* and *Monster Drawings* prefigured what would eventually become large sculptural representations, impressive in their disturbing resistance to coherent form. In reference to works such as *Amaryllis* of 1999, as well as *Supernova* and *Crysallis*, both of 2000, the confusion between inside and outside, between its space and our space, signals erosion of the clear divisions between the object and the viewer/agent. As one art critic wrote:

> This is a posthuman body, transcending the dichotomies between nature and artifice, male and female. It is at once glorious and sinister, familiar and alien, grotesque and strangely seductive, and it beckons us toward a sci-fi future in which species identity renders gender identity irrelevant.[9]

Thus, it suggests an alternative to the ways in which the perceptible material properties of Lee's works are received. The cybernated body is the body made monstrous and posthuman. It represents the technologically mediated, the unlikely couplings and subsequent engendered fusions. The claim that gender—or any marker of difference for that matter—will ever be rendered completely irrelevant is virtually unthinkable; still, the polymorphousness of Haraway's cyborg and Lee's monsters reflect at least an ideological perceptual turn:

> The monsters and cyborgs show us that another way is possible. And a monster *"demonsterates"*, indicates, testifies within its very body, its intrinsic singularity, that there are roads other than the usual roads; that there are possible, viable forms other than the forms that occupy a legitimate place in the normative field of representation; and that other worlds are possible and realizable. Lee Bul calls this the "point of convulsion", in that representation collapses under the effect of a concentration of singular forces. These forces inhabit the void, and endow it with an aesthetic power which enables the unfigurable itself to become palpable and sense-perceptible.[10]

This palpable "unfigurable," this turn from discrete singularities into spaces of flows, information patterns and data clouds, this is the mark of a cybernated aesthetics. The monstrosity of Lee's oeuvre, is a translation of cybernated life into art. Yvonne Volkart has written of how Lee's work "incorporates the traces and effects which new media technologies have on (female) identity and subjectivity."[11] The art lies no longer in the discrete object but in the *interface* between the work and the agent-viewer.

Lee Bul's work occupies one position on a broad spectrum of highly successful attempts by artists to communicate the reorganization of perceptual relations that has accompanied the onset of the digital. Robert Lazzarini's computer-aided sculpture turns everyday items into uncanny objects that refuse to resolve themselves into comprehensible form. They push at the boundaries of our perceptual stability, and disrupt the unitary sense of space and self. Lilla LoCurto and William Outcault's radical remappings of the surfaces of human bodies, completed with the aid of a full-body scanner and cartography software,[12] suggest a plane of experience that passes far beyond unitary subjectivity. Their bodies are infinitely splayed, dispersed.

Lee's work re-instantiates the corporeal (rather than dematerialized) experience of technology as always mitigated by the body. The social changes that accompany computer and telecommunications-based networks, with their real-time possibilities, reconfigure one's relationship to technology. However, the elusive materiality of the digital also constantly reshapes how we interface with the aesthetic. In short, it affects the entire topography of relations between that which is sensible (i.e., able to be sensed), and the framework through which it is perceived.

The pressure of technology, mentioned earlier, is an extension of the sweeping global effects mitigated by these new interfaces. Sociologist Manuel Castells argues that in the course of networking the globe, an epistemological shift from the industrial to

the "informational" has occurred. According to the Belgian scholar, "informational" refers to "a specific form of social organization in which information generation, processing, and transmission become the fundamental sources of productivity and power," a paradigm contingent upon the technological developments in global tele-communications and rapid international transit.[13] In an increasingly tele-connected world, electronically-mediated exchanges, the presence of mega-cities as nodes of exchange, and a solid network of what he has termed the "managerial elite," contribute to the delineation of a fluid space of capital. In this "space of flows," one holds relevance and centrality in terms of one's connectedness to the network society, as opposed to geographical location.[14]

Informational capitalism gives rise to a globally networked society; consequentially, traditional borders of the nation-state erode. Hence, markers of identity such as nation, racial division, and class stratification totter under the duress of this massive shift. In Castells's view, one's identity and social value revolve around an established set of particularities, while the current historical moment is marked by the fragmentation of those very same institutions. The resulting dispersion of conventional anchors of self-definition elicits an anxious, destabilized sense of the self; in short, it engenders a profound identity crisis. He writes: "Our societies are increasingly structured around a bipolar opposition between the Net and the self."[15]

Castells's scholarship illuminates what he identifies as a transition to an informational society. This new society's characteristics demand a radical reconfiguration of formerly stable notions of self. Globalization's strain on unitary identity results from the spatial displacement of bodies (through diaspora, migration, exile, nomadism, hybridity) and a real-time connectivity that radically influences subjectivity, in terms of one's location in the data network. Though he does not directly engage artistic production, his lucid insights regarding the media in question—as well as their socio-economic impacts—make his theorizations germane. There is a link between globality, network systems as a postmodern critical framework, and electronic media. But this linkage is somewhat unexpected. Namely, this postmodern electronic condition precipitates the radical reconfiguration of conventional notions of identity—and by extension it affects relations to the body.

A discussion of embodiment vis-à-vis electronics and digitality frequently revolves around the physical limitations that technology purportedly allows the body to conquer. Information technology such as the Internet is generally presumed to be devoid of materiality. That is to say, as pure information in the form of electronic signals, the data network has been conceived of as operating beyond the body or identity, as immaterial or disembodied code.

The separation of mind and body lies at the very fundament of Western philosophical concerns. This duality is fueled by horror of the inevitable decay and death of the body, versus the great potential of the mind to transcend that decay. Hierarchically stacked, the mind takes precedence over the body in the deeply imbedded ideological structures of Western societies. As an extension of the mind/body split

that haunts Western thought, the pursuit of pure consciousness through technology drives developments in science and culture. These can be seen in such scientific pursuits as Artificial Intelligence, artificial life, and robotics, or in commercial and artistic projections about what artificial consciousness and a fluid human-computer interface might mean.

Lee Bul's monstrous and cyborgian imaginings disregard the comfort zone between art object and viewer, engendering messy aesthetic experiences in which boundaries between nature, body, and technology are broached in a most disquieting way. This conflict between human and nature, encapsulated in the struggle for immortality through technology, is elaborated upon with Lee's *Live Forever* (2001). In this multimedia installation, three white pods that resemble futuristic auto designs are arranged in the exhibition space, each one with an accompanying video projection. The three fiberglass constructions of about one hundred inches in length are identical on the outside, evoking streamlined prototype vehicles, or air-controlled capsules such as one might see in science-fiction films. Futuristic and clean, these objects are beyond the abjection of Lee's monsters or her amputee female cyborgs. Nevertheless they remain ambivalent objects, compositing controlled, phallic external profiles with richly upholstered interiors that suggest prenatal chambers.

Opening the hatches of each pod, one observes that the interiors vary: *Live Forever I* is lined with black, *Live Forever II* with a deep, orange leather; and *Live Forever III* with a metallic light blue. Each is also equipped with its own audio-video system including a personal LCD screen, headphones and a microphone, suitable for choosing and singing along to any of a selection of popular karaoke songs. Once the pod is closed, an acoustic foam interior dampens sound so that no ambient gallery noise is heard inside, and only a negligible trace of the private karaoke singing can be heard from the exterior. Two Plexiglas portholes allow external viewers to see the participant; the artist's three original videos, which form a backdrop for the karaoke lyrics, are also projected onto the gallery walls. The three videos created for this work include: *Amateurs* (1999) in which Korean schoolgirls dance in the forest—but their actions fluctuate ambiguously between play and violence. *Anthem* (2000) provides a virtual race through Seoul traffic at night. Finally, *Live Forever* (2001) depicts couples dancing in a Polynesian-themed "tiki" lounge.

In this telematic womb, one rests in stasis, suspended in a circular aesthetic exchange with technology. As Lee Bul explains:

> The spaceship, often in the form of a pod or capsule, is a recurrent motif in futuristic fantasies, which are all, in some basic sense, about the desire for immortality—to suspend, to escape the flow of time. In these fantasies, the pod functions as a technological exoskeleton, a divine shell, that we hope will allow us to go beyond the constraints of mortal flesh . . . In the capsules, you enter a realm where time and location are in limbo.[16]

Top: Lee Bul, *Monster Drawings: No. 3*, 1998. India ink on semi-translucent paper, 117.5 x 87 cm. Photo: Rhee Jae-yong. Courtesy 21st Century Museum of Contemporary Art, Kanazawa, Japan; Bottom: *Untitled (crystal architectural landscape after Bruno Taut)*, 2006. Crystal, glass and acrylic beads on stainless-steel armature, aluminum and copper mesh, PVC, steel and aluminum chains, 150 x 140 x 100 cm. Photo: Rhee Jae-yong. Courtesy Artsonje Center, Seoul.

These pods operate, then, as a sophisticated but contradictory response to the pressure toward dematerialization. On the one hand, they evoke stasis by encasing the body in a shell. Simultaneously from inside the participant may remain discrete, cradled in a technological womb, protected from the postmodern condition of dispersion and fragmentation. Though aesthetically divergent from her earlier work, *Live Forever* resonates with the same intensity as the artist's former explorations of technology and the body. In their visual control and denial of uncontrollability, the karaoke pods powerfully address embodiment through their almost hysterical, technological containment of the flesh. Simultaneously, this project continues Lee's engagement with women's bodies, particularly female sexuality as a modernist trope for the seductive and annihilative power of modern technology.[17]

Lee Bul's work has been included in exhibitions of art and technology, although she is not generally referred to specifically as a new media artist, or currently incorporated into new media survey texts. Certainly, the above discussion forms only one interpretation of a multi-layered and compelling body of work that confounds rigid categorization. Lee's oeuvre, nonetheless, exemplifies a tendency toward cybernated aesthetics as an identifiable presence in both the form and content of her works. That is to say, Lee's cyborgs, monsters, and pods, while calling upon an array of technologies that include (but are not limited to) media arts, are nevertheless fully engaged with cybernated life. Because her work is so thoroughly imbued with the concerns of advanced technology and its impact on embodiment, interpretations that omit this aspect would be incomplete.

Lee Bul's richly presented imaginings capture technological hopes and anxieties, while acknowledging their underpinnings in issues of subjectivity. As one of many artists whose aesthetic production is informed by technologies of informational society, Lee visually melds aesthetics and commodity, while referring continuously to embodiment and embattled subjectivity as constitutive elements of her production. Her work is therefore exemplary in its subtle investigations of technological development, while outstripping a reading of new media aesthetics (or digital aesthetics) as bounded by specific "qualities" like numerical representation, modularity and automation.[18] Although these qualities are not as stringent as naming formal characteristics (i.e., digital code and hardware) I wish to capture an *ideology of the digital* that supercedes descriptive taxonomies.

In response to the unique conditions of cultural production in an informational era, art history might also begin accounting for the object's *perceptible aesthetic interaction* with the observer, in addition to the *perceptible material properties* of the art object/experience. In this move from aesthetics of object-based materiality to interaction, or "cybernated aesthetics," the formal aspects of the objects/experiences themselves do not entirely command the viewer's material relationship to aesthetics. Consistent with the current historical juncture, more significant is how the "material" dimension of objects interpenetrated by computational technology and informational patterns reorganizes perception according to their logic. Through this conceptual model, one may begin to understand aesthetic objects and experiences as entangled with our own

bodies and subjectivities. Yet to be unveiled is the profound impact of technology in shaping the social realities in which artists such as Lee Bul function.

Electronic technologies are already inextricably part of social structures and cultural production. Donna Haraway has compellingly argued that we are already posthuman, cyborg, inundated with advanced technology and ideologically, even *bodily* influenced by it. When addressing works made under the influence of cybernated existence, whether they are technological art forms or not, art scholars can access a tremendous resource for interpretation in new media studies.

The idea that the form of the artwork casts an overwhelming shadow over what that artwork can mean is a technologically determinist stance that underestimates the artist's voice, and also fails to understand those technologies as integrated within society. Technological media do not spring fully formed from the laboratories of engineers and scientists, affecting art and culture as foreign influences. Rather, they operate from within the social, of which art-making is a part.

By the same token, while digital and electronic art should be recognized in terms of its formal departures from classic artistic media, artists still engage with art's histories and are in fact immersed in these histories as a part of their social milieu. This is not to say that the technological developments of electronics and the digital are negligible details, nor superficial digressions from traditional media of painting, sculpture, and architecture. The formal aspects of these new media demand their own specific attention; at the same time, they are still forms of cultural production, and as such can be considered within the context of the expressions that have preceded them.

The question remains as to whether there is such a thing as a "digital aesthetic," in the sense of the digital possessing unique, discernable qualities that isolate it from other media. Limiting the digital to art whose final form must be composed of illuminated pixels, binary code, digital sound, or electronic hardware is useful for structuring a specialization, but ultimately under-represents the profound impact of advanced technologies on art. The digital has simply become too entangled with culture to dislodge it entirely and identify it discretely. However, cybernated aesthetics do exist. These aesthetics are in conversation with electronics and the digital, but not bounded by them. Cybernated aesthetics reflect the impact of cybernated life, though they may not take digital or electronic form. This perceptual shift opens the conceptual possibility for understanding aesthetic engagement with data as an embodied rather than disembodied experience. Cybernated aesthetics build interfaces between the canonical resources of art discourses, the notion of viewer as agent with a multiplex subjectivity, and cybernated life as a significant social reality of the past forty years.

NOTES

1. Donna Haraway, "A Manifesto for Cyborgs: Science, Technology and Socialist Feminism in the 1980s," in *Socialist Review*, Number 80 (1985): 65–107.

2. Nam June Paik, "Cybernated Art," in *Multimedia: From Wagner to Virtual Reality*, edited by Randall Packer and Ken Jordan, New York and London: W.W. Norton & Company, 2001, 40–41. Originally published in *Manifestoes*, in Great Bear Pamphlets, New York: Something Else Press, 1966.

3. Steven Shaviro, "Ghost in the Shell 2: Innocence," <http://www.shaviro.com/Blog/> posted October 3, 2004 (accessed October 8, 2004).

4. I have limited my discussion to the impact of electronics and the digital on art history, but there has also been significant new research on the application of aesthetic philosophy and practice to the field of computing. See Paul A. Fishwick, ed., *Aesthetic Computing*, Cambridge, MA: MIT Press, 2006.

5. I borrow this phrase from Homi Bhabha, who used it in reference to hybrid cultures and transnationalisms that appear at the interstices or liminal spaces between pre-existing demographic groupings. Though he used it in relation to emerging cultures, not art and technology, I see the term as also appropriate to the flowering of artistic forms that integrate the technological, engendering new and sometimes fleeting articulations. See Homi Bhabha, The Location of Culture, New York and London: Routledge, 1994, 7.

6. Lev Manovich, *The Language of New Media*, Cambridge, MA: MIT Press, 2001, 27–48.

7. Christiane Paul, "The Myth of Immateriality—Presenting and Preserving New Media," presentation at REFRESH! Conference, Friday, September 30, 2005, Banff New Media Institute, Banff, Canada.

8. National Gallery of Victoria, "world rush_4 artists: Lee Bul," exhibition statement, downloaded from <http://www.ngv.vic.gov.au/worldrush/bul.html> (accessed May 9, 2005).

9. Adrienne Gagnon, "Lee Bul," in *010101: Art in Technological Times*, San Francisco: San Francisco Museum of Modern Art, 2001, 96.

10. Jean-Louis Poitevin, "Convulsions: An Essay on the World of Lee Bul," in *Lee Bul: Monsters*, Edips: Dijon-Quetigny, 2003, 64–65.

11. Yvonne Volkart, "This Monstrosity, This Proliferation, Once Upon a Time Called Woman, Butterfly, Asian Girl," in *Make Magazine* (August 2000), <http://www.obn.org> (accessed March 25, 2006).

12. Helaine Posner, "Lilla LoCurto and William Outcault: Self-Portraits for a New Millennium," *Art Journal* 65,1 (Spring 2006): 40–53.

13. Manuel Castells, *The Rise of the Network* Society, Malden, MA: Blackwell Publishers, 2000, 21.

14. Castells, *Rise*, 442–445.

15. Castells, *Rise*, 2. Author's emphasis.

16. Lee Bul and Clara Kim, "Interview with Lee Bul," in *Lee Bul: Live Forever, Act One*, San Francisco and Philadelphia: San Francisco Art Institute and The Fabric Workshop and Museum, 2001.

17. Many scholars have researched the ideological melding of female sexuality and modern technology. In particular, I would like to draw the reader's attention to Andreas Huyssen,

"The Vamp and the Machine: Technology and Sexuality in Fritz Lang's *Metropolis*" in *New German Critique* 24/25, Special Double Issue on New German Cinema (Autumn 1981–Winter 1982): 221–237. See also Klaus Theweleit, *Male Fantasies, Volume 1: Women, Floods, Bodies, History*, Minneapolis: University of Minnesota Press, 1987.

18. Manovich, 27–48.

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