



Beyond *Ghost in the (Human) Shell*

Austin Corbett
(a.corbett@gmail.com)

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Abstract

The cyborg inscribes itself nearly everywhere, forcing us to re-examine discourses of humanity, modernity, Japan, and technology. I will trace the early history of the cyborg, from its hidden roots and precursors in *fin de siècle* Gothic fiction to its fully formed conception in 1990s science fiction and Donna Haraway's Cyborg Manifesto. I will then move beyond the well-known cyborg genealogy to delve into contemporary portrayals that radically expand the cyborg's political potential, and posthuman role, through an analysis of Kenji Kamiyama's *Kōkaku Kidōtai Sutando Arōn Konpurekkusu* (*Ghost in the Shell: Stand Alone Complex*), the 2002-2003 TV series based on Shirō Masamune's 1989-91 manga *Kōkaku Kidōtai* (*Ghost in the Shell*).

The cyborg, the automaton, the robot, the ab-human;¹ the monster created by science has a long history in Western and Eastern culture, but this history is one of mutability and hybridity. The figure of the cyborg is continually redefining itself. Standing at the crossroads of multiple genres, politics, temporal and spatial movements, the cyborg is a cipher for the ever-changing relationships between humanity, technology, and politics. Donna J. Haraway's essay "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" codified this idea of the cyborg, creating an ironic and postmodern political practice that can be utilized to examine many aspects of the contemporary condition. In particular, Haraway's Manifesto, and the figure of the mutable and multiple feminine cyborg, open for us an entry way into a realm of interlinked contemporary discourses. From Techno-Orientalism to Agamben's biopolitics, from Japanimation to the Gothic, the cyborg inscribes itself nearly everywhere, forcing us to re-examine discourses of humanity, modernity, Japan, and technology. I will trace the early history of the cyborg, from its hidden roots and precursors in *fin de siècle* Gothic fiction to its fully formed conception in 1990s science fiction and the Cyborg Manifesto. I will then move beyond the well-known cyborg history to delve into contemporary portrayals that radically expand the cyborg's political potential, and posthuman role, through an analysis of Kenji Kamiyama's *Kōkaku Kidōtai Sutando Arōn*

Konpurekkusu (*Ghost in the Shell: Stand Alone Complex*) (Kamiyama 2002-2003), the TV series based on Shirō Masamune's 1989-91 manga *Kōkaku Kidōtai* (*Ghost in the Shell*) (consolidated in Shirow 1991).²

Like science fiction itself, the cyborg arose out of the Gothic genre, with “automatons” first achieving prominence in the mid-nineteenth century through early depictions that considered the uncanny nature of the automaton and its threat to traditional conceptions of mankind. These stories focused on the imagined danger of creating life outside of normative categories, reflecting contemporary anxiety regarding traditional Biblical notions of the fixity of species and the new Darwinian discourses of evolution (Hurley 1996, 5). This transgression of bodily boundaries would continue to form a key component in depictions of the cyborg. The Gothic automaton is figured within the Freudian framework of “the uncanny” (see generally Freud 2003); its inner workings are unknown, a source of fear and danger for those around it, but it is always a product of mankind. It is both supernatural, and born out of scientific processes. Thus, in *fin de siècle* Gothic stories the human body which “one had thought to be unchangeable, and permanent as adamant, beg[ins] to melt and dissolve” (Hurley 1996, 13).

The story of Rabbi Loew's Golem, who defends the city of Prague before being destroyed by his creator, was one of the first such depictions, and it can be clearly linked to later stories such as Mary Shelley's *Frankenstein*. Other *fin de siècle* Gothic stories, such as H.G. Wells's *The Island of Dr. Moreau* also explore this conflict between traditional conceptions of the unitary human and the modernist scientific project which renders the human body mutable. Throughout these stories, science is used both to justify and transgress boundaries, as Wells states in the afterword of *Dr. Moreau*: “strange as it may seem to the unscientific reader, there can be no denying that ... the manufacture of monsters – and perhaps even *quasi*-human monsters – is within the possibilities of vivisection” (Hurley 1996, 18). Importantly, however, these creations are degraded and objectified. Any traces of humanity that remain are underscored, and “the return to full, unhybridized humanity is presented as the ideal outcome for the protagonists” (Orbaugh 2005, 63).

Throughout the first half of the twentieth century, the theme of rebellion continued to play a primary and increasing role, with depictions of robots and androids rising up against their creators to destroy the prevailing capitalist order, as in Fritz Lang's *Metropolis* (1926). It is in *Metropolis* that the cyborg first begins to embody another conflict, that contained within capitalism, or rather the conflict between “efficiency” and humanity, between a patriarchal yearning for order, and the possibility of liberation of the body through technology. What these narratives all share is a focus on the power of the automaton for disruption; its creation heralds the end of previous formations, whether bodily, political or otherwise, generally resulting in violence, upheaval and often utopia.

It was not until the 1960s that the term “cyborg” was first coined, by researchers attempting to adapt the human body for space travel. “For the exogenously extended organizational complex functioning as an integrated homeostatic system unconsciously, we propose the term ‘Cyborg’” (Clynes and Kline 1960, 26). This transhumanist aspect of the cyborg, not present in the Gothic automaton, refigures the cyborg as not just ab-human, but post-human. Rather than transgressing established boundaries through monstrosity, this new conception of the cyborg gives powers well beyond the human. *Tetsuwan Atomu* (*Astro Boy*) which was produced from 1963 to 1966, centers on this theme of cyborg enablement. Tobio is not just rebuilt after his death; he is given great powers to control. Furthermore, in *Tetsuwan Atomu* the discourses surrounding monstrosity and hardware technophilia combine, “so that creatures living with a Frankensteinian recognition of self as ‘monstrous’ in the eyes of others nonetheless choose to use their cyborg bodies to save those others from the ever-threatening enemies” (Orbaugh 2005, 66).

Another discourse of historical thought regarding the cyborg must also be examined before we delve into the fully formed cyborg political body of the early 1990s. The economic rise of Japan in the late 1980s led

to a feeling of panic on the part of “the West.” As Naoki Sakai says, “From the outset the Orient is a shadow of the West. If the West did not exist, the Orient would not exist either” (Morley and Robins 1995, 155). When faced with the growing economic and technological power of Japan, and with the attendant demise of traditional Orientalist notions in a global information economy that could no longer posit the West as the locus of progress, Orientalism became refigured as Techno-Orientalism. “If the future is technological, and if technology has become ‘Japanised,’ then the syllogism would suggest that the future is now Japanese too” (Morley and Robins 1995, page 168). This Western response reinforces the “image of a culture that is cold, impersonal, and machine-like” (Morley and Robins 1995, 172). This serves to reinforce a Western feeling of superiority: “‘they’ are barbaric and ‘we’ are civilized; ‘they’ are robots while ‘we’ remain human” (Morley and Robins 1995, 172).

Techno-Orientalism, and its stereotype of the Japanese, which Toshiya Ueno calls the “Japanoid,” exists in between Japan and the West, acting as a Lacanian mirror-stage for the production of identity. This mirror clouds both Western understandings of Japan, and the Japanese self-identity. Two dichotomies are constructed out of this misunderstanding: between human and machine; and between Japan and the West – creating the “Japanoid,” or in other terms, the cyborg. This discourse creates such statements as the following:

In Japan, where cyborgization is ... openly sought after, they speak of “sociotechs” and “humanitechs,” evincing the intimate integration of the worker and the industrial system that is the postmodern corporation’s goal ... [T]he Japanese even call their country “The Robot Kingdom.” (Orbaugh 2005, 55.)

This techno-orientalism is implicit in a great deal of Western science fiction from the 1980s and early 1990s, from William Gibson’s *Neuromancer* (1984), which combines “futuristic high-tech images of contemporary Japan and anachronistic images of feudal Japan still widely circulating in the popular American imagination” (Morley and Robins 1995, 169), to Neal Stephenson’s *Snow Crash* (1992), with its katana-wielding main character, Hiro Protagonist.

This discourse of Techno-Orientalism, which placed Japan as the new home of the cyborg, failed to account for the differences in Western and Japanese depictions of the cyborg, particularly in the early 1990s. In Hollywood, the cyborg continued to be conceptualized along the same lines as it had been for a century, “male” and violently dominant, through characters such as Darth Vader, the Terminator, Robocop, and the Cybermen of *Dr. Who*. Furthermore, these cyborgs continued to be posited as ab-human, and the desirability of rejecting cyborgization was routinely brought to the forefront.

In Japanese depictions, the nature of the cyborg as antithetical to humans is lost, replaced with a concern for the subjectivity of monstrosity and hybridity. Sharalyn Orbaugh links this to a “Frankenstein Syndrome”; like the monster, Japan is forced to recognize its “own ‘monstrosity’ *vis-à-vis*/within the discursive hegemony of the already developed nations of the West” (Orbaugh 2005, 62).

These discursive streams regarding the cyborg coalesce as a politics and practice in Haraway’s “A Cyborg Manifesto.” Haraway’s cyborg is at once monstrous, multiple, contradictory, Western and Japanese, biological and mechanistic, male and female. It is universal, in the sense that “we are [all] cyborgs” (Haraway 1991, 150). Indeed, the mind seems to be hardwired for cyborgization; we write our memories down, build shelters, and reshape the fabric of the world around us (Clark 2003, 3). Haraway uses this conception of the cyborg to break down traditional dichotomies and ontologies, much as the cyborg itself transgresses boundaries. By taking on the politics of the cyborg, we are liberated from “the tradition of racist, male-dominant capitalism; the tradition of progress; the tradition of the appropriation of nature as resource for the productions of culture” (Haraway 1991, 150). The cyborg “is a creature in a

post-gender world” whose ontology skips any mythical link to nature or an “original unity” (150-51). The cyborg is “the illegitimate offspring of militarism and patriarchal capitalism” (151) or in other terms, Western capitalist and scientific progress.

Haraway continues by linking her conception of the cyborg to the discursive streams mentioned earlier. The cyborg (like the Gothic monster) collapses the boundary between animal and human: “the cyborg appears in myth precisely where the boundary between human and animal is transgressed” (Haraway 1991, 152). Similarly, it collapses the boundary between man and machine, a movement first visible in the creation of post-human cyborgs such as Astro Boy. Finally, and most importantly, Haraway links the figure of the cyborg to “The Informatics of Domination,” an historical process closely linked with neo-Marxist readings of contemporary capitalism, such as Hardt and Negri’s *Empire*. This conception is also closely linked to Foucault’s biopolitics, and his analysis of structures of power relations in the West. As the global economy moves from a “Disciplinary” society to a “Control” society, many important changes take place. Hierarchical structures of institutional domination, such as the factory, the hospital, etc., which previously reified gender roles, races, and class, are reduced to network structures of control which shape a free and hybrid flow of information. While other theorists focus on the political and economic ramifications of this late-capitalist “Empire” (Hardt and Negri 2000), Haraway focuses on the “coding of information” and biotechnology as cyborgian processes. “Microelectronics mediates the translations of labour into robotics and word processing, sex into genetic engineering and reproductive technologies, and mind into artificial intelligence and decision procedures” (Haraway 1991, 165). Just as the cyborg integrates human and machine, these networks integrate work and home; the Fordist factory economy is replaced by the Toyotaist, just-in-time contract-work model. Most importantly, just like the cyborg body itself, economies and nations are rendered permeable, mobile, hybrid and networked.

It is in this simultaneity, between the world political economy and our cyborg bodies, that a liminal space can be opened up for contestation. Rather than reinscribing traditional dualisms and dichotomies, the cyborg collapses ontological distinctions, rendering them all vulnerable. By acting as “monsters” that define the limits (and conversely the center) of community, cyborgs can take on the responsibility of technology, rather than rejecting or being victimized by it. Cyborg politics is a politics of survival for people in a world for cyborgs.

This brings us to Major Kusanagi Motoko, the main character of *Ghost in the Shell: Stand Alone Complex*. Kusanagi leads a secret group of para-military police called Section 9 who specialize in investigating cyber-crime. She seems almost self-consciously over-determined to fit into Haraway’s conception of the cyborg. She embodies Haraway’s idea that “The machine is not an *it* to be animated, worshipped and dominated. The machine is us, our processes, an aspect of our embodiment” (Haraway 1991, 180).

Several particular elements of her character should be highlighted. Her dress is particularly interesting, as she generally wears only a leotard, coat and boots. This dress, while seemingly provocative, is not sexualized by other characters in the narrative, and seems to imply a freedom from traditional conceptions of femininity. She is both overtly feminine, and clearly non-female. In the famous first scene of the film *Ghost in the Shell*, when she is told over her internal radio that she has a lot of static on the brain today, she responds, “Yeah, it’s that time of the month.” Of course, as a full cyborg, she does not menstruate; “the sexed body as reproductive body has no meaning – or, at least, *should* have no meaning – in her cyborg state” (Orbaugh 2005, 67).

Other examples from the *Stand Alone Complex* TV series reinforce this strange link between the imagined, or remembered, body and the reality of life as a cyborg. In Episode 4, we learn that Batou continues to buy and use exercise equipment, even though as a cyborg, he does not need to work out. In

other scenes, Batou and other members of the team consume “cyborg food,” artificial (and nutritionally empty) sandwiches designed merely to ease the realization that the cyborg body has no digestive functions. Unlike the cyborgs in the West, which seem completely ab-human, these cyborgs remain connected to biological experience.

The ambivalent portrayal of Kusanagi’s femininity continues throughout the series, as we regularly see her push her own body past its limits, ripping her own arms off, jumping off buildings, and being shot and stabbed. She seems to embody the “partial, fluid, sometimes aspect of sex and sexual embodiment” (Haraway 1991, 180).

She is always in control, ordering and orchestrating the other members of the team. She embodies many aspects of traditional masculinity, while also appearing stereotypically female. Similarly, Batou, her muscular second-in-command, is highly masculine yet he always defers to Kusanagi. “Both male and female cyborgs are thus visually exaggerated in order to account for the lack of substance they have to confront” (Kakoudaki 2000, 183). This lack of substance is the non-corporeal realm of cyberspace, which Kusanagi travels through with ease.

In the action sequences which often end the episodes, she takes what Haraway (1991, 180) would call “Intense pleasure in skill.” She is also given the power to penetrate and override the identity of others, through her skill at cyber-brain hacking. This last skill is particularly troubling for Kusanagi, as she has trouble determining her own identity. As a full cyborg, she continually wrestles with the possibility that her entire identity may be fabricated, a position that seems to draw her closer to other full cyborgs such as Kuze Hideo in the second season of the TV series.

Finally, Kusanagi also embodies the conflict implicit in a Harawayian cyborg, as she is quite clearly “illegitimate offspring.” Her position at Section 9 is generally uncertain, and twice in the series she leaves the organization to pursue her search for emergent life through the net.

The differences between the TV series and the feature length films directed by Mamoru Oshii are numerous. The movies are a slow paced, introspective look at what it means to be human, in line with the “cyberpunk” genre. By contrast, the TV series can be considered an example of the “post-cyberpunk” genre, as it continues the exploration of cyborgization, personal identity, and Artificial Life, while expanding its scope to include the probable effects of these technological changes on society. The characters in *Stand Alone Complex* do far more to protect and improve the existing social order than they do in the films.

The Tachikoma, or “think-tanks” also return in the TV series (they were omitted from the feature length films). The series goes to great lengths in exploring the emergent intelligence of these AIs.³ But in contrast to Hollywood portrayals which show AI as a vicious competitor and danger to humanity, the Tachikoma, like cyborgs, are treated very differently; although not human, they become Harawayian cyborgs. They gain intelligence throughout the first season, in large part due to the interference of Batou, who gives them “natural oil” and plays favourites. He encourages the tanks to develop a sense of individuality despite the limitations of their programming: they are designed to synchronize their experiences at the end of the day.

Kusanagi at first rejects this developing intelligence as a weakness, dismantling the tanks and sending them back for repair, due in part to her own uncertain identity. Her identity as a human is closely tied in to her possession of a “ghost,” the spirit that is said to be the true source of identity and “personhood” in the show; the tanks, with their growing individuality based on purely artificial intelligence, seem to challenge this ideal. Reflecting her pragmatism, however, once the tanks prove their individuality is an

asset at the end of the first season, she relents, granting them full individuality in the second season, through the use of a satellite that records their experiences and memories. The Tachikoma repay this, and become fully “human” in the last episode of the second season, when they sacrifice themselves to save the refugees from nuclear annihilation. As Kusanagi ponders eating an apple, and reasserting her own humanity, and as Batou asserts his humanity by trying to save Kusanagi, the Tachikoma sing: “It’s because we’re all alive that we are sad. When we raise our hands and let the sunlight filter through, we can see our blood coursing through them a vivid red.” The message is clear; they may have started as artificial intelligences, but like humans, and “Earthworms, mole crickets and water striders, [they] are all alive.” In other words, they “must have ghosts within” (Kamiyama 2002-2003, Episode 26).

This theme of emergent life is further developed through the character of Kuze Hideo. Originally a member of the Individualist Eleven, a group of men infected by a virus that forces them to commit suicide and call for the removal of Asian refugees living in Japan, Kuze becomes the leader of these same refugees by the end of the second season. He is also a full cyborg since childhood, a fact that leads him to form his “revolution.” His character truly comes out in the last two episodes as he tells Kusanagi, that he feels “a disparity between my body and my mind.” Proclaiming that he wants to leave his body behind and sail on the net, he is beset by doubt, as his artificial face may express his “ghost.” In the end, though, like the Tachikoma, he wishes to evolve into a higher form, by incorporating and sustaining the memories and ghosts of the refugees who reside in his cyberbrain. Faced with imminent nuclear destruction, many of these refugees agree, wishing to be liberated from reality to live solely on the net. As Agamben highlights in *Homo Sacer*, these refugees are an example of “bare life,” life that “may be killed but not sacrificed” (Agamben 1998, 8). Invited by the Japanese government to fill a labor shortage, they have no rights and must live on a separate island. When they revolt, the government shows little compunction about shelling and attacking them, giving further impetus to Kuze Hideo’s goal. Their desire to escape this corporeal nightmare clearly connects with the liberatory and transhumanist impulses of Haraway’s cyborg (although obviously not the bodily aspects), and notably is completely different from a Hollywood interpretation, which would bring a return to “humanness,” through a re-integration of the refugees in Japanese society. Instead, after they are saved by the sacrifice of the Tachikoma, we learn that many died anyway, and the situation remains unresolved.

The cyborg can no longer be considered a niche character, present only in science fiction or radical feminist theory. *Stand Alone Complex* takes pains on many levels to demonstrate how close to its vision of the future we already are. If we are all cyborgs, then a modern cyborg politics becomes a pressing concern. Kusanagi Motoko embodies much of this politics, not only through her literal cyborgization, but through her actions and her representation. But it is the character of Kuze Hideo, and the Tachikoma that take Haraway’s cyborg politics even further, celebrating life in many different forms, embracing a “personhood” theory (Hughes 2004). These characters radically open up Haraway’s vision of the cyborg, extending it in all directions to encompass new forms of life. As we create ever more complex lifeforms, whether genetically engineered, cyborg, artificially alive, or otherwise, it is these bioethical issues that will come to play a leading role. We should strive for a vision of the future that is realistic and optimistic, like *Stand Alone Complex*, rather than the destructive dystopias of Hollywood.

Notes

1. All terms in the paper are used loosely, and with some caveats. *Cyborg* is used generally, while *automaton* refers specifically to creatures without a consciousness (i.e. robots, golems, etc.). *Ab-human* is used only when referring to the Gothic genre. Artificial Intelligence is used to denote manufactured consciousness while Artificial Life is used to denote emergent consciousness.

2. The English titles of Japanese manga and anime are seldom literal translations of the Japanese titles. The title *Kōkaku Kidōtai* could be translated as “mobile armored riot police.” The title *Tetsuwan Atomu* (broadcast in the US and other English-speaking countries as *Astro Boy*) literally means “mighty atom.” The expression “ghost in the shell” is the title of the 1991 English-language graphic novel version of the original *Kōkaku Kidōtai* manga, and in the title of Mamoru Oshii's 1995 film, *Gōsuto In Za Sheru/Kōkaku Kidōtai* (English: *Ghost in the Shell/Mobile Armored Riot Police*).

3. They are Artificial Intelligence, but as they begin to manifest personalities and individuality they are also, by my definition, Artificial Life.

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