Oh Brave New World That Has Such Lessons In It

Using the Series *Ghost in the Shell: Stand Alone Complex* as a Critical Text

By Paul E. Dunscomb

Major Motoko Kusanagi, the main protagonist of *Ghost in the Shell: Stand Alone Complex*. Produced by Production I.G. Source: *Just Good Vibe* at http://tinyurl.com/z3llxhn.

The 2002 and 2004 anime series *Ghost in the Shell: Stand Alone Complex* portrays a world where the vast majority of human beings have been transformed into things more like machines.[1] Yet perhaps the most remarkable thing about this brave new world is how much it seems like our own. Although their bodies are enhanced and their brains networked, they still engage in human activities. They still read newspapers, books, and magazines, even though the written word has largely been replaced by digital barcodes. They sleep, even though they appear to have no need to. They exercise, entirely out of habit it would seem, as they no longer have muscles to develop. They drink, no matter that they appear incapable of getting drunk. They even smoke, although it is not readily apparent that they even have lungs to damage by doing so.

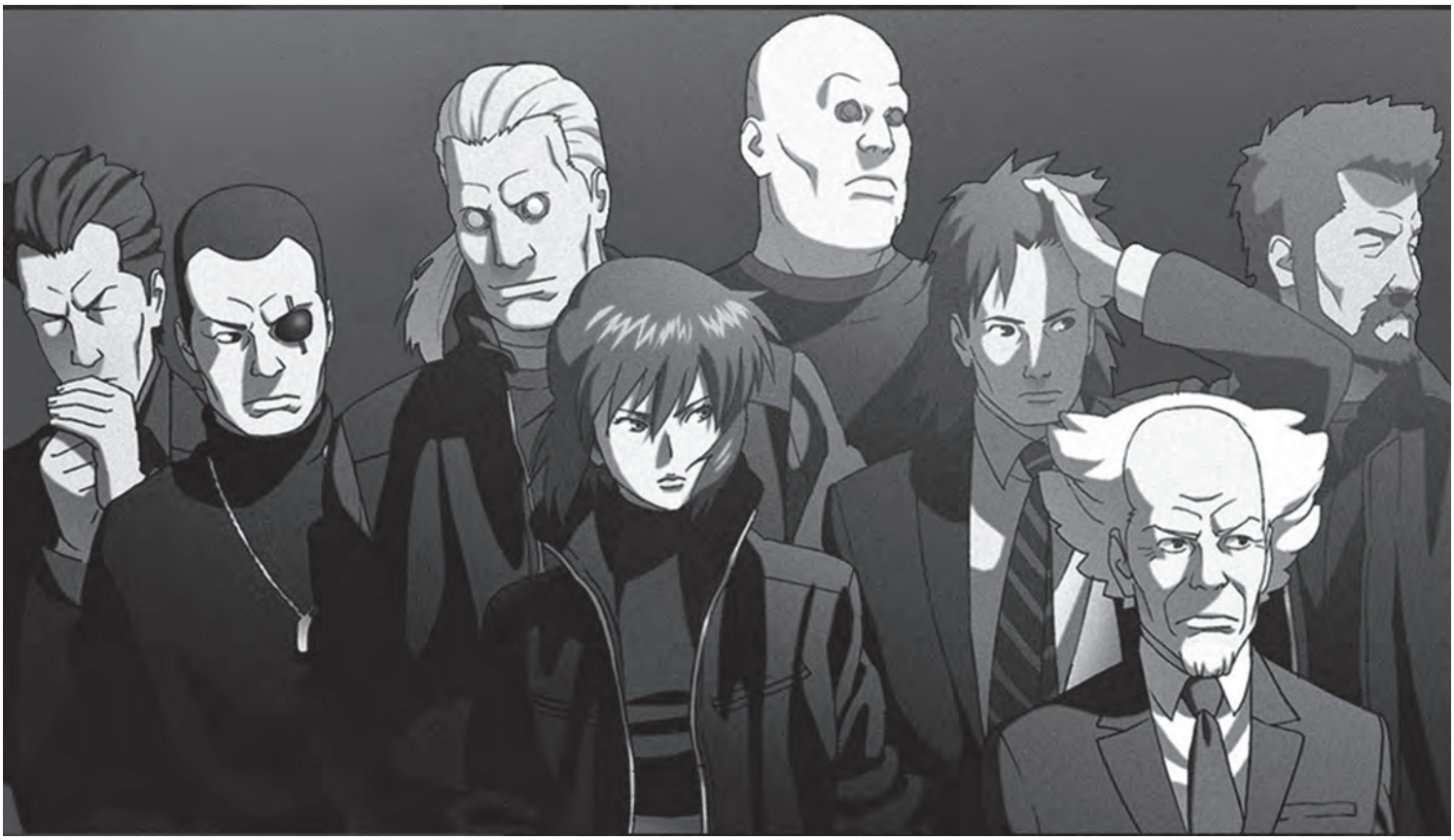
One wonders for whose benefit they do such things. Is it to make them appear less strange to the remaining, nonenhanced humans? Or do they feel the need to engage in these symbolic acts to convince themselves that they are still human? Perhaps they do it for our sake? Their simulation of human behavior allows us to identify with these characters even though we actually have little in common with them.

A major Hollywood film inspired by *Ghost in the Shell* is scheduled to be released in spring 2017. Even without this latest contribution, the universe of *Ghost in the Shell* is extensive. It includes the original *manga* (*Kōkaku Kidōtai*), written by Shirō Masamune, and the films *Ghost in the Shell* and *Ghost in the Shell: Innocence*, directed by Oshii Mamoru.[2] The series, which was directed by Kamiyama Kenji, is readily available on either DVD or Blu-ray through Amazon.com, and the series manga (available in English) can be found in the graphic novels section of major booksellers or comic book stores.[3]

Unlike other science fiction or fantasy worlds, such as *Star Trek* or *Star Wars*, the universe of *Ghost in the Shell* often lacks internal consistency. The two movies feature many of the same characters as the series, but the setting and action of the films are disconnected from the events of the series. It is set in the Japan of 2030, although even in the series there are unexplained discontinuities between seasons 1 and 2. As the result of the Fourth World War, the population, and the political and economic center of gravity of Japan, has shifted well to the south. In season 1, the new capital of Japan appears to be somewhere around Osaka, yet in season 2, it shifts to somewhere around Nagasaki for no apparent reason. Exactly what became of Tokyo is never explained, but the sight of Shinjuku submerged under several hundred feet of water provides a vivid spur to the viewer's imagination.

A notable thing about this rather dire-seeming future is that the setting is not overtly postapocalyptic. We see wide swathes of major urban areas that are run down or abandoned. There has also been a large influx of "Asian" refugees into Japan, including the vast squatter city of Dejima, which exists in view of the capital (season 2). Even so, the Japan portrayed in *Ghost in the Shell: Stand Alone Complex* (*SAC*, for short) is the familiar urban Japan of the 1990s, hypermodern but under the firm control of a triad of bureaucrats, corporate flacks, and tame politicians.[4]

It is the Japanese themselves who are most changed in this future Japan. Having taken their penchant for early adoption of technology to extremes, we are left to ponder what they have become. *SAC* posits a future where human brains can be cyberized, fitted with computer processors that allow them to network, wirelessly or otherwise, just as computers do. This allows for human beings to store not just their photos and music



Main characters in *Ghost in the Shell: Stand Alone Complex.* Left to right: Pazu, Saito, Batou, Major Matoko Kusanagi, Borma, Togusa, Chief Aramaki, and Ishikawa.
Source: *Kotaku* website at http://tinyurl.com/q4wpkmx

but actual memories in the cloud and to interact with other online consciences in a virtual universe. At the same time, human bodies can be partially or entirely cyborged, replaced by mechanical prosthetics giving them advanced strength, speed visual acuity, or any number of other enhancements.

Meanwhile, the development of artificial intelligence (AI) has advanced to the stage where computer programs have become capable of functioning entirely autonomously and can mimic human thought and emotions. This software can be placed in a wide array of robotic machines. They can take human form, as androids and gynoids, but they can also appear as autonomous drones or tanks. And it doesn't stop there. The society of *SAC* is a veritable smorgasbord of new technologies, including nanotech "micro-machines" and artificially generated human organs.

Perhaps the most remarkable thing of all about *SAC* is the entirely unproblematic way it portrays this society populated by its mix of wired and nonwired, augmented and nonaugmented humanity living side by side with autonomous machines and robots often indistinguishable from humans. The series allows us to see what happens to a society when the line between human and machine, already quite vague in Japan, is not so much crossed as it is completely obliterated.[5]

Precisely because of the way it raises questions about how technology can transform society and ourselves without answering them, the series serves as an excellent classroom text on the effects of technology on the human experience. And while students may respond to it as an example of cutting-edge *anime*, one of the show's great virtues is that it need not be confined to classes focused on Japan. The concerns it raises, the dilemmas it highlights, and the discussions it provokes can take place in courses on philosophy, religion, law, politics, technology, and more. The two series taken together comprise fifty-two episodes, which is obviously too much for classroom use. However, individual episodes of the show, which are about twenty-three minutes long if you skip the opening and closing credits, can be used to stimulate debate, provide concrete examples of theoretical dilemmas, or simply as a "what's wrong with this picture" exercise for students. As with all Japanese anime, it is embedded with cultural assumptions about appropriate levels of sex and violence. The content is generally not a problem for college-level audiences, and much of it can be used in high schools if selected with care.

The hero of the show is Major Kusanagi Motoko, who inhabits an entirely prosthetic body and has done so since she was six. She works for Public Security Section Nine, a small, paramilitary police organization designed to proactively seek out and eliminate potential threats to state security. Kusanagi's team includes former military such as the ex-army ranger Batou, former police such as the investigator Togusa, and a wide array of talented computer specialists (AKA hackers) such as Ishikawa. Section Nine is headed by the wily but upright Chief Aramaki. All the members of the unit have cyberized brains but vary in their other enhancements, from the almost wholly human Togusa to the fully cyborged Batou.

I have used portions of episodes 7 and 24 from season 2 as material for lectures in Japanese history but also in a colleague's political science class. The power of government bureaucrats and the incessant infighting that takes place between rival agencies are well-demonstrated in the first of these episodes. Maneuvers between political factions within the ruling party are nicely highlighted in the latter episode. Both provide vivid examples of two basic characteristics of the Japanese political economy in actual practice. In these clips and others, Aramaki is portrayed as someone very concerned about upholding justice. But the vision of justice he fights for is entirely his own. It is an abstract ideal; it does not lie within any government regulations, any safeguards on the abuse of government power, or in any properly constituted authority. This, too, is representative

of basic attitudes regarding the powers and privileges of many who serve in government in Japan.

But there is material in the series that can be of service to more than just historians or political scientists. Philosophers, anthropologists, sociologists, mechanical and software engineers, computer scientists, and teacher practitioners from other academic disciplines can make equal use of the material to generate thought experiments and in-class discussions on the implications of the technology portrayed here.[6] Almost anywhere you choose to dip into the series, you're likely to find more than ample grist for conversations regarding legal, ethical, moral, or ontological issues. Two quick examples are episodes 8 and 15 from season 1.

Episode 8 starts with Kusanagi getting wind of a black market in genuine human organs. This can certainly jump-start a conversation about the ethics of transplant surgery and the differing views on it in Japan and the West. However, the primary issue raised by the episode is the basic existential one of what it means to be human. Now completely digitized, human consciousness can be loaded into any mechanical device with sufficient memory to hold it. In the episode, we meet an extreme example of this in the form of the president of an organ wholesaling company. He has entirely abandoned his body for a crude robot that resembles a small refrigerator with stick arms and legs. Confusing the matter even more is the fact that the president's principal assistant is a human-form android running an autonomous AI.

The divide between humans and nonhumans therefore is no longer determined by physical characteristics. Instead, the divide is established along spiritual lines. Humans possess "ghosts." Exactly what constitutes one's ghost is never really explained. It doesn't seem exactly to mean soul, but it does include consciousness, identity, memory, and thought. Meanwhile, other mechanical devices possess AIs, which may have consciousness, identity, memory, and thought of their own. So what separates the president from his robotic assistant, and Kusanagi from the "AI ladies" she works with and superficially resembles, is that one has a ghost while the others have software.

Episode 15 of the first series indicates that the question might be even more complicated than it first appears. Kusanagi's other key coworkers at Section Nine are the *tachikomas*, small robot tanks with their own AIs. They are theoretically identical in terms of their software and continuously share "experience points" with their fellows by syncing their memories. Despite this, the six tachikomas seem to evolve their own capacity for individual identity and sense of self. Kusanagi is initially alarmed by this development and has them booted out of the unit. But in the final crisis of season 1 (episodes 24 to 26), they demonstrate a capacity for initiative, as well as loyalty to the group and willingness to sacrifice themselves—which convinces her they should be part of the team again.

In the end then, what the show leaves us are distinctions between machines with AIs and machines with ghosts that make no meaningful difference. It provides an equally confused picture of the nature of individual identity in such a society. If your brain constantly syncs with the experiences and memories of others, which are yours, and how do they make you, "you"? If your brain can be swapped, cloned, backed up, or downloaded into multiple copies, is there an individual left at all or just variations on a theme? The concept of the stand alone complex referred to in the show revolves around the challenge of maintaining a truly original thought in what has become essentially a wired hive mind.

The series also manages to treat the transformation of Japan's population into one divided between augmented and nonaugmented humans in an equally unproblematic way. First, it is notable that the only people who appear to object to either the cyberization or augmentation of human beings are portrayed as marginalized extremists or prejudiced cranks. Episode 10 of season 2 is good on that point. The consequences of a population split by a mechanical divide between ordinary, unmodified humans

and cyborgs with enhanced physical abilities, strength, endurance, ability to read digital material, etc., are raised at many points (episode 6 of season 2, for example) but never seriously examined.

For me, one of the most striking issues presented throughout the series, which cries out for critical examination without ever receiving it, is the basic issue of privacy. In an age that is not simply digital, but interconnected at the most basic and personal level, this would seem to be a paramount concern. And yet, no one seems especially upset by the routine violations of privacy that occur frequently throughout the show. If nothing else, one of the virtues of the series from my perspective is to make it very plain that turning the human brain into a large hard drive with a high-speed Internet connection is simply a terrible idea. Such wired human beings become just as vulnerable to hacking as a computer. An outsider can access information or force them to perform acts that they would not do otherwise. Instances of people being subject to just that take place almost every episode.

Obviously, criminals have no scruples in this regard, but neither do the authorities. The concept that something like a warrant might be necessary or desirable before invading an individual's brain—especially without any sort of informed consent—simply doesn't enter into the picture. Indeed, this issue is far more disturbing than a mere question of systematic civil rights violations by the state. This sort of unwanted, intimate penetration of the individual without consent might well be conceived as a new form of rape. Episode 4 of season 1 provides another example of violations of privacy. Nano-technology "micro-machines" are being used illegally to send literally everything the suspect sees to the authorities. For Americans, this can spark a discussion of Fourth Amendment concerns over illegal search and surveillance.

If you're still struggling to find an issue that might raise questions for your students, try episode 11 from season 1. It takes places in a facility for victims of "cyberbrain closed shell syndrome." These children have had adverse reactions to the implant of their cyberbrains. For all intents and purposes, they have grown incapable of, or just disinterested in, interacting with other humans. Instead, they retreat into their own virtual worlds or spend practically all their time inhabiting the web.[7] The fact that such technology might have adverse consequences is certainly worthy of discussion. What is liable to get your students downright angry is the way such children are exploited by their caretakers for their savantlike capacity to program data security firewalls and other computer applications.

The best thing about this is that you can show this episode to students in a philosophy course, a medical ethics course, a computer engineering course, a sociology course, or a number of other courses. It can generate stimulating, fruitful, and yet wildly divergent discussions applicable to the various disciplines or appropriate for interdisciplinary reflection. All this highlights the utility of *Ghost in the Shell* as a critical text that we can use to drive a conversation on the present and future implications of these technologies. It speaks to cultural differences between Japan and the West. It speaks to the various issues raised by the existence of such a society as depicted in the series. Most of all, it provides opportunities to stimulate inquiry into the implications of current trends in the development of technologies like artificial intelligence, human form robotics, and human enhancement. It allows us to have a conversation about the transforming effects of these technologies before they have the chance to transform us. ■

NOTES

1. *Ghost in the Shell: Stand Alone Complex*, DVD, 7 vols., directed by Kamiyama Kenji (Los Angeles: Manga Video, 2005), *Ghost in the Shell: Stand Alone Complex, 2nd Gig*, DVD, 7 vols., directed by Kamiyama Kenji (Los Angeles: Manga Video, 2006).
2. *Ghost in the Shell*, DVD, directed by Oshii Mamoru (Los Angeles: Manga Entertainment, 1998), *Ghost in the Shell: Innocence*, DVD directed by Oshii Mamoru (Go Fish Pictures 2004). There is also a follow-up to the TV series *Ghost in the Shell: Solid State Society*, DVD, directed by Kamiyama Kenji (Tokyo: Bandai Visual, 2007), and a direct-to-video series prequel *Ghost in the Shell: Arise*, Blu-ray, 4 vols., directed by Kise Kazuchika (Tokyo: Bandai Visual 2014).
3. Kinutani Yu, *Ghost in the Shell: Stand Alone Complex*, 26 vols. (Kodansha Comics, 2010).
4. For a basic primer on Japan's postwar political economy, see Paul Dunscomb, *Japan Since 1945* (Ann Arbor, MI: Association for Asian Studies, 2014), one of the *Key Issues in Asian Studies* series.
5. Jennifer Robertson, "Human Rights v. Robot Rights: Forecasts From Japan," *Critical Asian Studies* 46, no. 4 (2014): 571–598 provides an excellent overview of the cultural differences regarding attitudes toward robots in Japan and the West.
6. A good initial reference for those with little background in Japan is James D. Babb, ed., *The Sage Handbook of Modern Japanese Studies* (London: Sage Publications Ltd., 2015). It covers everything from justice and policing to medical ethics and more.
7. In this they resemble *hikikomori*, young Japanese who have withdrawn to their rooms or tiny individual apartments and interact with people only on the web. See Michael Zielenziger, *Shutting Out the Sun: How Japan Created Its Own Lost Generation* (New York: Vintage, 2006).

PAUL E. DUNSCOMB is Professor of East Asian History at the University of Alaska Anchorage. His specialty is in modern Japanese history. His book, *Japan's Siberian Intervention, 1918-1922: "A Great Disobedience Against the People"* (Lanham: Lexington Books, 2011), is the first comprehensive narrative on the topic in English. He is also the author of several essays on Japanese popular culture, including "Dogs, Demons, and Dai-Guard: Preserving the Peace of Tokyo in 2030," *East West Connections* (2006) and "Images of What Never Was to Suggest What Might Be: Japanese Popular Culture and Japaneseness" in *The Dynamics of Cultural Counterpoint in Asian Studies* (Albany: SUNY Albany Press, 2014). His current work focuses on the early Heisei Period.