Early Oshii. From *Patlabor* to *Ghost in the Shell* : a scientist jumped, and became a woman.

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Abstract Before Mamoru Oshii gained international acclaim with the 1995 *Ghost in the Shell* movie, he had already developed many of its themes in the two *Patlabor* movies (1989 and 1993, respectively). Here we introduce the first of these with a thesis (the fall of the programmer mirrors the birth of the gender-ambiguous cyborg) as well as notes from the history of computer science and technology. "*Patlabor for me was a major film in many ways, and I think it became my turning point. I know I am what I am today because of Patlabor.*" – he declared himself.

Introduction : *Patlabor 1*, a scientist learns to die

“*The scientific mission of the philosopher is to learn to die*”, Canguilhem told us via proxy, the Stoics, in “Life and Death”. —

Context for the time period of *Patlabor 1*’s release has already been provided, though not specifically related to it, and not entirely satisfying.

For many decades, (...) the more ethnocentric characters of Japanese manga/anime pop culture were [held] too exotic to ever interest the average American. In the 1960s Japanese TV imports like Astro Boy were banished to the remotest time slots (...). A video store may have had one Kurosawa movie in its foreign section. But in the 1990s the growing hip-hop, pluralistic culture embraced Japanese cultural forms as an alternative to western iconography, creating an international street cyberpunk. Kung fu masters, samurai, and ninjas were no longer archaic historical artifacts, but cool modern conventions. Starting with Katsuhiro Otomo’s cyberpunk classic film *Akira* (1988), Japanese anime features and TV shows began to build a loyal following in the United States. Stores now had whole sections of anime films, and bookstore shelves bulged with stacks of translations of the latest Bandai manga graphic novels. Mamoru Oshii, in his classic film *Ghost in the Shell* (1995) reinterpreted the lone Ronin samurai as a futuristic android cop, who battled not a clan warlord but a living cyber-entity that existed in the Internet.¹

This commentator does not state it, and neither does the rest of this monograph contain any mention of them, but the hip-hop group most representative of this shift was of course the Wu-Tang Clan; officially introduced to the world in 1992 with their appropriately titled : ‘*Enter the Wu-Tang (36 Chambers)*’ (a reference to Asian martial arts).²

This work opened with the following words, representative of the change in cultural context, advanced above :

“*If what you say is true then the Shaolin and the Wu-Tang could be dangerous...*”

— dialogue itself derivative, sample of the 1983 Hong Kong film *Shaolin and Wu-Tang*.

These artists, in other words, were influenced by one culture and used it to make innovations in their own, but not only that : they influenced it back. Notable, in this respect, is Robert Diggs’ (RZA) involvement with film e.g. in Jarmusch’s *Ghost Dog* (1999), or the anime *Afro Samurai*...

¹Sito 2013 : 119-120. (Hints at, in particular *Yojimbo* and *Sanjuro*, by Kurosawa.)

²This author also does not bother much with source material, but we refer to – already highlighted – Clements/McCarthy, P. Galbraith and others on these subjects.

Just like computer scientists, whose influence on popular culture (Gibson used to listen to programmers talk for inspiration³) was returned to them – as we have argued, in many previous papers already⁴.

But, these links go further :

Now, select computer scientists regularly reference hip-hop (especially within the area of database⁵, for reasons yet to be fully determined⁶).

Let us sum up :

At one end, there was the space created with the release of *Akira* in 1988 (i.e. big budget, an international audience, re-evaluation of anime as art...), at the other emerging artists like the dangerous New York group that "brought the ruckus", individuals whose collective association was "nothing to fuck with" – representative of novel attitudes towards culture – and whose debut was sometime in the early 1990's, with various iterations in the previous decade.

Such was the context in which the first *Patlabor* film was released, and the new network of relationships in which it could exist; becoming a polished, daring, even philosophical work that prefigured in many ways the better-known *Ghost in the Shell*, a later, mature work of Mamoru Oshii, 6 years before it.

Oshii did not become Oshii out of some accident : his early influences were largely outside of anime, they mixed literature, art films (Marker, unsurprisingly, Melville, ...) and politics.

Oshii began to become more politically active, participating in anti-establishment rallies and demonstrations.⁷

(An "otaku", according to Miyazaki, is the tragic figure of someone who knows nothing outside anime, a characteristic of many anime directors, source of explanation for the repetitive, self-imitating nature of their commercial art.)

Patlabor stood out⁸, in 1989 :

The beginning of this film let everyone know who saw it that this was not another generic work : in a highly stylized sequence of frames, a scientist jumped from a building, and smiled. Optimism, or certainty.

"There are, according to Leibniz, an infinite number of possible worlds...", Russel wrote in a youthful work. – If Oshii had not read Leibniz, he expressed here some of his views. (And, the Stoics and Canguilhem's too.)

— But, there was one last twist : from *Patlabor 1* to *Ghost in the Shell*, the jumping, smiling man became a woman... Everything was upside down, and

³Gibson 2020.

⁴We did so, not out of some attempt at a "cultural history", of dubious or debatable merits, but to extend the domain of both sciences (should they not be the same...).

⁵E.g. Peter Alvaro at USC, Andy Pavlo at CMU, etc..

⁶One reason could be that the area of database has been closer to applications and the "real world" than other fields of computer science. There is also of course, in the case of Wu-Tang and databases, a plausible reasonable explanation : DB is the conventional abbreviation of database, while O stands regularly for "object" in that discipline (e.g. object-oriented programming, object database, etc.). (Group member ODB...) (Hacker play with words...)

⁷Ibid.

⁸Oshii has called it his most important early work in retrospective. (See Ruh.)

the same. Up and down. Night and Day. Feminine and masculine... And, the same city on the horizon.

Figure 1: *Patlabor* (1989) opening scene

Figure 2: *Ghost in the Shell* (1995) opening scenes

***PATLABOR 1* DIALOGUE WITH NOTES...**

Brian Ruh has remarked accurately that Patlabor "serves as a basis from which to explore history, politics, and culture."

1. Social conditions and change drive technological innovations

"... basic engineering issues were ironed out in the 1980s, but *the tech wouldn't have matured so quickly if this project hadn't needed so many Labors.*"

In this work, Labors (with a capital) refer to a new type of machine, robot particularly adept at construction.

These early statements have parallels in the history of computer science and technology :

In *Scientific computing. A historical perspective*, we read :

In the history of mankind, war efforts seem to have given rise to new inventions when it comes to technological developments. During World War II this was even more pronounced.

– as part of "4.1 The First Electronic Computers".

However, in this case, it is not war efforts, but the requirement for massive extension of Tokyo land to accommodate population growth and needs (in the form of a 45,000 hectare artificial island, "Babylon") that explains the rapid advances. This was the driving cause for technological development, here.

The narrator adds :

"they weren't sure if they'd be done by century's end, but the advent of Labor technology changed all that." and qualifies this as "history's largest maritime construction project."

2. Automation and the end of human labor : an old concern

"Just one Labor is as productive as dozens of highly skilled workers."

Computer scientist and computer science historian Goldstine traced back our modern concerns with automation to Leibniz, at least : a (philosophical and engineering) project later furthered by Babbages, in his renditions.

3. Mutual influences of science-fiction, science and reality

"Yesterday's science fiction is now a reality."

We highlighted the importance of popular culture for computer scientists in various places, including in one multi-part full study. An egg-or-chicken type problem : it is progressively becoming harder to distinguish which ideas started where, and who or what influenced who or what.

One example is the invention of the term "cyberspace" by author William Gibson, which later found new meanings or applications under the influence of Libertarian tech-legal thinkers of wide audiences.

4. Unauthorized uses of technology : a complicated history

"... now there's criminal activities involving Labors"

So-called hackers were first modifiers of systems – we use this terminology consistently, to avoid ambiguities – of primarily academic origins (On the East Coast : MIT, and on the West Coast : Stanford, among other places);

Now mostly associated with dominant views of criminality, and "malicious" network or hardware activities (as not-so-neutral textbooks state).

Since the 1983 release of the movie WarGames, the figure of the computer hacker has been inextricably linked to the cultural, social, and political history of the computer. That history, however, is fraught with complexity and contradictions that involve mainstream media representations and cultural anxieties about technology. Moreover, hacking has its own history, which is itself (...) complex⁹

See also Levy's *Hackers*. (The opening and closing chapters of the newer edition are mostly sufficient for a first read : 1950-60's MIT, followed by the withering away of freedom at that institution, and Stallman).

⁹Thomas 2002 : Introduction.

REFERENCES

— The films :

Oshii, Mamoru. 1989. *Patlabor*.

Oshii, Mamoru. 1993. *Patlabor 2*.

Both movies can be seen as standalone pieces. Only the most enthusiastic fans, or cultural historians, need to watch the Patlabor series *Early Days* (1988-89), which functions as prequel telling the stories of the unit at the center of the films before the events depicted there (an inferior work).

— At least two monographs have been published on Oshii, Cavallaro and Ruh, while multiple anime encyclopedia exist, and recent interviews of Gibson shed new light on his work's origins :

Akmut, Camille. 2019-2020. "The History and Sociology of Computer Science and Technology." (parts 3 and 4, in particular)

— Referenced here, additionally, were :

Sito, Tom. 2013. *Moving innovation. A history of computer animation*. MIT Press.

Douglas, Thomas. 2002. *Hacker Culture*. University of Minnesota Press.