PCA/ACA Conference Presentation

SLIDE 1:

Hi there. I’m Aaron Tucker and this presentation is an expansion of a chapter from my upcoming book *Interfacing with the Internet in Popular Cinema* due out in July of this year.

SLIDE 2:

I wanted to begin with a brief history of the military Internet. While there were other theorists working like Leonard Kleinrock (MIT) and Donald Davies (England), most Internet historians point to Paul Baran’s 1964 paper “On Distributed Communications” as the first hypothetical articulation of an Internet based on an electric/computer-enabled distributed network. The paper itself was written when Baran was at RAND and in response to a potential nuclear threat that would wipe out a centralized communication system. This model of the Internet was the norm up until the introduction of the webbrowser in the early 1990s. Up until that point, however, the Internet was quite small and focused; most users would have been employees of a large corporation or likely government or military employees, with the small remaining population being filled by specialized hobbyists with a high degree of machine/computer knowledge.

SLIDE 3:

Manuel De Landa in *War in the Age of Intelligent Machines* sees the small concentration of users around centralized authorities, particularly the military, as reflective of the machinic phylum Deleuze and Guattari proposed in *A Thousand Plateaus*. A machinic phylum is the “processes in which a group of previously disconnected elements suddenly reaches a critical point at which they begin to ‘cooperate’ to form a higher level entity” (De Landa, 7). Deleuze and Guattari add that it is a “*constellation of singularities, which converge, and make the operations converge, upon one or several assignable traits of expression*” (*ATP*, 406, italics authors’). Focusing more on its military uses, a military machinic phylum, as De Landa already observed in 1991, was increasingly reliant on the Internet as a means to generate and organize all the different components of a modern war machine.

SLIDE 4:

The late 70s through to the late 80s were a time in which civilian and military computer knowledge and skills was relatively equal. **F**rom this balance the hacker arose as an ethical counterpoint to the Internet-enabled military or corporate assemblages. Civilians were at the forefront of next wave of innovations in home computing , with engineers like Ed Robert, Steve Wozniak, Bill Gates and Tom Pittman’s (ibid., 239) being at the creative forefront of pushing computers to be a smaller, cheaper, easier-to-use mass technology (ibid., 154). De landa argues thatthe figure of the civilian hacker is immensely important as a potentially ethical (humanist) super-user because he/she has a Romantic and symbiotic union with his/her technology (computer) that was outside the military machinic phylum. For such a figure the computer, like Haraway’s depiction of the cyborg, was there to enhance or extend, not replace, the user.

Slide 5:

I’m going to jump forward now to some recent popular films, where I can see the urge to remilitarize the Internet has manifested in the *Iron Man* films and *Pacific Rim*. In particular, the films move from the Internet-enabled hacker-civilian to the “man-in-the-middle” soldier.

I would point to *Iron Man 3* and *Pacific Rim* as heroically depictingthe man-in-the-middle soldier or the modern understanding of the Future Combat System (FCS) which Roderick outlines in “Putting the Post-Human in the Loop.” Roderick describes it as a cybernetic system in which the soldier is melded to a series of computers, giving him/her access to...a mixed reality....[of] information-rich environments” (Roderick, 305). It is argued then that the use of this type of “system” is a necessary tool in fighting the ongoing war against terrorism, as vital to counterinsurgent tactics, and central in protecting valuable national infrastructures. Yet, such a soldier, empowered by the Internet, is moving the individual (human?) towards the machine end of the military machinic phylum and, as such, needs to be looked at in closer detail.

Slide 7:

Tony Stark on the surface, appears to be De Landa’s heroic, civilian hacker. The first *Iron Man* is about his character's turn from a corporate weapon’s dealer to a civilian super hero; staunchly against his company’s products being used for military purposes. While he is a civilian, he is far from the healthy and subversive hacker De Landa and other imagine: Stark has great wealth and can afford the time and energy to, as Candra Gill put it, to “tinker”; he doesn’t identify himself as a hacker. In fact, makes fun of the concept (“It’s not 1980. No one says hack anymore”) and instead sets himself up closer to an Internet-enabled vigilante than the romantic computer-user super hero .

In the most common reoccurring shots in the film, we see Stark in a close up from “within” his suit. He is surrounded by various HUDs (heads up displays) that are created and manipulated by information networks. When he’s inside his armor like this, he is a literal man-in-the-middle, the human in a machine shell that is connected to the outer networks of the Internet. This depiction of human-technological co-operation is a far too simplified posthuman, where there are too overt divisions between technology and human elements, promoting the ideal that the technology is separate, a tool or a suit to be manipulated, not collaborated with. The suit harshly separates him from the outside world, is not reflective of the ways in which the viewing audience productively and transparently interacts with his/her various technologies (say a smartphone) in a healthy and bodily manner.

Slide 8:

This too-simple posthuman is then combined with the character of Iron Man’s close ally, Iron Patriot. Iron Patriot is an Iron Man replica, repurposed for military use. In Iron Man 3 he is rebranded from War Machine (his name in the first two Iron Man films) and re-painted with the colours of the American flag (top picture). Iron Patriot is completely without Iron Man’s civilian roots and the prototypical man-in –the-middle FCS soldier. As an American military representative, he is shown going beyond national boundaries to violently act and gather information, all in the name of national protection. Iron Man is then problematically tethered to Iron Patriot (and the military by extension) as the two figures work in tandem at the end to violently defeat the villains.

Slide 9:

The screen shot here comes from the climax of the film where Tony stark calls together an army of other, non-embodied Iron Men suits to fight alongside him. This is the extreme culmination of the military machinic phylum in the film – here we have an Internet-created network of other Iron Men with Stark and Iron Patriot, all working together in military formations. This then is one network of an even larger military assemblage or phylum (as embodied by Iron Patriot and the army that gives him his orders) and the exact singularity of hardware-software, machine-human, that De Landa sees so troublingly present in the military machinic phylum.

Slide 10:

Such a phylum is frankly, “awesome and cool,” but is a tool usedfor combat and violence. The film as a whole encourages a heroic (and necessary) military machinic phylum. The Internet as the cohesive technology connecting this military machinic phylum together is an external weapon to be wielded, not the symbiotic extension the ethical humanist hacker upholds.

Slide 10:

Show video clip (Pacific Rim)

Slide 11:

Compared to Iron Man, the pilots of the Jaegers in Pacific Rim are no longer the simple “man in the middle” of a human in a suit. In fact, the pilot cannot work a Jaeger on his/her own. Rather, a pilot needs to symbiotically meld with another human pilot and then the machine itself, creating a biological/technological network. In this way, the human and the machine are connected into a small scale network, an intimate Internet that is, on its own, more “healthy” than *Iron Man* films and much closer to *Avatar*’s treatment of the Internet, wherein the user is a messy biological/technological hybrid. Such a hybrid is much more reflective of the film’s audience’s Internet use in its acknowledgement of a multi-user, immersive and bodily experience contingent on the whole narrative of a individual’s specific memories and experiences.

Slide 12:

Part of this positive portray is due to the change in enemy: *Pacific Rim* is similar to *The Core* in that the adversary is Nature (though the disaster of the Kaiju is a man-made set of mutated monsters). Like *The Core* (and *The Matrix Revolutions* and *The Matrix Reloaded*), it is a film that reaches beyond nationalism, where the whole world is forced to work together in order to fend off the apocalypse, one that speaks to Deierdre Bryne’s remark that, post-Y2K, any human apocalypse is a machine apocalypse.

Slide 13:

Yet, the technology is justified as a “war” technology. They don’t use Jaegers to build in the way Iron Man doesn’t use his clones for diplomacy. Like the Iron Men clones, Jaegers are purely war weapons. As commander Stacker Pentecost (Idris Alba) says, humans are in the “last days of war.” The “DARPA based” Jaegers are a combat weapon to win that war and the pilots are soldiers: they are hardware to be deployed , under military orders.

Instead of the resistive civilian-hacker at its head, much like *Iron Man 3, Pacific Rim* showcases the repurposed civilian; Raleigh Becket, after leaving the military after his brother’s death, is brought back from civilian work to become a soldier again.

While Pacific Rim is more posthuman-positive than *Iron Man 3*, it still treats the Internet as weapon. In fact the “intimate” Internet of user-user –machine that pilots the Jaegers is still one piece of hardware to deploy among many; the Internet-enabled user is still just one part of a larger military machinic phylum, is one militarized network in a larger network of military networks. Like *Iron Man 3*, the film argues that this militarizing of the Internet is necessary for the safety of the larger population. Likewise, there is no opposition from an outsider hacker, but only “good” Internet-enabled soldiers.

Slide 14:

The encouraging of this re-militarized Internet is beginning to manifest outside the theatres. I think the most obvious example is the shift towards drones as both international attack and counterinsurgency weapons.

Equally as troubling, you can see it the situations outlined by Perlroth’s *New York Times* article “Luring Young Web Warriors,” in which she describes the recruitment of teenage hackers into the military assemblage at an earlier and earlier age, to become cybersoliders. Such cybersoliders are becoming the norm – most notably, America, China, Syria, Israel, Iran all have aggressive cyber-armies whose job is to attack other countries’ Internet-dependant infrastructure as well as defend their countries’ own infrastructures. In this, we can see an echo of the early days of the Internet in which the civilian is being repurposed into a nationalistic war in a virtual space that is not defined by any such borders or nationalities.

Slide 15:

Here’s my info

Q and A

This is not a new idea: Claude Shannon and Norbert Weiner discussed this at the Macy Conferences immediately post World War II and both N. Katherine Hayles (Ch. 3, *How We Became Posthuman (1999)*) and De Landa in WAIM (1991) discuss the concept.

As such the hacker in the above films is a key heroic figure in the fight against corporations (Hackers, the Net), the military (War Games, Sneakers) or a machine overlord (the Matrix). But the non-apocalypse of the Y2K scare made it apparent that computers and the Internet were an essential co-operative tool/species that humans needed to work symbiotically beside. In films post-Y2K, **as Dierdre Bryne points out, The last two Matrix films or The Core** remind us that a human apocalypse is a machine apocalypse and so the two entities must work together to ensure survival.

Yet, two films stand out to me as initial rumblings and echoes of the early military Internet. Both Swordfish and Enemy of the State have characters that argue that the public access to the Internet has made it necessary for a military or authoritative presence of surveillance and intrusion in order to police and protect national interests, America’s specifically.

Iron Man: slide with Ironman within Chinese Theatre simulation; also Jarvis = healthier (though he is also buggy; prone to errors; still very much a machine

More, the film’s ultimate nuclear solution of blowing up the equivalent of a hydrogen bomb in the ocean as a way of killing of the Kaiju speaks to a hardline military stance that values human exceptionalism above another environmentally ethical solution.

This process is called “drifting” or undergoing a “neural handshake”. “Handshake” is a key word – in computer science describes how one device (and its microprocessor) talks to and acknowledges another device.

I do think there are some Solutions going forward. To begin, there needs to be a constant awareness of the military use of hardware and software as part of civilian life and that we must be critical and vocal about surveillance and repurposing of the Internet’s physical and virtual infrastructures.

In order to create/maintain the checks and balances of empowered civilian users, there should be a turning away from the overreliance on a centralized Internet and a corresponding increase in mesh networks. Mesh networks are smaller peer-to-peer networks where users use their own hardware (routers, servers, cables) as a way of creating an Internet outside of the one provided by ISPs.

Lastly, I think that computer education needs to be made less specialized; even though it may sound somewhat goofy teaching HTML alongside teaching handwriting at an earlier age will produce more engaged and knowledgeable civilian users better able to provide the oppositional voices nessecary in hacking. Along these lines, I would love to see “Creative Computing” classes like Creative Writing classes (both engineering and software) that encourage imagination and wonder in relation to the technology, to bring them away from the pure function that the military machinic phylum depends on.