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## **Student A**

### **Something Interesting**

I am fascinated by the writing style of “Panic Diaries” which reads like a play and an academic text at the same time. The dramatic sections build up tension through fast-paced and somewhat obfuscated views into different characters’ mental lives. The gripping style recreates the all-encompassing feeling of panic and fear that was strategically kindled by networked power structures throughout society including the government, the military, research institutions, hospitals and the media.

Then the scholarly passages burst the dream-like images in a very matter-of-fact way. An example for this style would be how Orr presents the reader with Anne Parsons’s suicide (p. 159). At this point in the chapter, it finally becomes clear that the reader is reliving Anne Parsons’s stream of consciousness in the dramatic passages. Nevertheless the style of the dramatic sections makes it easy to identify with the character. I found myself identifying with her and seeing the historic information through her eyes. Everywoman is impacted by the spreading epidemic.

It is hard not to compare the panic-fostering strategies with the attempts to generate fear today about terrorism and the resulting need for constant vigilance. Frequent announcements like “if you see something, say something” in subways around the world foster the same type of communication-based control loops that seem to have been the foundation for psychological warfare during the Cold War.

In Bowker’s article, the all-encompassing nature of science provides the rational, non-emotional counterpart to Orr’s chapter. Unlike Orr, Bowker provides a logical, step-by-step argumentation for the rise of cybernetics following WWII from the point of view of science. While Parsons was in the field observing mental patients, Bowker’s characters like Wiener were developing abstract models that seemed to explain everything.

### **A Question**

Both articles address the deterministic nature latent in the “unified description of behavior” (Bowker, p. 108). The model implies that the right messages (messages = wrappers for information) will elicit specific responses. For example, the mental patient is expected to respond to treatment in specific ways that will shift her behavior back to the realm of what is socially acceptable. Parsons attempts to resist the communications presented to her, but Orr does not interpret that resistance in light of emergent models for human behavior. (see the quotations on p. 147 and p. 159)

Similarly, machines will communicate with humans based on specific inputs and produce outputs that can be seamlessly integrated into research. This universal language as Bowker describes it supports the translation of models and metaphors across all fields of scientific research. However, there is no discussion of the changed circumstances and specificities of biological systems versus machines. Physiology, for example, supports the same processes as machinery in space rather than in time. (Bowker, p. 110)

How can the same responses be expected from such vastly different systems? Where is the agency of the actors involved in constructing the interpretation of the messages? I'd like to explore further the role of agency within these systems to better understand the process by which these theories spread throughout society.

### **Side Notes**

On a side note, I was looking into some of Ernst von Glasersfeld writings on radical constructivism as a way into the discussion on agency. ([website](#))

Also the BBC documentary series entitled "Century of Self" provides a great supplement to the readings this week. The first series describes the transition from pre-War notions of panic as primeval to rational actor models of behavior.

[BBC Four, \*Century of the Self\*, Episode 1](#)

### **Student B**

Using the analogy of how life was first formed on earth, Orr's inquiry introduced the ideological pressure from the cold war as the catalyst that triggers complex chemical reactions within science and society, a panic. From there, it seems that the geneses of cybernetics are always repeated pervasively, transcendently and urgently, especially in today innovations. It becomes more instant since this catalyst can be easily produced in the human society, in which also act as good transmitter for panics as what Miller suggest (p.106). It's always interesting to view human as the medium of communication since a networks of minds can not only transfer information but can also justify themselves into a certain behavior.

Within this entire component, the evolutional curve of cybernetics should have been increased exponentially, since panic could be embedded in any situations. If pulling the coin out of the bottle can produce a certain amount of panics, then any circumstances can be regarded as Controlled Laboratory Experiment that could simulate a different kind of panics in this post-war society: financial panic, political panic, and any type of cultural shock from our everyday life. Human are somehow are getting used to be an object of simulation within the system of Goal seeking behavior: as a consumer in commercial and entertainment industry, or as a citizen in political milieu, such as in the way U.S. government creates condition with their all possible resources during the cold war to create public awareness on atomic bomb.

Under that simulation, some practices in cybernetics proved that the goal of all member of the lab with their different background can be shifted suddenly into a single communal goal. Cybernetics should have been the synthetic panopticon of our social order.

However, there is a missing link in Orr's story regarding the moral issue in the birth of cybernetics that prevents that ambition. It's hard not to be skeptical on the issue of good

and bad morale as merely government justification to quantifying information. In a reflection to the current vast information society, where almost every citizen has more than enough information and again, become a transmitter on their own, all this crisis -- energy crisis, financial crisis-- could not produce a type of panic that could lead into a desired good morale. For this, Galdston's question remains unanswered. (p.104)

## Student C

Orr's Panic Diaries make explicit the role that cybernetics ideas played in Post-War society. The ways in which panic entered scientific discourse and popular culture, and the use of fear for instilling in civilians the need for strategies for 'total defense' in atomic war scenarios. The FCDA (Federal Civil Defense Act) contemplated the volunteer civilian corps and "the establishment of communication systems to warn of enemy attack" (p.97) as a "future way of life" (p.99)

Facing an inadequacy of the social sciences to contribute to an effective nuclear disaster relief program decision-makers and (social) scientists are shown in Orr's chapter to have found in cybernetics discourse a rich rhetorical plateau, a perfect example of what Bowker calls in his paper 'triangulation'; a struggle for legitimacy characterized by the reliance of one field's findings on another's discourse. It is in this sense that Orr's chapter supports and adds to Bowker's thesis of the rhetoric construction of cybernetics as a universal science.

It first struck me that the discourse of cybernetics as described by Bowker is still enacted today under a different rhetoric coat for various purposes. An example of this would be the discourse of responsiveness in architecture (a discipline perhaps excessively prone to triangulation), which to a large extent sounds like an instance of cybernetics's basic premise: that control mechanisms based on environmental feedback have the potential to display intelligent behavior; in architecture and design this idea of self-adaptive systems and feedback control has been the ground for the same kind of metaphorical reasoning that Bowker points in cybernetics: that houses and living beings are, or can be seen as, the same thing.

These metaphoric leaps of cybernetic language across disciplines, in which machines are made of molecules and living beings are mechanisms, is nevertheless put forward by Bowker as a valuable analytical and heuristic tool which is "still an under-utilized resource today". Does this comment compromise Bowker's stance as a critic? He claims he's just interested in tracing the genealogy of cybernetics as a universal science. I appreciated the respect with which he treated the subject.

The power of a word to attract attention, to entice imaginations due in part to its own lack of definition (what can be more vague than a 'science of messages'?), is fascinating. The glamour of a word, carefully supported by the triangulation with other sciences, always under the assumption that there is a fundamental underlying 'structure' of messages and control for all things living and inert. It is this construction of the legitimacy of cybernetics as a science, so relevant to today's scientific and cultural world, what Bowker

makes explicit in this paper.

## **Student D**

Wow. First I was somewhat bored with the description of public fear and panic control in the 1950s, but juxtaposing it with the development of the field of cybernetics -- that came unexpected.

Despite the fascinating literary technique at the beginning, I was somewhat bored (or desensitized?) because it all sounded a little bit too close to home -- South Korea, where I grew up. Albeit the systematic approach or resourcefulness to simulate the A-bomb explosion, Korea technically is still at war with North Korea, and the people have been living the Cold War far and beyond the 1950s. Some examples:

- The national "monthly civil defense drill" up until my high school included sirens blaring, curfews and instructions to crawl under the desk and cover your eyes, ears and nostrils with your bare hands;
- Subway stations in Seoul are at least one extra level deep because they were built to function as bomb shelters. Some even function as art galleries at the same time;
- When the media spots a stray North Korean plane in the Korean air grid people would rush in to stock up rice and water. I still buy and hide water jugs in my San Francisco apartment in case of an earthquake;
- My high school classmate was excluded from a field trip to near the DMZ (de-militarized zone) because her grandfather had a history of co-operating with the communist regime sometime during the 3-year-long Korean war;
- At 5 o' clock in the afternoon everyday, the national anthem would blare out throughout the country and you are obligated to freeze wherever you are and put your right hand onto your chest.

Now that makes me really feel like we were nodes of a controlled system, reactive and mindless ones -- thank you, 1988 Seoul Olympics, for putting an end to some of this.

While I don't believe the Korean government had an approach nearly as theoretical or as a close tie with the academia in developing these programs, I wonder now, was it influenced by the US approach of seeing people and groups as actors in a controllable system, or was it simply an authoritarian regimen?

Also: Is the advent of the Internet and diversification of communication channels helping people to be more aware of the government agenda? Or are we becoming merely more networked nodes with our cell phones delivering to-the-minute messages and news?

Is this relation between Cold War communication and cybernetics theories an established

observation? This is the first time I encounter it and I still haven't decided if I should jump in and internalize it -- the writing style of this book may be contributing to my hesitation. Perhaps I feel that I might have been subject to the very development described in this book and I need more time to sink this in, in order to give a more removed, analytical response.

### **Student E – Nadya Peek**

Cybernetics considers the structure of communicative systems. The broadness of the topic allows cyberneticists to apply their knowledge to many different levels of communication- neural communication, interpersonal communication, communication from a government to a people and from a government to another government. That the development of cybernetics took place in a post-war era is somehow unsurprising-- the government to government level of communication was over-illustrated by the cold war, and on the other end of the scale, artificial intelligence was attempting to have machines learn by mimicking neural communication and feedback.

Orr's text places a matter of fact description of a development of cybernetics in the context of social control and feminism in the 50s. By the end of the text it becomes apparent that the text is written more or less from the views of Anne Parsons, daughter of sociologist Talcott Parsons. However, in the text many questionable things are suggested such as that Norbert Wiener and Anne Parsons are siblings, or that Talcott Parsons murdered his wife. The fictive parts are not separated from the fact, making the text difficult to interpret, but simultaneously an entertaining read.

Bowker's text is also amusing, as he immediately begins with an outright attack on the field of cybernetics. If your field is broad enough that it may subsume the research in neurology, artificial intelligence and control systems, it is not surprising that you will be accused of over-generalisation. Attributing an elegant graph or theory can seem very desirable, even for unelegant social interactions, but might not accurately describe the phenomena observed. This is then written off again as 'physics envy', and the proposed models perhaps brushed away too quickly.

Once the field is abstracted enough, you might try to agree with Dennett -- the feedback loop can have no politics, it is merely an algorithm. But it is an algorithm designed for a sender and a receiver, broad categories which can easily be attributed to individuals or countries. When the sender decided to send the message, the listeners will receive it and respond accordingly. What should be placed in this feedback loop and when is certainly a possibly political decision. That doesn't mean the medium is not a neutral substrate, but its involvement should be studied and questioned.

### **Student F – Yiftach Nagar**

In one of the footnotes of Geoff Bowker's paper (Bowker, 1993), we are told how the Chilean government has invited a cybernetics expert to "help manage [the Chilean] society cybernetically". This certainly shows the hype that was created around

“Cybernetics” in the years past WWII. This example is a pristine demonstration of how “cybernetics” became an “inescapable”, “new universal science” in Bowker’s words. But what is cybernetics anyway? Bowker sets the background at several developments. Mainly – on the one hand progress made in technologies (especially: electronics and communications) that have diminished some of the gap between machines abilities to “think” and the human brain’s abilities to think (e.g. computers were able to perform calculations faster) and on the other – revelations and advancement in understanding the psychology of both individual people and the masses (e.g. the ability to manipulate masses of people that was so evident in the Nazi regime) made it seem like humans and machines may be more similar than previously thought. I found the discussion of the diffusion of borders between humans and machines and the exchange of roles interesting, and it raised a few associations in my mind.

So – here are a few glimpses of thoughts, very associative (sorry...) -

### **1. The role of human masses and masses of machines – who is serving who**

Bowker quotes from The Official Soviet Short Philosophical Dictionary (1954), cited in (Masani, 1990): “...for cybernetics an imperialistic utopia is characteristic replacing living, thinking man, fighting for his interests, by a machine, both in industry and in war.” So whereas Marshal McLuhan talks about tools and technology as “the extension of man”, the cybernetic view expressed in the soviet dictionary is the ironic opposite, putting man at the service of the machines. This ironic view reflects a fear of dystopia that has been expressed by many artists and thinkers (cf. Charlie Chaplin’s “Modern Times” for one example). To a certain extent Amazon’s Mechanical Turk actually embodies this approach today.

*“A further possibility, amusing in its own way, is an animal computer, which could be valuable for slow speed, essentially parallel data processing. Skinner once used pretrained pigeons as pattern recognizing automata in a guidance mechanism, and they have also been used in industry. Working along somewhat different lines, Beer and I have experimented with responsive unicellulars as basic computing elements which are automatically reproducing and available in quantity.”* (Pask & McCulloch, 1968) quoted in (Bowker, 1993).

Think about Google for a minute: it is always brought as an exemplar of collective-intelligence. But changing our point of view we could also look at it as a machine that uses people to feed it (voluntarily) with link structures, picture tags and more, and basically actively working to document their thoughts in service of the machine. The border becomes blurry. (Michael Wesch’s excellent clip “Web 2.0: The Machine is Us(ing us)” (available on YouTube) touches this point brilliantly and in a very engaging way).

I also couldn’t avoid thinking about “The Matrix” (Wachowski & Wachowski, 1999) and mass artificial production of humans...

*“Reproduction has, in the past, often been thought of as exclusively biological, and as requiring very special conditions for its achievement. The truth is quite otherwise: it is a phenomenon of the widest range, tending to occur in all dynamic systems, if sufficiently complex.”* Bowker footnote 36: (Ashby, 1962)

## **2. So, What is “Human”?**

*“Copernicus challenged our human self-image by showing that the Earth was not the center of the universe; Darwin by showing that humans were not God's special creation; and Freud by showing that we are not rational animals, but that much of our thoughts and behavior is rooted in biological drives and unconscious processes. The present volume contributes a fourth reshaping of the human self-image, as we see that much that is human can, at least potentially, be shared by machines.”*(Arbib, 1989)

I guess we will touch this much more in our discussions of Cyborgs, etc, but this already brought up so thoughts –

I do believe that we are slowly, but gradually marching towards a future where artificial intelligence and hybrids of cyber-and-human intelligence (see: Google) will take an increasingly bigger role in the life society and organizations. We are already extending our bodies and minds with mechanical, biological and electronic parts. Some are embedded in our bodies – like pace makers. Others, we use as exoskeleton devices to augment our senses (glasses, hearing aids) and, growingly, we are relying on our PDAs, laptops and the web, to augment both our individual and collective memory and intelligence. As the borders between humans and ‘machines’ are gradually fading post-humanists ideas will become more relevant. Kurzweil’s books have been on my radar for quite a while, and I should really start reading them. Bowker writes about Norbert Wiener who asked “how can God play a fair game against the Devil, one of his own creations? And tells us Wiener claimed that it is possible to play with machines, because they can learn. This reminded me of [J.F. Sebastian](#) from the [Tyrell corporation](#) in Blade Runner, who makes his own robot toy friends.

## **3. On imperialism, natural choice/evolution and politics of power**

Bowker writes that cyberneticians employed “imperialist rhetoric”. This is not all that surprising. If we adopt a sociological lens, we can understand the struggle of cyberneticians for self-definition as yet another mere struggle for position of influence and power – no different than that of other groups of people sharing a vision, a profession or an academic discipline (cf. Pfeffer, 1981). We can now view Cyberneticians’ (futile, as we now know) attempt at claiming that their metaphor is better than other metaphors used by other disciplines as naïve (if we believe in the basic good nature of people) or as something worse. In any case, their sheer lack of reflection, reflexivity and sense of humility is quite striking. All models are wrong, some are useful (George Box). The metaphors of feedback loop and control communications can definitely prove valuable in the pursuit of understanding and describing various phenomena in the world, but

attempting to claim that these are always the only true / best metaphors is, to me, somewhat ignorant.

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