Cognitive Dissonance, Social Psychology, and Unit 731

Grace Danqing Yang

University Writing Program, Brandeis University

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Catherine Scott, PhD

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"Sometimes I look at my hands and I remember what I have done with these hands. What's really scary is, I don't have any nightmares of what I've done."

—Ken Yuasa, Japanese army doctor

Unit 731 was a Japanese research program during World War II that conducted horrific experiments such as infecting subjects with plague, giving subjects frostbite (Barenblatt, 2004), and cutting people apart while alive and unsedated (Gold, 1996). Most of its victims were Chinese (Barenblatt, 2004). Officially called the "Epidemic Prevention and Water Purification Department of the Kwantung Army," its victims died painful deaths, whether alone tied to an operating table or in their communities, where thousands were wiped out by plague virus thrown into their wells in "public health experiments" (Barenblatt, 2004). When faced with such sprawling pictures of horror, one might wonder: why would anyone do this? Was it curiosity? Greed? Racism? Or something more complex?

Japanese war crimes during World War II have been studied broadly. Much literature exists analyzing why ordinary people would participate in massacres such as the Rape of Nanjing (Jacob, 2018), looking at the violent training foot soldiers received and their subordinate position. But Unit 731 was staffed by physicians and others with medical training, not foot soldiers. Medical students are not beaten, and doctors do not set out to kill. Yuasa Ken, the army doctor quoted in the epigraph above, had graduated medical school hoping to "serve in some village that had no doctor" (Gold, 1996, p. 205). Why would a doctor, someone who had dedicated their life to healing and helping others, participate in Unit 731's horrific human experimentation?

When discussing war crimes, dehumanization is often assumed as a factor. However, when examining Unit 731 more closely, it becomes clear that the victims' use to researchers was *because* of their humanity, and that dehumanization was not the primary mechanism that drove the researchers to commit atrocities. These perpetrators dehumanized their victims in their official

terminology and everyday talk to rationalize their actions to themselves, but they did not truly believe that their victims were not human. Looking beyond dehumanization, we find their actions can be explained at least in part by a complex interplay of selfish motivations with evolutionary group-oriented mechanisms.

Background

Japan did not always treat its prisoners of war like this. Before World War II, Japan was known for treating its POWs well and giving them adequate medical care (Barenblatt, 2004). Japan did not always support biological warfare (BW) either—it had signed the Geneva Convention of 1925 that banned the use of chemical and germ weapons (Barenblatt, 2004). The change came with Ishii Shiro, who would become known as the "Mengele of the East" (Chan, 2020). As a young upstart army physician fresh out of Kyoto Imperial University's medical school, he read the 1925 Geneva Convention and felt inspired. If biological weapons were so feared as to be banned by the League of Nations, he reasoned, they must be a powerful tool. As he climbed the ranks, he lobbied the top brass. And in 1931, the army gave in, creating a BW research program and making Ishii its head.

Ishii would often describe two types of germ warfare research: "assault research" and "defense research" (Barenblatt, 2004, p.17). Ishii and his team initially focused on defensive research, such as developing vaccines to protect Japanese soldiers from disease (Barenblatt, 2004). However, "assault research," Ishii would often say in speeches, "can be done abroad" (Barenblatt, 2004, p. 17). While not said explicitly, Ishii's rhetoric has a clear implication that some experiments were not ethical to do with Japanese citizens but would be acceptable with supposedly lower races.

Japan invaded Manchuria and by 1932 had complete control (Barenblatt, 2004). This gave Ishii the site abroad he needed. A 1936 order from Emperor Hirohito integrated Ishii's program into the army and created a network of BW research units all over Asia (Barenblatt, 2004). Its headquarters was built in the Pingfang district of Harbin, Manchuria, called Unit 731. The term "Unit 731" is commonly used to describe the whole program (Jacob, 2018) as an alternative to the

ironic official title “Epidemic Prevention and Water Purification Department.” (In this paper, the term “Unit 731” is used to refer to the whole program, and individual units are identified by location.)

Research was mainly focused on developing biological weapons. Researchers also used Unit 731 prisoners to study effects of diseases, frostbite, starvation, and more in order to develop vaccines and medical treatments to support the Japanese Army (Jacob, 2018). While some employees were drafted, most doctors chose to go (Jacob, 2018). Most victims were Chinese (Barenblatt, 2004), but other nationalities included Russians, Koreans, Americans, British, French, and Mongolians (Gold, 1996). An estimated 3,000 were killed inside the walls of the Pingfang laboratory, and 500,000 more in “public health experiments” (Jacob, 2018). The sites and their documents were destroyed and no victim who entered Unit 731 survived (Gold, 1996), so most information we have about Unit 731 is from outside witnesses or perpetrator testimony.

Dehumanization, Humanization, and Cognitive Dissonance

It’s widely assumed that dehumanization is the major factor that leads to atrocities like Unit 731. After all, we believe that humans are empathetic by nature (Smith, 2006) and don’t want to harm each other, so dehumanization is an easy explanation—we’re not harming a fellow human if the victim is not human. For Unit 731 doctors and researchers (including those nominally serving as healthcare workers) the common understanding that harming other humans is bad contradicts with their behavior, experimenting on human victims. This creates a mental state known as cognitive dissonance—when “an individual’s cognitions—beliefs, attitudes, and behaviors—are at odds” (Egan et al., 2007, p. 978). Cognitive dissonance is an uncomfortable state, so people try to resolve it by changing one of the two dissonant elements (Festinger, 1962). An experiment by Egan et al. (2007) found that both children and capuchin monkeys experienced cognitive dissonance. This suggests that cognitive dissonance could be an adaptive mechanism found in our evolutionary history. The Unit 731 perpetrators clearly did not change their behavior of experimenting on

victims; instead, they changed their belief, at least nominally, so they could assure themselves that their mistreatment of prisoners was not morally wrong.

The view that dehumanizing victims in mass atrocities is necessary for overcoming the conscience of the perpetrators is so widely accepted that it's automatically assumed in discussions around war crimes (Theriault 2007), and not without reason. Unit 731 documents and perpetrator accounts reveal a "scientific reductionism" of prisoners' bodies into organs and body parts for experiments (Barenblatt, 2004, p. 50). This dehumanization can be seen in their language. Because of the lie to the Pingfang locals that the facility was a lumber mill, researchers joked that prisoners were *maruta,* the Japanese word for "log." As technician Yoshio Shinozuka remembers, Unit 731 personnel would use the euphemism in contexts such as "How many logs did you down today?" (Barenblatt, 2004, p. 49). It's clear that Unit 731 personnel did not value the lives of their victims, even joking about "fallen logs," and this callous cruelty is often attributed to dehumanization. Dehumanization, Barenblatt (2004) argues, was the "official policy," and employees would be ridiculed if they "acknowledged that the prisoners were human beings" (p. 50). This was congruent with a pattern of racism, othering, and xenophobia woven into Japanese culture. The belief that the Japanese were a special, superior race of people was prevalent (Harris, 1994) and was a driving motivation for imperialism.

Although Unit 731 perpetrators used dehumanizing language to rationalize their actions, dehumanization does not make sense as the main mechanism at play. Henry C. Theriault (2007), philosopher and leading genocide scholar, uses the Armenian Genocide as a case study to argue that instead of dehumanizing victims, perpetrators "recognized the humanity of their victims" and killed Armenians "precisely because" of their humanity (Theriault, 2007, p. 28). The more a torturer humanizes their victims, the more pleasure they would feel: when kicking a rock, thinking about the rock's pain brings no pleasure (Theriault, 2007). Perhaps Unit 731's purpose was to create biological weapons to efficiently kill large numbers of people (Barenblatt, 2004), but researchers

still conducted experiments with no scientific purpose, seemingly for the sake of curiosity, or simply just for fun. Barenblatt (2004) describes experiments such as boiling prisoners alive, hanging prisoners upside down to see how long it would take for them to choke to death, and sawing off a prisoner's hands and switching them so that the left hand was reattached to the right arm. This is different from the way one might clean mold or insects out of a house. While we may fear insects, we get rid of them as quickly as we can; we don't take pleasure in long, drawn-out torture sessions. "Professional people, too, like to play," testified an Osaka University professor who had studied footage of Unit 731 experiments as a medical student (Barenblatt, 2004, p. 79). Unit 731 researchers were highly intelligent doctors and academics who chose their career paths because of a fascination with biology and the human body. Unit 731's human experimentation gave them an appealing opportunity to study what goes on inside their own bodies. This would not have provided the same pleasure had they not used test subjects with human physiology just like their own.

Theriault argues that Armenian Genocide perpetrators had to acknowledge their victims' humanity in order to find ways to hurt them. How would they know that taking away a mother's children would cause distress, unless they understood that her emotions were as human as their own? (Theriault, 2007). Similarly, what use would infecting a Chinese victim with syphilis be to Japanese researchers, unless they understood that a Japanese patient had the same physiology and would respond in the same way? What would be so interesting about cutting a Russian victim open unless they had the same organs as the researcher's own? Perhaps Unit 731 perpetrators declared that their victims were not human and called them logs, but this was only a justification. Deep down, they knew their victims were human.

Self-oriented Factors

If dehumanization does not fully explain it, the behavior of Unit 731 researchers must have been motivated by some strong factors to overcome the clearly false belief about their victims'

humanity. Perhaps an answer can be found in personal motivations like greed or ambition. After all, most villains in our favorite stories are willing to hurt others because of a desire for money or power.

Desire for status is a fundamental human motive and one that drove many perpetrators of human experimentation, specifically to advance their careers. Maslow (1943) describes an innate desire for "reputation or prestige" (p. 382). Higher status would help an individual survive and reproduce, making the motivation for status evolutionarily beneficial (Anderson et al., 2015). A review of Nazi human experimentation suggests that "a desire for personal advancement motivated perpetrators" (Lefor, 2005, p. 880). Mengele used his Auschwitz experiments for his "habilitation," an advanced credential in German academia (Barondess, 1996). Japanese perpetrators also participated to "stimulate their own careers" (Jacob, 2018, p. 142), and after the war they achieved high-ranking positions in universities, public health organizations, and pharmaceutical companies (Barenblatt, 2004). While participating in Unit 731's experiments, perpetrators likely knew that this would benefit them in the future. Because of how highly respected doctors are in Japanese culture (Feldman, 1985), Unit 731 researchers likely pursued this prestige from a young age as they studied to become doctors.

Another personal desire these researchers were chasing was knowledge to satisfy morbid curiosity. As discussed above, many experiments had no value to developing germ weapons or protecting troops. When researchers tested what would happen if they surgically switched a victim's hands, or how victims would die in a giant spinning centrifuge (Barenblatt, 2004), they seemed to be motivated by morbid curiosity, defined as "a motivation to seek out information about dangerous phenomena" (Scrivner, 2021, Abstract). One factor of Scrivner's Morbid Curiosity Scale (MCS), the Body Violation Factor, suggests an interest in understanding the limits of the body and what happens when the body is damaged (Scrivner, 2021, section 2.2.3). Unit 731 perpetrators' fascination with damaging the human body suggests they likely would have scored high on the

Body Violation Factor. Scrivner (2021) speculates that the evolutionary benefit of morbid curiosity is that it motivates people to gather information about dangerous phenomena. Over a series of studies using the MCS, he found that on average, most people have some degree of morbid curiosity, but only a handful have very high MCS scores. Because of the "inherent danger" morbid curiosity brings, "only a small number of individuals'' would need to be extremely morbidly curious, since the rest could simply listen to those sharing the information (Scrivner, 2021, General Discussion Section, para. 3). This means that each society, including Japanese society, would have a small number of members showing this trait. Unit 731 doctors were not ordinary citizens but the small, highly intelligent portion of the population with a fascination for biology and the human body with personality traits very different from the average person.

However, this on its own doesn't explain the atrocities of Unit 731. Morbid curiosity manifests in most people as interest in haunted houses (Anderson et al., 2020), horror movies (Scrivner et al., 2021), or media accounts of serial killers (Harrison & Frederick, 2020). In trying to satisfy morbid curiosity, or other self-oriented desires like status or money, most people have not held a woman down and cut her open as she screamed "kill me, but please don't kill my child!" (Gold, 1996, p. 162). These self-oriented mechanisms are not enough to motivate Unit 731's horrific actions, but become powerful when combined with the power of the group.

Group-oriented Mechanisms

Social psychological mechanisms were a powerful motivator for many WWII atrocities, including Unit 731. Humans are social creatures who depend on others (Decker et al., 2016), evolutionarily wired to act for the good of the group (Fehr and Gächter, 2002). As discussed above, Japanese culture at the time was highly racist and nationalist. Returning to the question of why Unit 731 perpetrators chose to adopt a clearly false belief instead of changing their behavior, social psychology provides an answer—the group is a powerful driving force, powerful enough to make doctors go against everything a doctor should do.

Conformity to social pressure from peers was one of the main mechanisms that explains the actions of Unit 731's researchers. Asch (1955) performed a series of classic conformity experiments that demonstrated the human tendency to conform with the group even when one knows the group is wrong. In one, subjects were asked to compare the length of lines, not knowing that all other "subjects" in the room were actually confederates instructed to give an answer that was clearly wrong. Of 123 college students, 36.8% agreed with the majority despite seeing with their own eyes that the majority was wrong (Asch, 1955). When interviewed, subjects' beliefs ranged from genuinely believing the group was right to understanding the group was incorrect but choosing to conform anyway (Asch, 1955). There is evidence that conformity exists in other species including fish, rats, monkeys, and great apes (Morgan and Laland, 2012), suggesting that conformity is not a phenomenon unique to American college students but something universal found early in our evolutionary history. An experiment by Coultas (2004) suggests that conformity comes from an evolved mechanism to imitate others, which likely would have been beneficial for survival in the same way status would have been.

Conformity certainly was a strong motivator for Unit 731 perpetrators. As former Japanese army surgeon Yuasa Ken recounted, performing vivisections on Chinese captives "was practice for army doctors winning a war. If you made a disagreeable face . . . you would be called a traitor or turncoat" (Barenblatt, 2004, p. 151). When everyone in a group is behaving a certain way, humans naturally tend to act the same. However, the motivation to conform was not as simple as a desire to fit in with the group, but pressure to protect family as well. "If it were just me alone, I could tolerate it," Yuasa said, "but the insulting looks would be cast on parents and siblings. Even if one despises an act, one must bear it" (Barenblatt, 2004, p. 151). Yuasa's testimony demonstrates that Unit 731 doctors' conformity was not as simple as conforming to what other doctors were doing, but other social pressures were at play such as the human desire to protect family members.

It's impossible to mention conformity without its sister concept, obedience. Especially when combined with the self-oriented factors discussed earlier, obedience was so powerful as to drive Unit 731 perpetrators to commit horrific crimes, to justify their actions with a clearly false belief instead of changing their actions. Milgram (1975) defines obedience as when an individual complies with a higher authority. In a classic shock experiment, he found that subjects were willing to shock a confederate to dangerous levels in order to appease the orders of a Yale researcher (Milgram, 1975). This experiment was controversial for its use of deception, but it had implications for explaining the actions of war criminals and is one of the most-cited studies in literature around obedience (Haslam et al., 2014). Ironically, this unethical experiment on humans can be used to explain the Unit 731 researcher's obedience in horrific human experimentation.

Obedience may have evolved through group selection, as a tribe of members with high cooperation and obedience are more likely to survive (Darwin, 1874, as cited by Krebs, 2008). Hierarchy, which needs obedience to function, has evolutionary advantages in protecting groups of organisms from environmental hazards, threats from other species, and disturbance from within the group (Milgram, 1975). Milgram does not argue that we are born with a simple instinct for obedience, but that we're born with a potential for obedience that our social environment nurtures.

Unit 731 researchers' obedience to Ishii was facilitated by nationalism and the war. As mentioned previously, Japan at the time was highly nationalist (Harris, 1994) and so when obeying Ishii, perpetrators were being patriotic. This nationalism-fueled obedience was strengthened by being in war. In war, morality "acquires a radically different focus: the subordinate person feels shame or pride depending on how adequately he has performed the actions called for by authority" (Milgram, 1975, p. 146). Testimony from former perpetrators reflects the morality shift Milgram describes. "I killed people for the country—for the emperor," testified one hygiene specialist who had worked at Unit 731 in Pingfang and Unit 543 in Hailar (Gold, 1996, p. 182). A Youth Corps member who had been attached to Pingfang Unit 731 testified, "Because of my education in

emperorism and militarism, I never thought that what I was doing was wrong" (Gold, 1996, pp. 220-221).

In addition to the war affecting Unit 731 researchers' moral reasoning, Ishii's prestige and position as an idol affected the researchers, clouding their moral judgment and increasing their obedience. Galinsky et al. (2008) found that participants assigned to a lower-power role were more affected by the reputation of the person giving the orders. This finding suggests that the greater the power difference between an authority and a subordinate, the more the subordinate's judgment would be clouded by the authority's reputation or prestige. Milgram's experiments also support the idea that people obey prestige. When Milgram conducted his experiments at Yale, he found that 62.5% of participants continued to shock the "learner" up to the maximum volts, even as the learner feigned unresponsiveness (Haslam et al., 2014). However, a lesser-known replication at Bridgeport, an industrial neighborhood, found only a 47.5% obedience rate, suggesting that the prestige of the setting influences obedience (Haslam et al., 2014). Being in a world-class research facility headed by one of the most revered scientists at the time influenced subjects' moral reasoning and obedience. In this way, the allure of status strengthened the group-oriented mechanism of obedience.

The former Unit 731 hygiene specialist regarded Ishii as "higher than the emperor" and "almost cried from appreciation" for Ishii's scientific accomplishments (Gold, 1996, p. 179). Yuasa confirmed that "Ishii was like a god to us, and we thought what he was doing was necessary for our country to win the war" (Jacob, 2018, p. 66). This quasi-religious hero-worship is not what one would expect from a group of scientists, but Ishii's reputation combined with the nationalistic and militaristic factors led to this irrational thinking and obedience. Self-oriented mechanisms such as curiosity and desire for status acted as sweeteners for the ultimate motivator: the group.

Conclusion

While distressing, studying atrocities like Unit 731 is an important first step to making sure they never happen again. Unit 731 shows us that unethical human experimentation is not unique to Auschwitz or to Tuskegee but comes from universal, evolutionary psychological mechanisms. Unit 731 shows us how our evolved tendency to act for the good of the group can turn ugly when our judgment is clouded. Unit 731 demonstrates the power of cognitive dissonance in using a clearly false dehumanizing belief to justify horrific war crimes that were driven ultimately by conformity and obedience. While the perpetrators must have understood, on some level, that their victims were human, they used dehumanization to justify their actions. These actions were ultimately motivated by the interplay of simpler, selfish motives with the more powerful group-oriented motivations of conformity and obedience.

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