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# Godzilla and the Changing Contract Between Science and Society

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GODZILLA AND THE CHANGING CONTRACT BETWEEN  
SCIENCE AND SOCIETY

A thesis submitted to  
Regis College  
The Honors Program  
in partial fulfillment of the requirements  
for Graduation with Honors

by

Stefanie Maletich

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## **Preface and Acknowledgements**

Like Godzilla, this thesis had its origins in an amalgam of memories, images, and resources. As a chemistry student with interests in sociology, I decided not to be in the laboratory for my thesis, but instead chose to combine the two disciplines in a written work, using sociology to examine the field of science. The introduction of Godzilla was the result of a paper I had written for a previous class in philosophy; the task was to write about the problem of evil, so I decided to write about the evil of a monster in a film. Not knowing much about Godzilla, I watched *Gojira* (1954) and read about Godzilla's nuclear origins for the first time. I was so enamored of the film and its history that I had trouble keeping to the limit of 3-4 pages, especially when I saw the way his character changed over the years. Godzilla was much more complicated than I thought, and so I returned to the series for my thesis.

The task I set for myself was to examine the relationship between science and society through the lens of Godzilla. In a play on the Regis motto, "How ought we to live?" I asked, "How ought we to live and work as scientists?" The ideas of relevance and socially-minded work I uncovered while writing will continue to guide me as I forge my career in chemistry. As I discovered, it is impossible to "un-know" something you have learned; I kept seeing Godzilla everywhere as I was working. I will always carry the memories of Godzilla and of this thesis with me.

I want to thank Dr. Michael Ghedotti and Dr. Solen Sanli for advising me throughout the thesis process; their help was invaluable and I could not have finished this project without either of them. I also need to thank Dr. Thomas Bowie for his assistance, and for keeping me and everyone else in the honors department in line for our four years at Regis. I thank Jim Supinski for lending me his extensive collection of Godzilla DVDs, allowing me to watch a total of 16 films from the series. I want to thank my friends and family for their encouragement and support, for listening to my progress and discussing ideas with me. Lastly, I need to thank my father, John Maletich, for introducing me to Godzilla and the corresponding Blue Öyster Cult anthem many years ago and laying the foundation for what would later become this thesis.

## **Introduction: The King of the Monsters**

As one of the more influential aspects of society, popular culture represents a field worthy of academic scrutiny. Items from popular culture such as films, literature, or music can then be seen as representative of cultural values, or at least potential values. In the words of Joke Hermes, from her work “Gender and Media Studies,”

“...popular culture always also entails the production of hopes, fantasies and utopias. To my mind, they therefore could and should be a part of politics and of citizenship in its (ideal) sense as deliberation about what for most of us would be the best kind of life” (Hermes 1997, 77).

Cultural items can then be seen as projections of cultural values, in a literal sense or a distorted, figurative sense. By studying these items, we see what a society values, what fascinates and entertains the society. By studying one genre in particular, that of horror films, we see “one aspect of the social constructions of the fearful in our society” (Tudor 1989, 5). We see the things that keep us awake at night, the things that determine our “collective nightmares” (Tudor 1989, 3).

In terms of cultural influence of horror films, there is no better example than Toho Studio's Godzilla series. Spanning from 1954 to 2005, there are 29 Godzilla movies in total (not including the 1998 American disaster), with another rumored to be on the way, making it the largest series in cinematic history (Tsutsui 2004, 45). By the 1980s, about 65 million people had seen a Godzilla film, and that number can only have grown since

then (Tsutsui 2004, 64). In a 1985 survey, the New York Times asked Americans to name a famous Japanese person: the top three responses were Emperor Hirohito, Bruce Lee, and Godzilla (Tsutsui 2004, 7). Clearly, the Godzilla franchise represents a significant body of work as well as an integrative piece in American and Japanese culture, and is worthy of academic scrutiny. “A cinematic series of such length and such global popularity surely reveals something of significance about the time in which it was made, the people and organizations that created it, and the audience who watched and embraced it” (Tsutsui 2004, 44).

With such an expansive series of films, it is helpful to start at the beginning, with Ishiro Honda's masterpiece, *Gojira* (1954). In the film, Godzilla is an allegorical figure warning the public about the dangers of nuclear technology. Godzilla himself was presented as a product of H-bomb tests, a direct consequence of nuclear technology, and the allegory is clear in the first film. In this context, the film was meant to be a genuine horror story, “intended to frighten rather than amuse” (Tsutsui 2004, 14). To a postwar Japanese people that were still feeling the aftermath of World War II, this *was* a horrific image. The scenes depicting the aftermath of Godzilla's biggest attack on Tokyo echo many images of the Hiroshima and Nagasaki atomic bomb attacks, with dead and wounded overflowing hospitals, and panic overrunning the town. The interactions between nuclear science and society were meant to be terrifying and destructive, showing the full force of the scientific institution's power.

It is this image that I isolate and examine in Chapter I, that of Godzilla as a terrifying force of nature, and, as it follows, of science as a powerful institution. I will

explain how science gains its power within society, and the implications of this power in a larger structure in Chapter II. Obviously such an image was influenced by postwar Japanese society, so I will explain more of this background as well.

In spite of Godzilla's status as a veteran cinematic monster, it is hard to imagine him competing with other horror movie monsters of today. This is because, as Tsutsui neatly summarizes,

“The Godzilla that most Americans know and love is not the sinister, homicidal, black-and-white, fresh-from-Bikini-Atoll-and-bent-on-revenge monster of the 1954 *Gojira*. Instead, the image rooted in America's pop culture subconscious is that of Godzilla the goofy champion, the saurian defender of the world, the judo-kicking, karate-chopping, bug-eyed, technicolor creature from the films of the 1960s and 1970s” (Tsutsui 2004, 43).

While Godzilla's debut was a haunting morality tale, some of the later films are nearly the opposite. For the purposes of this project, I examined some of the Godzilla films from 1954-1975, which are often merged into one set called the Showa series. In this series, Godzilla becomes a protagonist rather than an antagonist. He fights a host of other Toho monsters, who are initially portrayed as villains for Godzilla to fight (except Mothra, who has always been a protagonistic figure). Godzilla is now shown as the defender of Japan, a hero among the Japanese. Even if he's only defending Tokyo so that he can later destroy it himself, the audience still cheers for him, which is significant. The significance of Godzilla's changing characterization will be analyzed in more detail in

### Chapter III.

While this is partially a gimmick that capitalizes on the trend of monster films in that era (called *kaiju eiga* in Japan, also shown with the film, *King Kong* (1953), in America), it also shows the way that the institution of science can be useful to society. The means by which science and society communicate is often termed a contract, whereby the two (or more) entities engage in conversation. As I explain in Chapter IV, there are costs and benefits to societal contracts, but the arena of science and society is definitely changing.

In the Conclusion, I will reflect on these images of Godzilla and of science in general. Not every image presented in film is necessarily accurate, so I will consider the portrayals of Godzilla and of science carefully. Finally, I will relate these reflections to a larger, hypothetical question regarding the involvement of science and society. We have seen the ways that this relationship, this contract, has changed, but how ought it to change in the future?

There are varying answers to this question, and to the others I have asked, but the changing scope of the societal relationship is undoubted and therefore requires attention. This thesis then represents a fragment of my own personal attention to these questions.

## I. “The Terror of the Bomb” and Godzilla’s Debut

A ship, broken and shattered, washes up on a Japanese coastline with islanders telling tales of a mythical beast that “will come from the ocean to feed on humankind to survive.” A Geiger counter indicates dangerous amounts of radioactivity. A creature, a monster, silent and menacing, glares over a hilltop at the fleeing villagers. This is the story of 1954’s *Gojira*, the first image of the reptile-dinosaur hybrid that would become the king of monsters.

This image, like Godzilla himself, did not appear from nowhere. “Godzilla in all his glory was spawned from a virtual primordial soup of political concerns, cultural influences, cinematic inspirations, genre traditions, economic crassness, simple opportunism, and sheer creativity” (Tsutsui 2004, 15). Godzilla draws upon the rich cultural story-telling tradition of Japan, echoing mythical creatures like dragons and other sea monsters. He draws upon the rich story-telling tradition of Japan which plays on a deeply-ingrained fear of the power of nature (Tsutsui 2004, 15-16). In the years surrounding Godzilla’s debut, there was a worldwide interest in giant monster films such as *King Kong* (1953) and *The Beast from 20,000 Fathoms* (1953); Godzilla’s creators certainly must have been aware of this trend (Tsutsui 2004, 19). 1954 was also a memorable year for Japanese cinema in general, producing such films as *The Seven Samurai* (1954) and *The Twenty-Four Eyes* (1954). Even among these critically-acclaimed films, *Gojira* held its own as the eighth highest-grossing Japanese films of the year, and the twelfth highest when counting Hollywood imports (Tsutsui 2004, 32).

While all of these inspirations are important to understand Godzilla, the one that cannot be ignored is the creators' own intention behind *Gojira*: Tomoyuki Tanaka, the producer, remarked that “the theme of the film, from the beginning, was the terror of the Bomb. Mankind had created the Bomb, and now nature was going to take revenge on mankind” (Tsutsui 2004, 18). Japan was attacked with atomic weaponry, once in Hiroshima on August 6, 1945 and once more in Nagasaki on August 9th. It was not easy for Japan to recover from this devastation. The Japanese economy began to improve in the 1950s, and the Japanese government even went so far as to announce that “the post-war period was over” (Tsutsui 2004, 18). But “the dark memories of war...remained fresh and traumatic...the specters of Hiroshima and Nagasaki...were particularly vivid, harrowing, and unresolved in 1950s Japan” (Tsutsui 2004, 18). Though the economy was looking up, and the government acknowledged the improvement, the Japanese themselves still felt the aftermath of the nuclear attacks on their nation; the conflict was still “unresolved.” They “still bore the scars – both physical and emotional – of total war and defeat” (Tsutsui 2004, 18).

In addition to still bearing the scars of World War II, Japan experienced occupation by the United States from August, 1945 to April, 1952, which was the first and only time in Japan's history that “national sovereignty was compromised by another power” (Takemae 2002, xxvi). The occupation enacted a system by which “an essentially American military occupation force dismantled and rebuilt the Japanese family and society” (Noriega 1987, 65). National affairs were conducted by “the American conqueror,” travel was carefully monitored, and media were closely censored; “criticism

of the Occupation or of the Allied powers was strictly forbidden” (Takemae 2002, xxvi). The occupation brought about a series of reforms which gave women legal equality and effectively rearranged the Japanese family structure, which “exceeded what American society would have accepted for itself at the time, indicating that the purpose was more to undermine the patriarchal base of Japanese society than to reform it” (Noriega 1987, 65). The idea of the occupation was not to help Japan recover from their devastating defeat, but to rebuild their society in order to not threaten the Western world, and the rebuilding ran from the national to the micro level. To “Americanize” Japan, compulsory education of children was extended to nine years, reducing the strong influence of their parents (Noriega 1987, 65). The occupation resulted in a repressed Japanese culture, and according to many psychoanalytic theories, “what is repressed must always strive to return” (Noriega 1987, 65). As Noriega goes on to describe, the story does not end after the US occupation.

“Occupation ended in 1952, but the United States nuclear presence did not. On November 6, the United States exploded its first H-bomb, a ten-megaton weapon one thousand times more powerful than the one dropped on Hiroshima, on a Pacific Island near Japan. The island evaporated...[In] March 1954, the United States exploded a fifteen-megaton H-bomb that unexpectedly sent substantial fallout across a seven-thousand-square-mile area...” (Noriega 1987, 65).

These bombs were tests conducted by the United States, showing how they remained present in Japan after the occupation. The fallout from the bomb detonated in

March of 1954 reached a nearby Japanese tuna boat, the *Fukuryu Maru* (“Lucky Dragon”), irradiating the crew as well as nearby islanders (Takamae 2002, 555). “Popular revulsion at US nuclear testing turned to outrage,” sparking revived interest in Japan’s nuclear history (Takamae 2002, 555). As Noriega writes, “the repressed had returned” (Noriega 1987, 65-6).

As filmmakers, Ishiro Honda and Tomoyuki Tanaka acknowledged these buried feelings within the Japanese public and sought to express them on the silver screen. “To Honda, *Godzilla* was a means of 'making radiation visible,' of giving tangible form to unspoken fears of the Bomb, nuclear testing, and environmental degradation” (Tsutsui 2004, 33). The government refused to see the anxieties still present in Japan, focusing only on the economic growth. While the restrictions on criticisms of the Allied occupation were lifted in 1952, and Honda and Tanaka began production of the first *Godzilla* film, *Gojira*, in 1954, it would have been tactless to outright describe Japan’s nuclear past. Especially after the Lucky Dragon accident, Honda could not show a film that explicitly described nuclear weapons or their aftermath due to social taboo. Honda could not make a film outright demonizing nuclear technology, but he could make a film demonizing *Godzilla*.

*Godzilla*, then, from the beginning, acted as a stand-in for the dangers of nuclear technology run amok. The uniquely Japanese perspective on the issue is what makes the film itself so powerful. “*Gojira*, one critic has written, 'was a rare monster movie to go into the nasty details of the catastrophe: hordes of injured refugees, thronging field hospitals, churches full of widows and orphans'” (Tsutsui 2004, 33). The aftermath of

Godzilla's attacks were purposely designed to induce memories of Hiroshima and Nagasaki (Tsutsui 2004, 30). As Japanese citizens, the makers of *Gojira* knew how to evoke the emotions necessary for the film to succeed. Images of Geiger counters, orphaned children, and broken families brought an element of reality to the film, which resonated with Japanese audiences.

“...radiation is not something mysterious, antiseptic, or theoretical in *Gojira*, but is an unrelenting lethal force unleashed against nature and humankind. Even Godzilla's skin, thick and furrowed like the keloid scars that afflicted the survivors of Hiroshima and Nagasaki, evoked the agony of irradiation. The moral was clear: nuclear war and the uncontrollable horrors within the atom were to be avoided at all cost” (Tsutsui 2004, 33).

This was a very real image of their own fear, their own suffering brought to life. While Godzilla is a metaphor, he is a very tangible and real representation; the audience can see the references to radiation and nuclear destruction and, having understood the story firsthand, they are able to understand the moral. This is what made *Gojira* such a powerful film for Japanese audiences. The film was stylized to bring out these unnerving realities and contrasts, as well. The black-and-white palette of the film only adds to the chill of Godzilla himself, his dark skin contrasting with the white sands on the beaches, with the bright lights and dark landscapes of the nighttime attacks. The entire story is set to the background of Akira Ifukube's iconic score, which mixes elements of nationalistic marches and mournful dirges, as well as the “Song for Peace” played throughout the film.

When considering the tangible nature of the Godzilla films, and what Godzilla represents, it is helpful to consider his physical attributes in the early films. Godzilla is described in *Gojira* as an “intermediate creature” between the “marine reptiles and the evolving terrestrial animals,” being about 50 meters (about 164 feet) tall. In *Godzilla, King of the Monsters!*, the 1955 American re-make of *Gojira*, Godzilla is described as being 400 feet tall. Regardless of his height (or the resulting disproportions of the surrounding buildings he later destroys), both films stress his origins as a product of atomic weapon detonation in his habitat, which is evident in his footprints that set off the Geiger counters on Odo Island. He has atomic breath that sets fire to any buildings that he wishes to destroy while illuminating the spines on his back. Godzilla’s face is very sharp and pointed, with downward scowling eyes and needle-like teeth jutting out of his mouth; his ridged skin is a dark charcoal gray, which is not just in the black-and-white *Gojira*, but in many of the films (Fig. 1). Godzilla is an archetypal monster on the loose because he is dangerous and scary-looking, and he is meant to be that way.

Though Godzilla is a personification of the atomic bomb and because of this he is very tangible and real, Godzilla himself is mysterious. He is a monster of few words, and his silence is only broken by his trademark roar. “Our first view of him in the 1954 film that began it all is of an enormous dark scaly head rising above the hills of a Japanese coastal town, and this scene is made all the more menacing by Godzilla’s total silence” (Napier 2006, 10). Napier argues that this silence of Godzilla is left over from long-time treatments of Japan as a passive, silent nation used as “simply Western projections...incapable of life on their own” (Napier 2006, 9). In portrayals of Japan, the

characters are often silent, given voice only by Western means; this is an interesting connection to the Allied occupation where Japan was literally unable to communicate with the outside world due to Western involvement, as Takamae notes. While this cultural history of silence and the more recent impact of the Allied occupation definitely have a part in Godzilla's character, the overtones of World War II are present as well. "The total voicelessness of Godzilla in this film may remind us of John Treat's quotation from a survivor of Hiroshima who describes the day of the bombing when she looked up in the sky and thought, "[o]h look there's an enemy plane coming" and then says, "[t]hereafter there were no more words" (Napier 2006, 10).

Not only did *Gojira* emerge from the imposed silence within the Japanese people, but Godzilla himself, the representation of their fears, is also silent. The film that meant to give voice to the nuclear problem still carried the silence that has characterized Japan for years, according to Napier. I would argue that the silence of Godzilla, however, is meant to characterize him as mysterious and distant rather than passive. The audience may know the fears of radiation, having experienced it in the past, but the characters on screen do not. While the radiation that created Godzilla is real and tangible, Godzilla himself is not. The characters know the reasons for Godzilla's existence, they know what will happen if humanity continues to produce nuclear weapons (Yamane warns at *Gojira*'s conclusion that "if we keep on conducting nuclear tests, it's possible that another Godzilla might appear somewhere in the world, again," which does happen in *Godzilla Raids Again*), but they do not know the reasons why Godzilla is destroying Japan. After all, it was not Japan that caused Godzilla to come into the world. Japan is then shown as

an innocent victim of Godzilla, of nuclear technology in general, and this image is definitely not passive. Godzilla has his origins in human mistakes via a nuclear technology wielded by an occupying nation, but he is still that thing which is attacking Japan, he is still “the Other” of the science that created him, specifically American nuclear science. Godzilla thus partially represents the destructive power of nuclear science as witnessed by the Japanese people.

Even though the characters in the film know where he comes from and why, there are still undertones of mystery present in the story. What is not a mystery, however, is the result of Godzilla’s presence in Japan. No matter what the reason for Godzilla’s attacks, they always result in destruction. Godzilla is shown in film after film that his actions will harm humanity, that he is a true monster. As one Japanese reporter remarks in *Gojira*, “This looks like our doom!” In *Gojira* and other early films like the American adaption of *Gojira, Godzilla, King of the Monsters!* (1956), as well as *Godzilla Raids Again* (1955), and *Mothra vs. Godzilla* (1964), Godzilla is depicted as a genuinely terrifying monster *because* his motives are unknown. It is this unknown quality of Godzilla that makes him a threat to the stability of society. Though his origins as a nuclear dinosaur hybrid are known, it is unclear as to why he is attacking Japan, other than the fact that Japan is the nearest target.

Again, this is reminiscent of the origins of the Godzilla story itself. When the Japanese cities of Nagasaki and Hiroshima were bombed with nuclear weapons, they had never seen such technology before. They had no idea what was happening, they did not know how to stop it; all that was left was to be at the mercy of mysterious and previously

unknown artillery, and suffer an overwhelming crushing defeat. This is essentially what happens in the early Godzilla films, and characterizes Godzilla as an unstoppable force of nature, a deadly villain that is stronger than anything else in the natural world. This is what makes him the King of the Monsters in the American version of *Gojira*. Much of the ambiguity of *Gojira* (as well as the anti-American references) are stripped from the film for the American release, but the picture that remains is an even more unknown and evil Godzilla. As the American reporter, Steve Martin, notes about his monster story in *Godzilla, King of the Monsters!* “well, it’s big and terrible.” Godzilla is shown as a single-minded monster on the loose in order to line up more solidly with the *King Kong* monster tradition already established in Hollywood at the time. The side stories about a love triangle are omitted and replaced with pompous voice-overs by Raymond Burr as Steve Martin. This does limit the storytelling potential of the film but leaves Godzilla himself bare and more available to American audiences.

Of course, not all characters feel that this necessarily means Godzilla should be killed. The most notable is Dr. Yamane of *Gojira*, who repeatedly stresses that Godzilla “absorbed massive amounts of atomic radiation and still survived. What do you think could kill him? Instead, we should focus on why he is still alive. That should be our top priority!” As an archaeologist, Yamane wants to study Godzilla rather than kill him outright. “It’s a unique opportunity....Godzilla is something never seen in the world, and only those of us in Japan can study it!” His priority is scientific research, but as an opponent counters, “research at what cost?” This tension disappears relatively quickly, emerging as a plot point only in the first two Godzilla films, *Gojira* (1954) and *Godzilla*

*Raiders Again* (1955). While the ambiguity of Godzilla has largely left the films by this point, his character is by no means static. However, it is sufficient to say that at this point Godzilla's character is antagonistic, and the characters on-screen fully acknowledge his antagonism.

What Godzilla's antagonism, and his protagonism in the later films, comes down to is a fundamental treatment of the Other, which, in this context, is the nuclear "monster." The Other is treated in *Gojira* as an aspect of society that does not fit, and must therefore be excluded. As Noriega states, "As the cold war developed, American monster films reflected this inability to identify with the Other" (Noriega 66). The Other is the nuclear technology that had destroyed Japan, and subsequently, the Other is the United States that brought about this destruction. The treatment of the Other, of Godzilla, then, is largely negative, lending to the nature of *Gojira* as a horror film. Godzilla acts as a stand-in for all that is harmful and dangerous in nuclear science, and for all the harm that specifically came from the United States. Producer Tomoyuki Tanaka described the mechanism as this: "We wanted to show how easily a [nuclear] incident could occur today...but vivid images of nuclear war are taboo. Godzilla, on the other hand, can bring the message to light and still be entertaining" (Tsutsui 2004, 55). For the Japanese people, who had seen the effects of nuclear technology and are aware of their own history in these events, Godzilla is a true horror story.

When presented with the Other, the society must then decide how to deal with it. Japanese monster films, in general, seek to integrate the monster, the Other, into the society shown in the films. The Other seeks to merge with the self, it seeks to "operate

according to the defense mechanism that is central to therapeutic psychoanalysis: transference” (Noriega 68). Where repression submerges the uncomfortable Otherness, transference uncovers the Other in an attempt to examine it productively. Here, transference means to “struggle against a cold war ideology based on repression and projection” (Noriega 1987, 68). While Godzilla is the first example of this trend, he is not the last. Other monsters in the Godzilla series, as well as Japanese monster movies in general, have “personalities, legends, and names,” which contrasts with the “them,” and “it” nature of monsters in American films (Noriega 1987, 67). Later in the series, Godzilla even becomes a protagonist, fully integrating himself into Japanese culture. While he is still the Other, he is also a part of Japan, and so comes to represent and defend Japan in the later films. This shows the re-integration of nuclear science into Japanese society as a re-integration of the Other.

In other early films, Godzilla still represents the bomb, even though there is less mystery surrounding him: we know what kind of monster he is, how he was created, etc. In later films, even ones where Godzilla is not even present, there is almost always some mention of Godzilla’s (or another monster’s) nuclear origins or of the dangers of radiation or nuclear science in general:

- “As you can see, even with our arsenal and our intelligence together we could not stop that terrifying radiation-containing, atrocious Godzilla.” (Yamane in *Godzilla Raids Again* [1955])
- There is a lengthy introduction to the English version of *Godzilla Raids Again* (1959) about the dangers of “giant mechanical monsters,” the hydrogen bomb

which “inaugurated a new and frightening era in the history of man.”

- “It was as if something human were dying [in a] fiery holocaust.” (Voiceover describing the deaths of the Rodan monsters in *Rodan* [1956])
- “I’ve got a bad feeling about flying through this much radiation.” (the pilot flying near Mothra’s island in *Mothra* [1961])
- A particularly telling exchange occurs between a photographer, a reporter, and a scientist while a research party examines Infant Island, Mothra’s home (*Mothra vs. Godzilla* [1964]):

Photographer: This is the result of atomic tests.

Reporter: At one time this was a beautiful green island.

Scientist: As a scientist I feel partly responsible for this.

Photographer: All of mankind is responsible.

Reporter: Like the end of the world here.

Scientist: This alone is a good reason to end nuclear testing.

Reporter: Those who dream of war should come see this, eh?

Godzilla’s nuclear legacy is present in all of the films where he is characterized as a villain, including *Gojira* (1954), *Godzilla, King of the Monsters!* (1956), *Godzilla Raids Again* (1955), and *Godzilla vs. Mothra* (1964). The negative portrayal of radiation also bleeds into other examples from Toho Studios’ veritable pantheon of monster films, which include *Rodan* (1956) and *Mothra* (1961). An exception would be the monster Ghidorah, who is a creature from outer space in *Ghidorah: The Three-Headed Monster*

(1964) and *Invasion of Astro-Monster* (1965). It is important to recognize that Godzilla is not the only radiation-induced monster in the Toho Studios world, and as they interact on screen their meanings are changed and influenced by one another.

Overall, Toho Studios' monster films are products of the times in which they were produced. By drawing from Japan's cultural storytelling history, its crushing defeat in World War II, the subsequent occupation following the defeat, and the difference between the government's optimistic statements and the public's remaining fears, Toho was able to create Godzilla, a living representation of these anxieties. This is a way that they attempted to give voice to the fears and deal with their cause, nuclear science and technology, as the Other. This treatment of Godzilla corresponds to a treatment of nuclear science and technology, which has implications for the characterization and treatment of science in general, not just for Japan but for other parts of the world as well. With this image of Godzilla as an antagonist in mind, the image of science as an antagonistic force to society can then be analyzed accordingly.

## II. “The Most Efficient Instruments of Death”

Man “[seeks] answers to worlds outside his own. But as he attempts to unlock the mystery of the universe in which he dwells, are there not darker and more sinister secrets on this planet, Earth, still unanswered, still baffling in defying men? With each step forward, does he not take several steps back? This, then, is the story of the price of progress...”

- *Godzilla Raids Again* (1959)

In the same way that Godzilla was initially portrayed as a villain in opposition to society, so, too, has science been described as an opposing force. In the context of the metaphor described in Chapter One, Godzilla represents the result of a science that has done great harm to society. Godzilla is shown as the aftermath, much like the aftermath of the nuclear weapons that afflicted Japan for those years. For the purposes of this chapter, I will begin by speaking of science as a social institution; I will aim to trace science’s path backwards in order to assess its purpose in society. I am also including all disciplines of science in this discussion; this includes not only the physical sciences but social sciences like economics, sociology, or psychology.

Science’s place within society, or outside of society, has long been the subject of intellectual debates as well as governmental initiatives. One of the many critiques of science comes from Paul Feyerabend, detailed in his book, *Against Method*. Feyerabend begins his treatise with the statement that science has a place in society as the sole bringer of truth. Science is able to verify its truth claims by claiming a separate, objective view on the world. The nature of scientific facts is that they are “experienced as being independent of opinion, belief, and cultural background” (Feyerabend 2010, 3). In this

way, "...the domain [of science] is separated from the rest of history and given a 'logic' all its own..." (Feyerabend 2010, 3). This separation and independence is enforced by ideas like the scientific method; it is an organized, methodical system that has been designed in order to guide scientific workings so that they will be uniform in procedure. Quantification represents another boundary between disciplines. The use of numerical findings in scientific work is seen as more objective, applicable, and general than another method such as a narrative story. When it comes to quantification, science reigns as the champion. Physical sciences may have more of a quantitative aspect than social sciences, but quantification is, arguably, always present in science. By using these and other ideas, science is able to set up a unique methodology that is purposely kept separate from other disciplines in order to preserve its objectivity.

This objectivity then allows science's findings to be interpreted as "fact" or "truth." In Feyerabend's words, science has "the sole rights for dealing in knowledge" (Feyerabend 2010, 3). These "sole rights" are derived from the methods which separate science "from the rest of history;" in a world of science, where empiricism is often valued, and quantification is king, the purity of data is essential. Once this objectivity is attained, science can then begin to analyze its data successfully. The objectivity of the data lends it credence, making it nearly infallible. "Like the defenders of The One True Religion before them they insinuate that their standards are essential for arriving at the Truth, or for getting Results" (Feyerabend 2010, 164). Feyerabend continues to compare the insidious power of science to that of religion, arguing that both hold their method above all others and obtain power within society. Once science has "the sole rights for

dealing in knowledge,” that is a very powerful tool to be wielded.

For critical thinkers like Feyerabend, this tool is akin to a weapon, doing more harm than good. It is true that Western science now reigns supreme all over the globe; however, the reason was not insight in its inherent rationality or accuracy but the power play at stake through colonization. When Feyerabend writes, “Western science so far has created the most efficient instruments of death,” he writes not only of the actual weaponry created by science (like the atomic bombs which created Godzilla) but of science’s ability to be a weapon itself (Feyerabend 2010, xxi). This is true when considering Godzilla and what he represents: the tragic triumph of American nuclear science. Godzilla is the result of western science, of the atomic bomb tests near Japan, and he definitely is a very “efficient instrument of death.” When the films show, over and over again, Godzilla destroying Japan, they not only show the gargantuan monster battles; they also show American science, the Other, destroying Japan. This is a direct parallel to Feyerabend’s argument, and Godzilla is the physical representation of this fear. Especially in the early films where Godzilla is a villain, American science is very much the true villain.

In order to tackle this villain of science, Feyerabend begins his critique. By claiming pure objectivity and correctness, science is able to trump any other discipline that claims to have answers. This is one of Feyerabend’s biggest problems with science, so he first questions the validity of science’s claim to objectivity. He claims that the facts that scientists gather, even those quantifications from analytical instruments, are not immune to historical influence. “Facts contain ideological components...Such

components are highly suspicious. First, because of their age and obscure origin: we do not know why and how they were introduced; secondly, because their very nature protects them, and has always protected them, from critical examination” (Feyerabend 2010, 57). Everything in science, from the way analytical instruments are constructed to the way that the results are interpreted, even the words scientists use to describe them, are influenced by historical ideologies. Since historical influences have changed so many times over time and space, it is difficult to keep track of them, and so they are discounted, according to Feyerabend. By calling the findings “facts,” they are protected from scrutiny; the label “fact” gives it a protection from “critical examination,” because, of course, facts are always true and never contested. Once the historical ideological component of facts is discounted, “statements are compared with each other without regard to their history and without considering that they might belong to different historical strata” (Feyerabend 2010, 105). A measurement from hundreds of years ago is different not only due to potential instrumentation, but due to the social environment. It is this social environment that is very often not accounted for in scientific investigations. Due to the unseen interplay of these historical events, the true objectivity of scientific findings is open to dispute.

Science is also open to human influence, contesting its objectivity once more. “...science is much more ‘sloppy’ and ‘irrational’ than its methodological image” (Feyerabend 2010, 160). Many scientific discoveries were the result of “mistakes” or blatantly going against the prescribed methodology. “History is full of ‘accidents and conjectures and curious juxtapositions of events...’” (Feyerabend 2010, 1). Since this

messy history is ignored as part of the ideological background of facts, it is unlikely to appear in scientific experiments. In addition to the messy nature of some scientific discoveries, the “laws” that are derived from these discoveries are not as reliable as they might appear to be. “We find, then, that there is not a single rule, however plausible, and however firmly grounded in epistemology, that is not violated at some time or another. It becomes evident that such violations are not accidental events...” (Feyerabend 2010, 8). For Feyerabend, this is another reason to pick apart science’s claim to accuracy and truth. If the rule has exceptions, then it is unfair to deem it a “law.” It is for these reasons that he moves onto his next claim that science should not have such a privileged status in society.

He characterizes science’s permanent and universal rules as unchanging solely to preserve the interests of the old method. These discoveries, though it may be admitted that they came about accidentally, are then transformed into laws or methods, and “when once fashioned into method, though it may be further polished, illustrated and fitted for use, is no longer increased in bulk and substance” (Feyerabend 2010, 117). Science’s practice of forming methods is another way to solidify its truth claims, and its separation from society. Feyerabend goes so far as to call science’s exclusion as hypocrisy; by calling itself the sole bringer of knowledge, it turns itself into “metaphysical doctrine,” into the very dogmatic practice against which it claims to set itself, further continuing his comparison of science to religion (Feyerabend 2010, 22). Science has not only turned into a metaphorical villain, it has turned into the very villain that it despises.

With that in mind, we should recognize that “science is only one of the many

instruments people invented to cope with their surroundings. It is not the only one, it is not infallible...” (Feyerabend 2010, 164). Because “the idea of a fixed method, or of a fixed theory of rationality, rests on too naïve a view of man and his social surroundings,” it is necessary to bring other ideas and philosophies into the field of knowledge (Feyerabend 2010, 11). He praises the “essential” value of pluralism, arguing that “variety of opinion is necessary for objective knowledge. And a method that encourages variety is also the only method that is compatible with a humanitarian outlook” (Feyerabend 2010, 25). Feyerabend suggests finding this variety anywhere and everywhere, from religions and philosophies to ancient traditions and myths or other “irrational” ideas (Feyerabend 2010, 48). These ideas only appear to be irrational because we are not familiar with them, and “there is hardly any idea that is totally without merit and that might not also become the starting point of concentrated effort (Feyerabend 2010, 116). Since one of science’s faults is the exclusion of other disciplines, the solution is to purposely bring in other disciplines.

This pluralism also parallels the Godzilla series because Godzilla cannot be defeated by only one force. In *Gojira* (1954), Godzilla is defeated by the oxygen destroyer, but another Godzilla appears just in time for *Godzilla Raids Again* (1955) along with Anguirus, a new monster. As Dr. Yamane explains in *Godzilla Raids Again*, “even with our arsenal and our intelligence together we could not stop that terrifying radiation-containing, atrocious Godzilla.” Though Godzilla died in *Gojira*, another one appeared, so he was not completely defeated. In *Godzilla Raids Again*, Godzilla defeats Anguirus, and then the original team of scientists work with the military to trap Godzilla

in an avalanche. Even then, Godzilla was not completely defeated, since he appears in later films. He breaks out of his snowy prison to fight King Kong in *King Kong vs. Godzilla* (1963), and the films after this one typically end the story with Godzilla swimming away into the sea. In a way, Godzilla is shown to resist the efforts of science, the military, and nature, as shown by the avalanche. As Feyerabend might say, there is not one single way to control the power of science, much as the same way that there is not one way to control or defeat Godzilla, but the “essential” value of pluralism is required.

Another implication of Feyerabend’s argument is the relationship of science to the rest of society. He argues that “science must be protected from ideologies; and societies, especially democratic societies, must be protected from science” (Feyerabend 2010, xviii). The same argument that pluralism is necessary to search for knowledge is sharpened by this clarification. Though this pluralism is essential, it is also essential to protect the disciplines from one another, to a certain extent. The separation between church and state is once again a relevant parallel; Feyerabend did compare the doctrines of science to those of the church, noting that “any criticism of the rigidity of the Roman Church applies also to its modern scientific and science-connected successors” (Feyerabend 2010, 130). The state and the church are separated to prevent one from influencing the other. Throughout the discussion, science has been characterized as extremely powerful and influential, making it just as dangerous to the state as religion. Feyerabend characterizes his “free society” (his ideal society) as “[insisting] on the separation of science and society” (Feyerabend 2010, 239). He goes on to say that “a community will use science and scientists in a way that agrees with its values and aims

and it will correct the scientific institutions in its midst to bring them closer to these aims” (Feyerabend 2010, 262). Rather than let science influence the rest of society, Feyerabend will have society shape science in order to let it be a productive institution.

Furthermore, this separation is necessary because, for Feyerabend, the way that science operates is inherently dangerous. Not only is it dangerous to society, but it is dangerous to the humanity of its people. Science’s insistence of separating concepts and facts from associations threatens “the way in which we relate to our fellow human beings,” and “removing them or changing them in a fundamental way may perhaps make our concepts more ‘objective,’ but it often violates important social constraints” (Feyerabend 2010, 124). He argues that people cannot be separated in the way that science demands. The exclusion of other disciplines is also harmful because “scientific results and the scientific ethos (if there is such a thing) are simply too thin a foundation for a life worth living” (Feyerabend 2010, 131). Not only do we need this pluralism in order to successfully understand the facts we gather, but we need it to live our lives. Feyerabend pushes the idea even further, quoting Kierkegaard by asking “Is it not possible... ‘that my activity as an objective [or a critico-rational] observer of nature that will weaken my strength as a human being?’” and questioning science’s allowance of free will (Feyerabend 2010, 156). He even suggests that the opposite is true, and that even by not participating in science’s rules, the dissenter is forced into “a no-man’s-land of no rules at all and thus robs him of his reason and his humanity” (Feyerabend 2010, 166). Either people participate in science and are inhumane, or they reject science and are seen as unreasonable. He concludes by asking, “is it not possible that science as we know it

today, or a 'search for the truth' in the style of traditional philosophy, will create a monster?" (Feyerabend 2010, 156). If we include the metaphor of Godzilla in the argument, then the answer is certainly "yes."

Feyerabend's critiques are well-founded and are clearly echoed in the Godzilla films, most obviously in the early films such as *Gojira* (1954). Though Godzilla represents the effects of a harmful science, Feyerabend has characterized the institution of science itself as entirely capable of producing these "monsters." He particularly attacks the scientific method and society's preference of science over other ideas, concluding that this practice is detrimental.

It is not necessary to take Feyerabend's argument literally in order to understand Godzilla from this perspective. In fact, it is harmful to take Feyerabend completely at face value at all. He purposely contradicts himself and exaggerates his arguments in order to make his points. However, he outlines some good points for consideration. His criticism of the scientific method is particularly interesting but I disagree on some points. To a certain extent, a uniform method is necessary for science to take place so that scientists can communicate with one another. If there are two groups conducting the same experiment, it would be confusing for each of them to use separate methods and then try to compare the results. The method can be useful for ease of communication, but latent effects like exclusion of all other options are also in place. I would also argue that there is not exactly an impermeable wall around these methods; while they are in place for a reason and resist adjustment, they are not immune to it. Changes are allowed to be made and ideas are allowed to be added, but of course it takes time for these changes to happen,

which Feyerabend points out as being too much time (Feyerabend 2010, 132). With the way the current systems are designed, it is impossible to initiate such changes overnight, but that is another of Feyerabend's points. Obviously he is advocating a systematic overhaul of society, where such time constraints would not exist; his "free society" (Feyerabend 2010, 239).

Feyerabend's description of science as an institution capable of producing monsters like Godzilla has its merits and its exaggerations, but it definitely resonates with the early Godzilla films. Feyerabend himself even describes science as "creating a monster;" who better than Godzilla to serve as a representative example of the monster created by science? By the time the first edition of *Against Method* was written in 1975, Godzilla was well into his transformation into protagonist, so they are not overtly connected with one another, but these parallels can be drawn to understand them. The next phase of Godzilla's characterization is significantly different: he becomes a positive figure, a hero for Japan.

### III. “Monster as Hero” and Godzilla’s Transformation

*Gojira* (1954) was a product of the post-war Japanese society in which it was produced, and laid the foundation for later Godzilla films and for Toho Studios’ films in general. What we see over time is a very different Godzilla than the one that first appeared in that black-and-white masterpiece. The Godzilla series did not come to a complete creative halt, but rather changed to suit the times:

“The creation of an ongoing Godzilla series very much reflected the economic and creative realities of the Japanese film industry in the 1960s. The 1950s – which had given birth to the original *Gojira* – may well have been the greatest decade in the history of Japanese film, both artistically and for the bottom line...Tokyo had more movie screens than any other city on the globe, and the average Japanese went to a dozen films a year” (Tsutsui 2004, 48).

While *Gojira* was meant to make radiation visible and portray anti-war messages, the newer films reflect the changing perspectives of Japan. The Japanese film industry in general was not doing as well in the 1960s as it had in the 1950s, due largely to “the ascendance of TV...as well as mounting prosperity, suburbanization, and a proliferation of entertainment options” (Tsutsui 2004, 51). In the 1950s, the Japanese people would visit a movie theater, but in the 1960s there were more options available due to the rising economic status of Japan. The cinemas were not filled to capacity as they had been in the 1950s because the Japanese had other choices for where to spend their time. Because of

these shifting demographics, “the now beloved movies of the 1960s and 1970s were meant to distract, to entertain and (not insignificantly) to turn a healthy buck or two for Toho Studios” (Tsutsui 2004, 44).

One of the ways that Toho Studios managed to “turn a healthy buck” was the introduction of new monster spin-off films. While Toho had already made the spin-off *Rodan* (1956), it was essentially a carbon-copy of the “monster-on-the-loose” tradition already established in the first few Godzilla films. It was with the introduction of *Mothra*, the giant divine moth from Infant Island, that Toho really added a new dimension to the *kaiju eiga* tradition, which is the idea of “monster as hero” (Tsutsui 2004, 47). “The lighthearted, quirky, and charming *Mothra* demonstrated how a creature feature could be packaged as a 'preposterous, beguiling fantasy' rather than a customarily dark, brooding horror film. The success of this novel approach would fundamentally reshape the resuscitated Godzilla series of the 1960s” (Tsutsui 2004, 47). By examining the implications of *Mothra*, the complications in Godzilla’s character can in turn be examined.

*Mothra*’s first appearance in *Mothra* (1961) has many of the same elements as the Godzilla films, but with some marked differences. *Mothra* herself is not the villain of the story, but instead, the hero. There are still references to nuclear weapons, but they are not explicitly linked to *Mothra*, who is a divine figure. A party of scientists is sent to investigate Infant Island, but they question the purpose of the mission once nuclear weapons are brought into the discussion, one of them saying, “Maybe this is a romantic notion...but wouldn't it be better just to leave this island alone?” *Mothra* is described as

not knowing the difference between right and wrong, but only having the instinct to protect the natives who worship her and the small fairy women, the *shobijin*, who summon her. This is a departure from Godzilla, whose only instinct appears to be to destroy Japan.

Mothra is first seen in a deep sleep, and can only be awakened by the song of the *shobijin*. This song reoccurs throughout the film as the *shobijin* are captured and use the song to summon Mothra to protect them. Mothra is, from the beginning, shown as a protective figure, not an antagonist at all. This is also linked to the image of the protective, nurturing female character. The *shobijin* describe Mothra as female, and of course there are Mothra eggs in *Mothra* as well as other films, though the eggs always appear and their origins are never explained. Mothra is the only female monster in the Toho pantheon, so it is almost by virtue of being female that she is permitted to be protective.

Mothra is also associated with nature and religious imagery throughout the film. The song of the *shobijin* is used to summon Mothra and is played on church bells in Japan later in the story. The natives' symbol for "Mothra" resembles a giant cross, which is painted on an airplane landing strip to direct Mothra to the *shobijin* along with the ringing of church bells across the town. There are references to the beautiful and green quality of Infant Island, and the *shobijin* ask the scientists on the expedition not to harm their island. As a moth, Mothra flashes her colorful wings each time she takes flight. These natural and colorful images combine with the religious overtones to create a kind of pan-religious natural message. Again, this is a strong contrast to Godzilla, who is dark

gray, antagonistic, and on a permanent mission to destroy Japan.

“Unlike Godzilla, who is a transitional monster, Mothra is a monster in transition. Both monsters, like postwar Japan, are awakened by H-bomb tests. Mothra, however, changes from a larva into a moth. This represents a shift in the nature of the repressed-returned-as monster and points to the positive and moral forces within history that can arise out of the negative” (Brophy 2000, 70).

It is through Mothra’s portrayal as a positive figure that we see an attempt to deal with Japan’s changing social climate. “Once the American occupation of Japan ceased in 1958, Japanese popular cinema certainly shifted its axis away from regret and atonement to rebuilding and rejuvenation” (Brophy 2000, 41). It is this “shifted axis” that is shown in the characterizations of Mothra and Godzilla. Not only does Mothra change from a larva into an adult moth, but Mothra dies in some of the films in which she is featured. In *Mothra vs. Godzilla* (1964), Mothra once again rescues the *shobijin* but she dies after she reaches Japan. The *shobijin* say, however, that “it will not be the end of Mothra. When the egg hatches, it will again be born.” Whenever Mothra does die, there is always another egg to take her place; there is always a Mothra to accompany the two *shobijin*, making a kind of trinity that further emphasizes Mothra’s religious implications. In her continuing death and rebirth, Mothra is the image of “rebuilding and rejuvenation” of a new, hopeful Japan while Godzilla showed the effects of “regret and atonement” that were present in 1950s Japan.

Due to their contrasting personalities, the positive character of Mothra was

destined to clash with the original king of monsters, and it is in *Mothra vs. Godzilla* (1964) that we see their first encounter. The story begins with a giant egg washing onto the shores of Japan after a typhoon, and some scientists take the egg to study it but their plans are interrupted by the businessman Kumayama, who wants to turn the egg into a tourist attraction. The *shobijin* appear to warn the scientists that if the egg is not returned to its home, Infant Island, it will hatch into a monster that will destroy the land. Godzilla eventually starts destroying the cities first, and the *shobijin* persuade the adult Mothra from their island to defeat Godzilla and defend the egg. After the adult Mothra dies, the egg hatches to reveal two Mothra larvae, which then defeat Godzilla by tying him up with their cocoon silk spray and sending him falling into the sea.

While the Mothra larvae are described in the beginning of the film as capable of destroying the surrounding area once they hatch, they end up working with the humans in the end to defeat Godzilla. The adult Mothra is also shown as a protector, not only of her eggs but of the city in general. Godzilla, by contrast, is once again shown as a villain whose only intent is to destroy the city. Right before he is defeated by the larvae, Godzilla is on his way to the island to which the entire city's children have been evacuated, presumably to destroy it. Godzilla's villainous quality is starkly contrasted with Mothra's heroic potential, but it does not remain that way for long. As the series progresses, Godzilla begins his transformation from villain to hero, pausing briefly to emerge as a "tamed being," neither here nor there (Brophy 2000, 41).

The next film in the series is *Ghidorah, the Three-Headed Monster* (1964), in which Godzilla is first shown fighting Rodan rather than destroying Japan. As the story

progresses, the newest threat in the Toho Universe is revealed; Ghidorah, the monster from space, is intent on destroying Japan himself. The humans attempt to devise a solution to their newest monster problem, but it is soon decided that once again, monsters must defeat monsters. They turn to the *shobijin* to ask Mothra for help, but Mothra is not strong enough to defeat Ghidorah. The *shobijin* declare that “there is one hope. Godzilla, Rodan and Mothra, fighting together. If they fight together, they may defeat King Ghidorah.” Since Godzilla and Rodan are still fighting one another, it is up to Mothra to persuade them both to resolve their differences and team up to fight Ghidorah. Mothra argues, translated by the *shobijin* via their telepathic communications, “don't fight. Let's work together to protect Earth from King Ghidorah's violence,” but “Godzilla and Rodan are saying they don't care.” We see that “Godzilla...has no reason to save humans. ‘They are always bullying [him].’ Rodan agrees with him.” In a puzzling turn of events, it is Godzilla who feels victimized by the humans. It is at this point that Godzilla starts to become less of a villain. As he argues with Rodan “that one must apologize,” one of the scientists acknowledges that “men are not the only stubborn creatures.” Godzilla is rendered more human-like through his argument with Rodan. No longer does Godzilla stalk silently throughout the island, destroying all in his path; he communicates with other monsters, he can be stubborn, and he behaves as men do.

This trend of Godzilla aiding humans continues in the series, where he is repeatedly summoned like Mothra is in her films. *Invasion of Astro-Monster* (1965) is the story of a struggle between humans and aliens, once again featuring Ghidorah, but Godzilla is shown on the side of the humans. He is shuttled back and forth between

Venus and Earth, as much of a victim as the humans are. *Godzilla vs. The Sea Monster* (1966) has Godzilla intervening in the fight between the natives of Infant Island and the evil Red Bamboo military organization that is exploiting them, as well as fending off the lobster-like monster, Ebirah, who attacks the coastline. After the final battle, the humans cheer Godzilla on as he escapes into the sea; they want him to get away because “he never did [them] any harm. And not only that, he helped [them] all to escape, too.” In *Godzilla vs. Hedorah* (1971), Godzilla defends Japan from the Hedorah, the smog monster who feeds on the pollutants in Japan’s atmosphere and the garbage dumped in the nearby oceans. Hedorah personifies pollution and environmental destruction, so it is significant that Godzilla, who once represented the evils of atomic science, is now able to defeat Hedorah. Godzilla’s battles show that he is able to defend Japan from threats, whether they are humans, extra-terrestrials, or pollutants, and this is now his job. No longer does Godzilla purposely rampage Japan; if a few buildings are demolished in his battle with Hedorah, it was purely an accident. Godzilla’s role is now that of the protector of Japan, of the hero.

Along with his changing dynamic from hero to villain, Godzilla also had to change his character to appeal to the newest reliable audience in Japanese movie theaters: children (Tsutsui 2004, 51). The films and Godzilla himself had to draw children into the movie theaters, which meant longer “creature sequences” and monster battles (Tsutsui 2004, 52), less violence (Tsutsui 2004, 53) and a more anthropomorphic Godzilla in general. The Godzilla of the 1960s is “Godzilla the goofy champion, the saurian defender of the world, the judo-kicking, karate-chopping, bug-eyed, technicolor creature” that was

designed to appeal to child viewers (Tsutsui 2004, 43). Godzilla no longer stomps through buildings and cities; he now dances and skips to lively jigs to entertain the children that were filling movie theaters across the world.

“Blood did not often gush, death (either human or monster) was seldom explicitly shown, and even the destruction of cities came to be portrayed as not involving the direct loss of human life... The fighting between Godzilla and his beastly adversaries, which had been depicted as savage and animalistic in *Godzilla Raids Again*, became increasingly stylized and comic. Monsters did not endure the throes of death on film, but fell into the ocean, tripped into volcanoes, or swam off into the sunset... The violence of Godzilla thus became safe, humorous, and ritualized” (Tsutsui 2004, 53).

The films themselves became “safe, humorous, and ritualized” as the Godzilla series tried to attract younger audiences. “The Godzilla films of the 1960s and 1970s also became ever less daring and innovative, preferring to copy successful cinematic formulas rather than blaze a pioneering path (as *Gojira* had done years before)” (Tsutsui 2004, 60). The formulaic quality of the films in this era is apparent, with a lack of serious social or moral commentary, rendering them simplistic and entertaining (Tsutsui 2004, 62). At the same time,

“The very appearance of Godzilla also changed over the years in response to the perceived demand of the films' ever-younger consumers... the Godzilla costumes were stripped of their forbidding fangs, and the four toes of the original *Gojira*

were reduced to three on each foot. The suit was given a friendly, more mammalian look over the course of time, with the hint of an upturned smile. Godzilla's tail, always a formidable weapon, seemed to become longer, snakier, and more comic. Godzilla's head underwent the most changes in the periodic redesigns: the monster's eyes grew larger, his noggin bigger and rounder, and his features smoothed until he had a virtual pug nose...a friendlier, almost Muppet-like look” (Tsutsui 2004, 54).

In order to let Godzilla appeal to the perceived demands of the children in the audiences, he was crafted to be less scary and more of “the veritable life of the party” (Tsutsui 2004, 56). Godzilla himself became “stripped,” “smoothed,” and “more comic.” Other changes included introducing various adopted sons for Godzilla, such as Minilla in *All Monsters Attack* (1969). *All Monsters Attack* is a particularly obvious example of Toho Studios’ targeting the younger audiences, with the main plot points taking place in a schoolboy’s daydreams about his bullying problem. Other films began to feature children as prominent characters; *Godzilla vs. Hedorah* (1971) has Ken, who begins the film by playing with Godzilla action figures in an example of Godzilla product placement, declaring “Godzilla’s a superman!” Ken later becomes the voice of Godzilla’s opposition against pollution, saying that “Godzilla would get really angry if he saw this. He would do something.” By the film’s end, Ken stands atop Mt. Fuji, calling, “Godzilla, sayonara!” and waves as Godzilla stomps away. These are just some of the ways that children were not only seen as a perceived audience, but were grafted into the films

themselves.

The messages that can be gleaned from the films are often seen as “virtually impossible” to compare to the originals like *Gojira* (1954) due to the obvious decline into simplistic formulae and writing (Tsutsui 2004, 62). All the same, the fact that the films are so different is in itself significant. To examine the origin of these differences, it is important to once again think of films as contextual cultural products.

“...the Godzilla films were products of their times, and that the Japan of 1970 was a far, far different place from the Japan of 1954. The fun-loving, father-figure Godzilla of the later Showa films mirrored a nation that was rapidly emerging from the shadow of Hiroshima, shrugging off the baggage of defeat, surging forward economically, and growing increasingly confident and comfortable year after year. In this context, Godzilla became less of a menace – and more of a mascot – for the revitalized, 'new' postwar Japan” (Tsutsui 2004, 63).

Though the differences in the films are due primarily to changes in Japan’s social environment, the results of these changes are interesting and significant. Godzilla arguably still represents the face of nuclear science (and science in general). In the 1950s, Japan was feeling the aftermath of Hiroshima and Nagasaki in spite of the government’s assurances that the nation’s situation was improving. By the 1960s and 1970s, that improvement was really happening.

In this changing economic atmosphere, the treatment of nuclear science was also changing. Globally, “nuclear fear” was on the decline, making it less of a “hot-button

issue” (Tsutsui 2004, 62). Nuclear science was still discussed, but in a new light; like Godzilla, nuclear science was also being developed as a positive force for Japan. In 1971, the Fukushima and Daiichi nuclear power plants were commissioned, and now nuclear power accounts for 1/3 of Japan’s energy use (Kluger 2011). Nuclear power was a very important development for Japan, and this change is reflected in the films. “Virtually across the board, the Godzilla films of the 1960s and 1970s were much more upbeat, optimistic, and vibrant than their 1950s predecessors” (Tsutsui 2004, 62). Like nuclear science, Godzilla, too, was shown to have positive applications. He could now be summoned to defend Japan as well as to relate with its children. Nuclear energy, too, was in the process of being summoned to help Japan and other nations in the world. The ties between Godzilla and the nuclear allegory have changed in appearance, but they still remained throughout the 1960s and 1970s.

As Godzilla began to speak and to interact with the humans on-screen, his role as an Other was altered. No longer was Godzilla completely separated from humanity by his monstrous qualities, he was able to have conversations with other monsters (as shown in his argument with Rodan) as well as with humans, aided by conveniently-placed telepaths or even cartoon speech-bubbles (Tsutsui 2004, 56). The Other-ness of Godzilla diminished, showing the therapeutic integration of the monster, and of nuclear science, back into society. The memories of Hiroshima and Nagasaki still remain, just as Godzilla still remains, but the therapy has begun to work. By allowing Godzilla to become a hero rather than a villain, nuclear technology is also permitted to be a positive force in Japan, as well as around the world.

#### IV. “Shadow Show” and the Contract between Science and Society

In her article, “When Godzilla Speaks,” Napier reference’s Clifford Simak’s short science-fiction story, “Shadow Show” (Napier 2006, 10). In the story, some scientists are sent to an uninhabited planet and make mental puppet shows to amuse themselves, and are surprised to find that the figures come to life and speak to them. The story ends with one of the scientists wondering what he would say to the character, and, “more to the point,” what the character would say to him. Napier tells the story in order to describe the ways that we project ideas and values onto “blank screens,” and asks readers to let these “projections” speak for themselves. She goes on to describe Japan’s position as a projection for Western values and ideas, and, of course, Godzilla is included in this metaphor. Godzilla has been shown to act as an “Otherized” projection for Japan’s nuclear anxieties. When the projection of Godzilla is allowed to speak, what will the conversation involve? When the characterization of Godzilla in terms of science is brought into the projected image, the implications change once more. The idea is to engage in this conversation between projection and audience, and between science and society.

This dialogue between science and society is often termed a “contract,” in what I see to be an application of the social contract described by philosophers like Hobbes, Locke, and Rousseau. While the *social* contract is between individuals and the larger society, this *societal* contract is between groups and institutions of the society itself. The societal contract “implies two distinct parties...who come together to reach a formal

agreement on some common goal,” which is described in the contract. The contract is decided as “each party tries to secure the most advantageous terms,” and it “suggests the possibility of conflict” as well as being able to be “renegotiated if conditions change for either party” (Hessels et al. 2009, 389). Between science and society there are two basic types, the “old” and the “new” contracts (Vavakova 1998, 210).

In the old contract, government provides funds for science based on the promise that science will “provide a steady stream of discoveries that can be translated into new products, medicines, or weapons” (Vavakova 1998, 210). According to Vavakova, this contract dominated the American system for almost five decades, which includes the time period of the Showa Godzilla films that I studied (1954-1971). It is still seen today due to the fact that science is still producing technological advances such as weapons for the government. The old contract functions on the assumed power of science that was demonized by Feyerabend, which is problematic due to the criticisms associated with that particular power structure. Because of this, the supported research is not directly user-oriented and may be extremely expensive. Though science in this contract is separate from society, it relies on the public’s and the government’s confidence in science’s ability to produce results or what Gibbons calls “reliable knowledge,” or “knowledge that ‘works’” (Gibbons 1999, 13). There are things that can cause the public’s confidence to lapse, such as suspicions of scientific fraud or the continued support of morally criticized projects (Vavakova 1998, 212). The nuclear research that contributed to the bomb tests near Japan sparked moral criticism in Japan, leading, of course, to the creation of Godzilla. In the view of the old social contract, Godzilla represents the loss of confidence

in science, particularly American nuclear science. Overall, the contract allows science to function autonomously with the emphasis on producing tangible results.

Because of historical context and societal changes in general, some scholars have suggested a new contract within the past decade. The argument is that society is a different place than it was at the beginning of the 20<sup>th</sup> century, so the societal relationships between institutions are different as well. This requires a new contract that would reflect the growing complexity of society's organization; the boundaries between "the state, market, culture, and science" are blurring, and the result is an "erosion" of the previously stable categories (Gibbons 1999, 12). Gibbons goes on to argue that "science and society are invading each other's domain, requiring a rethinking of previous responsibilities" (Gibbons 1999, 11). At the same time, "governments can no longer afford unconditional support for basic science" (Hessels et al. 2009, 387). The government was not necessarily handing out free money to science in the past, but considering the world's current economic status, it is beneficial to reconsider science's budget.

There are two themes in the new contract: socially robust knowledge and a more participative, conversational knowledge process. "Socially robust" knowledge relevant both inside and outside the laboratory and has a process that is "transparent and participative" (Gibbons 1999, 13, 11). Rather than producing results for the government, science would produce results for the larger societal purposes. Gibbons describes the shift from reliable knowledge to socially robust knowledge as including more perspectives than just a peer group; the entire scientific community as a whole would be contributing

as well as members of the “non-expert community” (Gibbons 1999, 13). He argues that knowledge is moving away from the expert community and the “controlled environment of scientific peers” (Gibbons 1999, 13). One argument he describes for this point is that there is no one practice that can be deemed “science,” and that the many factors of science need to be taken into account in a new contract (Gibbons 1999, 14).

In terms of the conversation between institutions, it is about recognizing the effects of society and science on one another. “...If it is widely recognized that science is transforming modern society, it is less often appreciated that society, in speaking back, is transforming science” (Gibbons 1999, 12). Feyerabend argues that this does not happen currently, but advocates this conversation in his description of the “free society” (Feyerabend 2010, 262). However, he does acknowledge the unavoidable interaction between science and its historical influences, so there is no way that this conversation cannot be happening already; perhaps it is just not clear. This act of making the relationship clear is vital to the new contract. Once it is clear, the conversation can be acknowledged and encouraged. “Not only can science speak to society, as it has done successfully over the past two centuries, but society can now ‘speak back’ to science” (Gibbons 1999, 12). Unlike the old contract, there is interaction not only between science and government, but also between science and industry, science and other areas of education, and science and the general public. For Gibbons, the resulting socially robust knowledge born of this process is “less likely to be contested than that which is merely ‘reliable’” (Gibbons 1999, 13).

Many of the authors writing of a new societal contract do not go into details about

such a system. The idea is that the society should decide what is best and that “there is not even a common definition of societal relevance” (Hessels et al. 2009, 388). Since the new contract is so open-ended, it is particularly susceptible to criticism. While socially robust knowledge is useful inside and outside the lab, it can close avenues for more explorative research since it would be more difficult to obtain funding. Scientific discoveries have often been the result of failed intended experiments. At the same time, science’s decreased autonomy may not necessarily be a good thing; after all, science is not solely responsible for controversial projects. Policy-makers also need to be held accountable for a new social contract (Vavakova 1998, 227). Vavakova makes another point about new fields of science, areas that are just recently coming into the forefront of discovery. New fields are often competitive as well as expensive. It is difficult to reconcile the competitive nature of science with high costs of research if the new contract is so rigid, causing groups to seek funding elsewhere (Vavakova 1998, 226). The result is science as a private competitive enterprise rather than an institution striving for socially robust knowledge, which “[reduces] the societal usefulness of science to purely economic value” (Hessels et al. 2009, 389). The task, then, is to find a balance between letting science run a free reign and constraining it to an economic good.

It is worthwhile to consider the ways that science is relevant, as well as the ways that it might work to become relevant. While “it is a mistake to consider the stress on relevance as a completely new phenomenon,” this relevance will be discussed in terms of Gibbons’ “socially robust” knowledge (Hessels et al. 2009, 387). The relationship between science and medicine or science and weapons technology is relevant; it has been

relevant to society for years. Hessels et al. provide a list of “rationales for funding science,” which can be seen as ways that science is useful to society, as well as opposing the idea of science as a purely economic outcome. They describe “science as a cultural good,” and science yielding knowledge that is of general interest (Hessels et al. 2009, 391). These rationales go beyond the economic value of science that is present in science’s quest for weapons or medicines. Hessels et al. present the idea of science having “an intrinsic value or ‘axiomatic relevance’” due to the knowledge with which it is associated (Hessels et al. 2009, 391). This is a stark contrast to the image of science as a powerful, greedy institution that was presented by Feyerabend. The place of science within society is contestable and varied, with differing viewpoints on its importance or purpose. There is no one contract that will be able to solve all the problems associated with science’s relationship with society due to its inherent complexity, much like other societal institutions.

It is this same duality of potential that is present in the character of Godzilla, which makes the metaphor even more rich and complex. Godzilla is an interpretation of the Asian myth of the dragon. Dragons were believed to “roam beneath the surface of the earth” to be awakened by some clumsy individual digging in the wrong season; “Godzilla, too, is awakened from a deep sleep beneath the earth’s surface” (Bergesen 1992, 203). The symbolic similarities are present in addition to the physical. “Dragons are both good and bad, and represent generalized images through which societal anxieties, contradictions, and tensions are symbolically dramatized” (Bergesen 1992, 204). The dragon symbolized the power associated with royalty, but it also destroyed

cities with its fire-breathing capabilities (Bergesen 1992, 202). In a similar fashion, Godzilla defended Japan while crushing buildings that remained in his way, as well as his early intentional destruction of Japan. Both the dragon and Godzilla show a power that is “an intruder of force and power, goodness and evil, all that we cannot control and feel is more powerful [than we are]” (Bergesen 1992, 204). Godzilla’s power is associated with science, so both Godzilla and the institution of science can be seen as that same type of “goodness and evil” that “we cannot control.”

If science and Godzilla are entities that cannot be controlled, then how might they be engaged in conversation with other beings? In some of the later films, Godzilla literally engages in spoken conversation with other monsters and humans as described in Chapter Three. Godzilla is capable of speaking back, and as he speaks we learn that he feels victimized by humans in *Ghidorah, the Three-Headed Monster* (1964). This is one of the most surprising moments in the film, as well as the series as a whole. It would never be expected that Godzilla, the reincarnation of Asian dragon mythology, that terrifying force of radioactivity, would feel victimized. In the same way, it is possible for science to speak back to society and vice versa, and it is equally possible to be just as surprised. The realities revealed by conversations between institutions will be just as illuminating as those shown on that cliff in Japan between the *kaiju*, but first the conversation must be permitted to occur. It is this permission and encouragement to converse that is the heart of the contract between science and society, and the basis for a new relationship between institutions.

### **Conclusion: Monster Island and the Structure of Societies**

Gengo: And if you're displaying monsters from around the world...What about the monsters on Monster Island?

Director: Of course we have considered them. But those monsters are hardly peaceful. Even Godzilla.

- *Godzilla vs. Gigan* (1972)

In some of the Godzilla movies, there is a setting far away from Tokyo and the rest of Japan: a seemingly deserted patch of land in the Pacific known only as Monster Island.

“No fewer than 11 monsters (including Godzilla, Mothra, Rodan, and Ghidrah) are interred on Monster Island and controlled by a sonic perimeter which keeps the monsters at peace with each other. Presented as a holiday resort while operating as a high-tech penal colony, the songs of praise for Japan's futuristic control of unstable energy drown out issues of colonisation (where exactly in the Pacific is this 'uninhabited island'?) and individualism (who has the right to reprogramme monsters into not being themselves?)...[it miniaturises] life in diorama form to be viewed from a safe distance; [inducing] dread through [its] aim to create a utopia” (Brophy 2000, 42).

The monsters are placed there to keep them from destroying Tokyo, but also to keep them from destroying one another. The image of the “holiday resort” contrasts strongly with that of the “penal colony”; if the true purpose of Monster Island is to “drown out” the issues, it truly does allow life to be viewed “in diorama form...from a

safe distance.” By fencing in the monsters, they are prevented from “being themselves,” from behaving destructively as they normally would. The monsters are restrained in order to “create a utopia” for the humans. The result, of course, is far from a utopia, because the monsters always find a way out of their forced habitat of Monster Island and on their way to Japan. The significance of Monster Island is then threefold: the monsters are kept from one another, they are kept away from Japan; in doing so, they are kept from being themselves.

It is assumed that the monsters are incapable of living in close quarters without boundaries, making it necessary for them to be separated. In *Ghidorah, the Three-Headed Monster* (1964), Mothra, Rodan, and Godzilla team up to fight Ghidorah. It took some convincing, but these three were able to stop fighting one another, at least for the duration of the film. Granted, most of the interactions between monsters are negative, but it is possible for them to cooperate against a common foe. The assumption that the monsters are inherently dangerous to Japan is also questionable. It has been shown in Chapter 3 that films like *Mothra* (1961), *Invasion of Astro-Monster* (1965), *Godzilla vs. the Sea Monster* (1966), and *Godzilla vs. Hedorah* (1971), among others, portray the monsters as protagonists. While they may not act as protagonists in all situations, the possibility exists.

The most disconcerting idea that Brody unearths is that of denying the monsters the right to be themselves. He is, like the inhabitants of Japan, assuming that the monsters must be destructive in order to be as they were meant to be. Are the images of Godzilla as a protagonist then falsified? These images of Godzilla reflect the contexts in which they

were created, not necessarily the true nature of Godzilla as a monster. If the monsters' true function is villainous, they are in tension with those positive images from Chapter Three. If their true function is protagonistic, they are in tension with the initial negative portrayals. By calling to the forefront the assumption of the monsters' individualities, Brody engages in the very same thought process as those he criticizes. The state of the monsters' true purpose, their true function, is ambiguous.

Godzilla has been repeatedly compared over the course of this thesis to the institution of science. Godzilla on Monster Island is forced to remain out of conflict with the other monsters. If Godzilla represents science, then Monster Island is an image of the boundaries in place between superstructures in society. In the same way that Godzilla is kept on an island, away from the other monsters and away from Japan, so, too, can science be kept behind a boundary away from other institutions and away from the general population. In the same way that Godzilla stares down Mothra from across the hills of Monster Island, so, too, do science and religion stare down one another across the boundaries of society, rarely to meet in harmony but, rather, restricted to meeting in conflict. In the same way that Godzilla cannot be isolated from fellow monsters Rodan, Mothra, and Ghidorah, so, too, does science fail to separate itself completely from politics, religion, culture, and other structural neighbors. In the same way that Monster Island represents a false and distant utopia for the people of Japan, so, too, can society itself represent a deceptively ordered and well-assembled machine.

The impact of this image is stark, leaving a bleak impression in the face of our own Monster Island. What one must remember is that it Godzilla did not appear out of

nowhere. It was we, as in humanity, it was our forefathers who set down the laws of this nation that make it what it is today. Once we forget that people had their own hand in making these structures, we turn them into untouchable entities. It is this way that we turn them into monsters. Whether we leave these boundaries in place or dissolve them for an integrated community of institutions is up to us, but the decision must be made.

As for what the relationship between science and society ought to look like, I feel that the new contract is a step in the right direction. As citizens of the world, scientists should not be isolated from society. I agree with Feyerabend's pluralistic philosophy, and think that conversation between disciplines is the right avenue to explore. Science definitely resembles Godzilla as a monster, in all his complexity, and it is was illuminating to embark on this study comparing the two. Both are powerful entities with their own mythology and history, and both are more nuanced than they appear.

When such power is attributed to institutions like science, they really do take on a life of their own, and it is difficult to instigate such changes. However, the changing contract between science and society shows that change is possible. The journey between the images of science as positive and negative shows that change has occurred in the past, and that it can occur again. Some boundaries that were once in place are now being dissolved, and they could dissociate further in the future. Institutions play much different roles and are in different places than they were years ago, and they surely will be even more different as time passes. After all, Godzilla always escapes from Monster Island.

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