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The Scientist: Hero or Villain?

Charlotte Oestrich



As prevalent as the scientist is in modern cinema and culture, depictions of the character have not changed much since its earliest introduction. Sometimes good, but usually portrayed as “mad,” scientists work to uncover the unknown and are not afraid to accept the consequences of their theories. As Christopher Frayling writes, the scientist is usually depicted as a “very intelligent [person]—a genius or almost a genius... [They know their] subject... [They are] prepared to work for years without getting results and face the possibility of failure with-

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out discouragement; [They] will try again” (12). When we are asked to describe a scientist, our minds often move to stereotypical depictions gathered from films; rarely do we consider how the nature of scientists’ experiments and knowledge shapes their core identity. Many times, the public cannot explain the discoveries of scientists, but it appreciates the work nonetheless. Our understanding of scientists is socially constructed, often depending on the knowledge they advance and the value or threat we see in it. While the gap in knowledge between the public and the scientific community can create anxieties regarding the impact of technology, it can also lead scientists to be viewed as potential heroes or villains depending on the nature of their knowledge.

As the character of the scientist remains constant across time, anxieties about their seemingly God-like understanding of the universe raise questions of whether they will use this knowledge for good or evil, and what will happen if their findings fall into the wrong hands. In *Mad, Bad, and Dangerous? The Scientist and the Cinema*, Christopher Frayling explores the presence of the scientist as the “unworldly saint” or “dotty sinner,” attributing this divergence to a gap in knowledge between the public and the scientific community:

The gap between specialized knowledge and public understanding lies at the root of most fictional cinematic representations of the scientist—specialized knowledge in the restricted sense of technical data, and in the broader sense of specialized ways of thinking and specialized scientific communities that legitimate the thinking as well: bod-

ies of knowledge and styles of knowledge. The gap has usually been filled by stereotypical representations of one kind or another. (11)

This gap between different types of knowledge results in problematic representations of the scientist as the public attempts to make sense of what it does not understand.

Put another way, the public makes up for the knowledge it lacks with varying depictions—often stereotypes—of scientists that characterize their intentions in various ways. Whether a contemplative natural philosopher, a potential hero, or a villain with an “obsessive desire to tamper with things that are best left alone,” a scientist, or at least our notion of one, can be explained by understanding different conceptions of knowledge: explanatory and exploratory (Frayling 36). The anxieties associated with exploring scientific discoveries rather than explaining scientific knowledge have become prominent through the portrayal of the scientist in media. The characterization of the scientist as a trustworthy hero or a threatening villain can be attributed to the public misconception of science and the subsequent marking of explanatory knowledge. While explanatory knowledge is perceived as positive because it cannot be read as potentially harmful, exploratory knowledge is vilified because it can lead to unknown consequences.

Scientists are held on a high moral ground because of their above-average intelligence. They possess the ability to understand concepts beyond the capacities of the average individual, and they are therefore assumed to hold an ethical responsibility to ensure that knowledge is not used for acts of evil. In *Screams of Reason*, David Skal explains the

infamous stereotypical characteristics of the scientist as a means of commenting on universal “themes and social issues,” which speak to the social and cultural concerns of intelligence (3). He contends that the scientist has “served as a lightning rod for otherwise unbearable anxieties about the meaning of scientific thinking and the uses and consequences of modern technology” (18).

Most anxieties regarding scientific thinking derive from a form of discovery knowledge—knowledge that arises out of sheer human curiosity, usually revolving around themes of changing humanity, breaking the boundaries of the human body, going against the laws of nature, and even potentially destroying mankind. The difference between a scientist’s explaining the laws of the universe and exploring the capabilities of the universe tends to lead the public to view that scientist in a positive or negative light, differing between potential hero or potential villain. Public acceptance of and perspective on scientists depend greatly on understanding what they are trying to accomplish with their experiments, which is a difficult notion to grasp considering the gap between public knowledge and that of the scientific community.

The differences between explanatory and exploratory knowledge are most prevalent when we examine the differing attitudes toward the work of Albert Einstein and J. Robert Oppenheimer on atoms. The public has accepted Einstein’s intelligence largely because of the complicated and seemingly harmless nature of his work. The equation $E=mc^2$ became a trademark of Einstein’s work with atoms, though not many can explain what it means or how it can be utilized

in daily life. It is difficult for many people to understand how these theories work, but that is part of the reason why the public viewed the knowledge Einstein discovered positively. When explanatory knowledge is released to the public, the public uses what it doesn’t understand to form a positive attitude toward the scientist, assuming the work must be good if so few can understand it and even fewer can make use of it.

However, questions regarding how the scientific community expands its knowledge have raised concerns in regard to who should have access to that specialized knowledge and for what reasons it can be utilized. During the Cold War era, an untold number of people feared the atom bomb and the risk of nuclear war. During this time, many fictional portrayals of the scientist played up the fear of nuclear war. For example, Dr. Strangelove and Dr. No represented scientists as villains who had lost touch with humanity. More important, such anxieties are reflected in discussions of J. Robert Oppenheimer, head of the Manhattan Project. Oppenheimer, credited with creating the atomic bomb, will forever hold a moral and technological burden due to his achieving scientific fame by “selling his soul to the devil” in return for the ability to play God and use the power of the stars to produce nuclear fission (Knust 129). During the early part of the twentieth century, nuclear energy was a field not many scientists were comfortable exploring because of the unprecedented harm that could be done if something went wrong. It was also misunderstood by the public because of its complicated and secret nature, and little was done to bridge the gap between the scientific

community and the public.

Since nuclear knowledge has often been villainized since its creation, Oppenheimer's "character" is that of a villain, primarily because he fulfills the role of the helpless scientist who has "lost control either over [a] discovery...or, as frequently happens in war times, over the direction of its implementation" (Holderman 219). Rather than exploring the relations between atoms as Einstein did, Oppenheimer explored the tangible application of this knowledge and, as a result, cost over two hundred thousand people their lives and lost the public's confidence (Frayling 13). Although Oppenheimer would not have used his discoveries to attack others, as the fictional Dr. Strangelove or Dr. No would, he is nonetheless a villain due to his desire to toy with dangerous knowledge and his lack of help during its devastating utilization. Even though his work stemmed from Einstein's, the innate differences in the tangible application of the knowledge fed into the cultural and societal fear of intellectual discoveries being used for purposes other than for the undeniable good of society. Despite the fact that the public could not understand the knowledge of Oppenheimer or Einstein, they could visually see the physical effects of using Oppenheimer's knowledge and punished his personal character. Einstein, in contrast, remained sheltered by his hero status, and little attention was drawn to the similarities of the two.

The possibility of everlasting fame is enough to lead many scientists to seek a God-like status, so they continue to pursue complicated, questionable work that is not always welcomed. Often, the public falls victim to the impression that the scientist must

have had devious intentions related to the pursuit of scientific discovery. Such anxieties have been reflected and amplified across media because scientists are often portrayed as having a nefarious curiosity and a taste for disaster (Frayling 12). The quintessential mad scientist, Victor Frankenstein, has been misunderstood and vilified because of his exploration into breaking the barriers of the human body and blurring the lines between life and death, both topics that foster unease.

In her 1818 novel, Mary Shelley introduces Dr. Victor Frankenstein as a prominent and respectable young scientist who develops an obsession with finding the knowledge to animate matter. Dr. Frankenstein embodies the scientist as an idealist "engaged in conflict with a technology-based system that fails to provide for individual human values" (Haynes 219). In *Gothic versus Romantic: A Re-evaluation of the Gothic Novel*, Robert Hume re-examines the classic novel and ponders the relationship between knowledge, discovery, and the effect of such actions:

As the novel advances[,] we recognize that [Frankenstein] has a half-mad understanding that the monster is enacting in objective form the implications of his own inhumanity.... Senseless butchery by an inhumane monster would be frightening, but no more; here it is not senseless, but all too reasonable. (286)

In saying this, Hume relates the havoc caused by Frankenstein's monster, objectifying his own inadequacies along with the underlying fears and anxieties of society. The society in the novel condemns Dr. Frankenstein because it does not understand how,

or why, such a being would be created. Dr. Frankenstein has no reason to explore such knowledge other than to break through the ideal bonds and “pour a torrent of light into our dark world,” seeking fame and recognition in place of humility and purpose (286). The greatest anxieties of his society arose from Dr. Frankenstein’s obsessively trying to discover reanimation, toying with knowledge “not properly belonging to man” for the sake of a scientific breakthrough (286). As with Oppenheimer’s work, the effects of Frankenstein’s were visible and explored the limitations of humankind rather than explaining human functionality.

At first, Dr. Frankenstein can be seen as a potential hero—he is warm, dedicated, and working for reasons other than glory—but he soon becomes a “brain,” spending most of his time alone in his laboratory seeking knowledge not understood or accepted by many others. He begins to seek knowledge not for “theory and understanding” but for “heightened sensory experience,” exploring life and death rather than working to explain it (Frayling 37). Although knowledge explaining the human body is encouraged and primarily viewed in a positive light, its limitations and boundaries are rarely questioned. Because of all the faults in his experiment, the knowledge that allowed Dr. Frankenstein to create artificial life does not have an explicitly positive impact on public knowledge, nor does it bridge the gap between the public and the scientific community, unlike the work of Einstein.

Knowledge is extremely subjective; the way in which scientists advance knowledge is the basis for how they will be viewed by the public. Those who use knowledge to explain

the mechanisms of the universe—explanations without negative implications for mankind, often too specialized for the public to understand—are viewed as heroes because of the potential good offered by their discoveries. On the contrary, those who pursue knowledge without an explicit good purpose are viewed as villains. While Einstein was awarded a Nobel Prize in Physics for his contribution to the understanding of energy, Oppenheimer has been criticized because of his utilization and application of energy-related knowledge. Scientists may always carry the stigma of being detached from society and hell-bent on finding solutions regardless of ethics, but they shape their own character based on whether they choose to explain or explore and the value the public places on what they do.

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