

A Virtue Ethics Analysis of “Dieselgate”

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Sophia DeCleene
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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

ADVISOR

Benjamin J. Laugelli, Assistant Professor, Department of Engineering and Society

Introduction

In 2014 it was found via on-road testing that several of Volkswagen's diesel vehicles emitted up to 40 times the amount of nitrogen oxide allowed by the Environmental Protection Agency (EPA), which contradicted the emissions levels found through lab testing (EPA, n.d.). This led to the discovery that Volkswagen included software on some of their vehicles which caused them to operate differently when being driven on the road vs. being tested. Many people have examined this incident through the lens of consequentialism, focusing on how the aftermath of this discovery impacted Volkswagen's image, credibility, and sales such as in Atwal et al.'s article (Zhang et al., 2021) and Ewing's article, "Inside VW's campaign of trickery" (Ewing, 2017b). This approach fails to look at the actions taken by individual employees during the development and cover-up of the use of the software, which means it does not hold the right people accountable for their actions. Examining the consequences rather than the actions taken prevents people from learning who was involved and what their motivations were. I will use virtue ethics, which focuses on the character of an actor in a specific situation, to demonstrate that the Volkswagen employees involved in this scandal behaved immorally. Specifically, I will show how the actors failed to practice three engineering virtues: openness to correction, willingness to compromise, and professionalism. In order to illustrate this, I will use evidence from news articles as well as scholarly articles.

Background

The software used by Volkswagen, which caused their diesel cars to meet the EPA's emissions standards in testing mode but not otherwise, was termed a "defeat device". These defeat devices were used in some of Volkswagen's vehicles for almost a decade before they were caught. The unearthing of this work-around led to a significant dip in Volkswagen's market

value, harmed the image of the company, (Envirotech, 2022) and resulted in several employees facing jail time. Media deemed this incident “Dieselgate.”

Literature Review

There exists a fair amount of literature on the subject of Dieselgate, however, the majority of it reports the facts of the story, focuses on the aftermath of the scandal, or analyzes the behavior of the company of Volkswagen as a whole. These pieces of literature place the blame on the company, which employs almost 700,000 people (Volkswagen Group, 2022), rather than the small group of individual actors that were involved. As a result, they fail to hold the proper people accountable for their actions.

In their paper, “Corporate social irresponsibility and stakeholder ecosystems: The case of Volkswagen Dieselgate scandal,” Zhang et al. analyze the general rise and fall of the popularity of diesel cars as caused by the Dieselgate scandal. They focus on the concept of corporate social responsibility and how the pressure for automotive companies to decrease emissions led to its counterpart of corporate social irresponsibility, resulting in unethical actions (Zhang et al., 2021). In Luc Bovens’ article “The Ethics of Dieselgate” he frames his analysis on the basis of the trolley problem. He stresses that truly following the EPA’s guidelines would protect people in the present by reducing harmful nitrogen oxide emissions, whereas promoting diesel vehicles helps reduce carbon dioxide emissions which will protect people in the future by combating climate change. In this analogy, the trolley is already headed toward harming people in the future, which would impact more people (arguably) than making the switch to diesel cars. Boven argues that the problem here is less of Volkswagen’s responsibility but is rather a systemic issue caused by the pressure to pass emissions tests. Engineers are told to design cars that will pass emissions tests, sometimes causing them to exploit loopholes to accomplish this (Bovens, 2016).

In both these pieces of literature, the authors explore Dieselgate from a very general perspective looking only at the one act of Volkswagen installing the defeat devices with the purpose of bypassing emissions tests and the effects of them doing so. They both stress the pressure to pass emissions tests as a source of the problem, however there is no in-depth analysis of specific actor's actions in the scandal. This paper will focus on specific actions taken by the small group of individuals involved in the development and cover-up of the defeat devices, using the virtue ethics framework to assess the morality of their actions.

Conceptual Framework

The morality of various actors' actions in Dieselgate can be assessed using virtue ethics. Virtue ethics can be largely credited to Aristotle. The main idea of virtue ethics is its approach is to evaluate the character of the moral actor in a given situation. One's character is established by the virtues (qualities of excellence) they practice. An idea stressed in virtue ethics is that "people's characters can be shaped by proper nurture and education, and by following good examples." (van de Poel and Royakkers, 2011). This means that even if someone has displayed poor virtues in the past, they can always be taught how to act appropriately. Willingness to learn how to act morally is vital for the concept of "the good life," which refers to the idea that the goal of human action is to strive for the highest good. In other words, people should have the goal of being a "good" person, which in this case means practicing virtues to the best of their ability. Note: was suggested I added that virtues were like a mean between two extremes but the following sentence was already included. These virtues can be thought of as a middle course between two extremes of evil. For example, in the book Ethics, Technology, and Engineering An Introduction, sections 3.2-3.6, van de Poel and Royakkers explain that courage is a balance between recklessness and cowardice (van de Poel and Royakkers, 2011). Another example of a

virtue is practical wisdom, which is to try and act in ways that will result in a good and successful life. If one is ever unsure of what course of action to take, virtue ethics defines a moral act as one a virtuous person would perform. People must use reasoning to figure out what a virtuous character would do. In fact, Aristotle argues that in order to have a happy life people must use reasoning to its full extent, especially since the ability to reason is unique to humans.

The use of virtue ethics can be found in Pritchard's list of virtues that engineers should demonstrate in their work (Pritchard, 2001). Some of the virtues found in this list include competence, a willingness to compromise, willingness to be corrected, and perseverance. Although this list provides a good baseline for practicing virtues that will result in consistently moral behavior, Pritchard does explain that this list is not comprehensive, and even if an engineer exhibits every virtue on the list they could still act immorally in certain ways. On the other hand, failing to practice even one of the virtues on the list opens someone up to immoral behavior (Pritchard, 2001). In context of Dieselgate, I will explore specific Volkswagen employees' actions with respect to three of these engineering virtues.

Analysis

Although not much is known about interactions between individual actors involved in Dieselgate and what the development process of the illegal software looked like, there is a decent amount of knowledge about specific actions the actors each took to contribute to Dieselgate. This information can be used to demonstrate the lack of three engineering virtues— openness to correction, willingness to compromise, and professionalism— in the behavior of the individuals involved in the development and cover-up of Dieselgate. Virtue ethics determines that the absence of these virtues in the actions of those involved equates to acting immorally (Pritchard,

2001). The following three sections examine the lack of a certain virtue by actors involved in the Dieselgate scandal.

Openness to correction

The first virtue to be examined is openness to correction; the lack of openness to correction indicates the individual actors involved in Dieselgate acted immorally. This virtue involves the ability to admit one's mistakes and acknowledge oversight (Pritchard, 2001). Rather than admitting their mistakes and acknowledging oversight, the actors in Dieselgate attempted to conceal the use of the illegal software and provided false information to avoid being held accountable for their actions. One example of this can be seen in Heinz-Jakob Neusser's actions. Neusser, at the time of Dieselgate, was the executive showman for Volkswagen. In 2011, after the illegal software had already been used in millions of cars, he took over responsibility for developing new engines for Volkswagen cars (Ewing, January 2017). He learned of the defeat devices at this time. In such a situation, a morally responsible engineer practicing the virtue of openness to correction would have reasoned they should speak up against the use of these devices and acknowledged the oversight of Volkswagen executives, but instead of raising a red flag Neusser let the project continue. Some engineers on the project complained the software caused engine malfunctions and in response Neusser ordered changes to the engines that reduced pollution controls even further and instructed employees to destroy evidence. This demonstrates a clear lack of openness to correction as rather than admitting to the mistakes previously made by Volkswagen employees, he made the software more deceitful and attempted to cover it up further.

Failure to accept correction is also evident in the actions of Jürgen Peter, who worked for quality control in Volkswagen at the time. It was discovered that he played a significant role in

the development of excuses Volkswagen used to explain why their vehicles emitted significantly more nitrogen oxide on the road than in the vehicle lab tests (Ewing, January 2017). This shows that Peter and Volkswagen not only were unwilling to admit their wrongdoings prior to being discovered, but continued to deny the claims even after multiple tests had been conducted and proved that the emissions in testing were drastically lower than on the road due to the defeat devices. This demonstrates a major lack of openness to correction because even with undeniable proof, they refused to admit to their mistakes.

A final example of unwillingness to accept correction can be seen in the response of Volkswagen's CEO at the time, Martin Winterkorn. In May of 2014, Volkswagen's head of product safety wrote a short report clearly communicating that there was a high risk Volkswagen had been caught using illegal software (Ewing, 2019). This report was sent to Winterkorn, so even if he was not aware of the cheat devices before, he almost certainly was now. Volkswagen's official statement was that Winterkorn did not learn about the problem until September 2015, however this is very unlikely to be the truth as contradicting this statement, there is proof that engineers briefed Winterkorn on the problem on July 27, 2015 (Ewing, 2019). Important to note from this is that both Winterkorn and Volkswagen lied about Winterkorn's knowledge of the case even after clear evidence was brought forward showing he had known about Dieselgate. Despite this knowledge he made no effort to correct the mistakes made involving these defeat devices, further demonstrating another employee's unwillingness to admit to mistakes and rectify them. Disobeying this virtue equates to Winterkorn acting immorally in the context of this scandal.

Not only did Volkswagen and its employees fail to practice the virtue of openness to correction, but they actively avoided it. Their failure to flag the illegal software as a problem and admit they made a mistake using it along with the denial of the claims made against them

demonstrates their lack of openness to correction. The avoidance of this virtue was evident through multiple actions the company took, especially as seen through the actions of the individual employees mentioned above. Acting in opposition to the virtue “openness to correction,” it is clear that by the way of virtue ethics, the individuals in Volkswagen acted immorally in the situation of Dieselgate.

Willingness to compromise

Another virtue the individuals involved in Dieselgate failed to practice, demonstrating that their actions were immoral, is the willingness to compromise. In the late 2000s, the introduction of tougher regulations for how much nitrogen oxide cars could emit required the design of new technology as current engines were incapable of meeting the requirements. Volkswagen executives knew that the first car maker to develop working technology would have a large advantage in the market and made it the company’s goal to become the world’s largest carmaker by doing so (Blazek, 2018). This created immense pressure on those involved in the design of the technology, encouraging them to get the job done fast, potentially sacrificing quality in the process. It was deemed that the design team was not working quickly enough. Thus an unknown individual in the company ordered that the version of the engine in progress, which did not meet emissions standards on its own, be programmed with additional software by Bosch, an automotive-parts and power tool manufacturer. Bosch warned employees of Volkswagen that this software was intended to be used in engine development but never to be installed into production vehicles (Driving, 2018). Obviously, this warning was ignored. The significance of this is that this pressure to be the first to design cars to meet the new emission standards created an environment of competition in the company. It was expected that the demanding goals requested of employees would be met unconditionally. Any questioning of the goal’s attainability

was seen as incompetence or disloyalty (Blazek, 2019). It was this mindset that led to the use of illegal software to cheat emissions tests.

Volkswagen employees were struggling to create a working design because their ideas resulted in features of the car they thought were undesirable in the public eye. It was determined that most methods of obtaining lower emissions levels reduced the car's fuel economy, harmed performance, took up too much space, increased cost, and/or required frequent servicing (Parloff, 2018). Volkswagen employees failed to honor the virtue of willingness to compromise in this situation. Instead of working towards a solution that met their requirements in the middle, they chose to falsify information and use deceitful software to pretend they met emission standards while keeping the cars "desirable." In this situation, a moral actor would have searched for a solution that involved compromise on both ends so that they could produce the "best" cars possible; cars that worked towards lowering nitrogen oxide emissions but also maintained their marketability. Volkswagen employees did not make compromises even to a small extent. I argue this because rather than working to produce a car with lower emissions, they turned to tricks and lies to deceive people (including emissions testers and the general public) into thinking that their design met standards and was "cleaner" than previous models of cars produced by Volkswagen. Those in the company who were involved in ordering the development of the illegal software and those involved in the design of the software itself prioritized their own monetary gains and apparent success over following regulations and ethical considerations. If they had made compromises in their designs, Volkswagen would not have been outed for the scandal of Dieselgate (as it would not exist), which harmed their reputation and monetary value because their actions were deemed immoral by the public.

Professionalism

The last virtue to be examined with respect to Dieseldgate is professionalism; the lack of professionalism exhibited by Volkswagen employees shows they were not practicing good virtues and thus were acting immorally. Professionalism, or acting professionally, involves traits such as setting high standards, being honest, and holding oneself accountable (US Department of Labor, n.d.). Volkswagen employees acted unprofessionally by intentionally deceiving the regulators and the public when it came to their diesel cars. The following will look at questionable actions performed by individuals involved in the Dieseldgate scandal.

Richard Dorenkamo (Volkswagen emissions specialist) and James Robert Liang (Volkswagen software engineer) both played a key role in the conspiracy to develop and use defeat device software. Liang admitted to being part of the group that developed the defeat device. Beginning in 2008, one of his responsibilities for the company was to work with clean-air officials to approve cars for sale (Ewing, January 2017). Obviously, being one of the people who worked on the illegal software, Liang was well aware the cars did not meet emissions standards so in his work with clean-air officials he lied repeatedly. His job gave him ample opportunity to come forward about the truth behind Volkswagen's diesel cars, but he never took advantage of this. Although Dorenkamo did not work with emissions regulators, he still could have informed someone of the scandal at any time. As the new diesel engine first begun being developed in 2006, and the EPA did not issue a notice of violation of the clean air act to Volkswagen until 2015, Liang, Dorenkamo, and the other employees aware of the use of defeat devices had years to come forward and admit their wrongdoing, yet no one did. This dishonesty clearly shows a lack of professionalism by the employees as per the definition of professionalism. In addition, failure to speak up about what was going on with the diesel cars is

failure to hold oneself and others accountable for their actions, which demonstrates another clear lack of professionalism supporting the case that their actions were indeed immoral.

Another key person in the development of the illegal software was Hanno Jelden, who was known to be in charge of its development. Jelden claims to have informed his superiors about the software and that they told him to keep quiet (Waldersee, 2021). Although if true, this created a great deal of pressure on Jelden and put him in a difficult position, to keep quiet is dishonest in itself and if Jelden were practicing professionalism he would have continued to bring the issue to the attention of those who needed to be aware of it. While the people that would have put a stop to Dieselgate sooner were oblivious to what was going on, there were many Volkswagen employees who were aware of the problem and failed to hold themselves accountable. In fact, when summarizing road tests that confirmed the diesel cars did not meet emissions standards, one employee in Audi's (a subset of Volkswagen) diesel motor development department wrote that, "We won't make it without a few dirty tricks." (Ewing, May 2017). This statement and the use of the words "dirty tricks" clearly shows that employees knew the use of defeat devices was immoral, yet they did nothing to stop it. Evident here is a lack of high standards for themselves as "dirty tricks" indicate rather low standards—standards that allow for dishonesty and deceit. A similar statement was made at an Audi presentation in which the suggestion of the defeat device was made. This presentation explained that using the defeat device was a form of cycle-beating, analogous to cheating on an exam (Ewing, May 2017). Important to note here is that a company presentation admitted that the use of these devices was "cheating" and dishonest. As such, it is obvious the employees failed to act professionally as they knowingly deceived everyone into thinking their vehicles were much cleaner environmentally than they actually were.

In the above section, it has been argued that in the case of Dieselgate, the actions of individual actors involved were unprofessional, meaning by virtue ethics their actions were immoral and those who are deemed having acted immorally must be held accountable. One could make the argument that Volkswagen employees were put in a difficult position when it came to Dieselgate and therefore do not deserve the responsibility. It could be argued that following orders from higher-ups is acting professionally as the employees were simply doing their job as instructed. Many actors involved in the scandal place blame on the competitive company culture as the cause of their actions. In certain cases, individuals supposedly did speak up about the situation (internally within the company), and were told to keep quiet. This point of view removes responsibility from the individuals involved and shifts it to the company. While there is a basis for this argument, only six Volkswagen executives were charged for their roles in Dieselgate. It was found that at least 40 employees destroyed evidence to cover up the use of defeat devices. Volkswagen is over 500,000 people strong (Rawlinson, 2017). This means maybe about 0.02% of employees were aware of the situation (using an estimate of 100 employees involved in the coverup). It is unfair to place blame on the entire company rather than the individuals because this tarnishes the reputation of not only the company as a whole, but every employee as well. The ~99.98% of employees not involved in the scandal do not deserve to be viewed as lesser than before or to take moral responsibility for the situation. Placing responsibility with the company avoids targeting the immoral actors while singling them out is necessary in order to make an attempt to teach them improved morals/virtues for the future, which is a key concept in virtue ethics.

In the above paragraphs, specific actions performed by individuals involved in Dieselgate were assessed against the use of three professional engineering virtues: openness to correction,

willingness to compromise, and professionalism. The general action taken by employees was they deliberately lied about the environmental cleanliness of the diesel cars as well as the use of the defeat devices. These actions, along with the denial of accusations made against them, prove Volkswagen employees acted immorally by failing to practice professionalism, compromise, and acknowledge their mistakes.

Conclusion

In the incident of Dieselgate it is clear that individual actors involved in the scandal lacked many professional engineering virtues one should practice in their work. Among these are openness to correction, willingness to compromise, and professionalism. The lack of these virtues are discernible through specific actors' actions. The general actions taken by Volkswagen employees were allowing the use of illegal software, turning a blind eye, purposely deceiving people with respect to the true nature of the cars, and consistent denial of claims made against them. The absence of the mentioned virtues, in the view of virtue ethics, equates to the actors having behaved immorally. Through this case it can be observed that although the majority of Volkswagen employees knew nothing of the use of defeat devices in their vehicles, there were enough people involved that surely someone should have done something to stop it, however no one did.

The failure to demonstrate engineering virtues hurt the image of individual actors as well as the company as a whole. It also shows there were issues within the corporate culture of Volkswagen, which is what led to the use of defeat devices and caused employees to go along with this. This stresses the importance of encouraging virtuous behavior within a company as in this incident the lack of this motivation caused damage to multiple parties. Individual employees need to act virtuously despite the consequences they may face from the company. This action

would help prevent disasters such as Dieselgate from happening, and result in a change in corporate culture where virtues are valued over meeting desired outcomes at whatever the cost.

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