

ENCS4210-Computer Engineering Ethics

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Volkswagen Emissions Cheating

ABSTRACT

The discovery in 2015 that car maker Volkswagen (VW) had installed “defeat devices” into its diesel engines to lower emissions during testing exposed a corporate scandal and resulted in a 40% drop in the company's share price in 2 weeks. Although industry analysts questioned whether VW would survive the fallout, its sales quickly rebounded, and in 2017 the firm was the world's largest auto manufacturer. Although this unexpected surge led some to say that the scandal had blown over, there are indicators that VW has not yet fully recovered from the affair, and several issues stemming from it remain to be resolved. An examination of several reports issued as the crisis unfolded highlights the impact on VW and offers lessons for the firm's leaders and public policy makers.

the test to switch between two distinct operating modes [1].

In the test mode, the cars are fully compliant with all federal emissions levels. But when driving normally, the computer switches to a **separate mode** significantly changing the fuel pressure, injection timing, exhaust-gas recirculation, and, in models with AdBlue, the amount of urea fluid sprayed into the exhaust. While this mode likely delivers higher mileage and power, it also permits heavier nitrogen-oxide emissions (NOx)—a smog-forming pollutant linked to lung cancer—up to 40 times higher than the federal limit. That doesn't mean every TDI is pumping 40 times as much NOx as it should. Some cars may emit just a few times over the limit, depending on driving style and load [1].

1- What happened?

Volkswagen installed emissions software on more than a half-million diesel cars in the U.S.—and roughly 10.5 million more worldwide—that allows them to sense the unique parameters of an emissions drive cycle set by the Environmental Protection Agency. According to the EPA and the California Air Resources Board, which were **tipped off by researchers in 2014**, these so-called “defeat devices” detect steering, throttle, and other inputs used in

2- Who is responsible?

The Volkswagen group failed in its duty of care by neglecting the sub-categories of care ethics when it cheated on its emissions testing in the United States. By cheating, Volkswagen deliberately failed in upholding its duty to its customers, shareholders, and the environment. The company violated its principles and broke the trust of the public. The violation of this duty of care can be seen in the company's actions between 2005 and 2014 where it installed the defeat device software in its

vehicles to avoid setbacks in the engineering department so it could stay on course for its sales goals in the United States. Overall, Volkswagen acted unethically by violating environmental standards, acting out of accordance with its stakeholders, and openly lying to its customers. The following sections will highlight exactly how Volkswagen acted unethically by examining the four formal sub-categories of care ethics including attentiveness, competence, responsibility and responsiveness [2].

When looking through the lens of care ethics, attentiveness is simply paying attention to those around us and making sure that their needs are met. This sub category requires acknowledging what must be done for the benefit of those affected by a relationship. Failing to do this violates care ethics in the first step. In the case of Volkswagen, the company failed the principles of Attentiveness and Competence by cheating on the emissions standards which hurts the environment and also fails to adhere to the needs of its customers [2].

Being one of the largest automobile manufacturers, Volkswagen has many of these relationships. Automobiles are so important in today's society and how they are made can actually affect the people that drive them in many ways including financially, personally, professionally, etc. When automobile buyers make decisions to buy vehicles, they often make these decisions with certain factors in mind when can include how much or how little the car pollutes the environment. According to Mathiesen Volkswagen added an additional one million tons of extra pollution that violated many environmental standards by allowing its cars to switch into a normal mode when

it is outside of a testing environment. This immediately violates the principle of attentiveness as the company had to consciously make the decision to install these devices before they were even released to the public. Of course, this cannot be used to say that every person that had any role in the development of the vehicles is responsible but rather that there were a couple people in positions of power that made these decisions [3].

The response of the company post scandal also violates the duty of care owed to its customers. When news of the scandal broke, the initial public apology made by Volkswagen admitted no wrongdoing. However, within five days the CEO of Volkswagen, Martin Winterkorn, stepped down. Only further showing the lack of competence and attentiveness to this issue as a whole. As explained by Jung and Sharon (2019), the response of the company was different from country to country. Some places the company completely refused to make any settlements or buybacks while in the United States fines and criminal litigation where very immense with fines and settlements reach in the amount of approximately \$23 billion. Responsibility is defined as a willingness to respond and take care of need. This is a very important aspect when considering care ethics and the willingness to respond to those in need. This subcategory of care ethics is also important in analyzing how Volkswagen handled their response [3].

The responsibility of the group to act in the best interests of its stakeholders and the environment was not taken into consideration when the decision was made to cheat on the emissions test. In fact, this was a blatant disregard for people in densely populated areas or countries where smog and pollution are

widespread. According to Campbell, Rauwald older diesel engines can pollute far more than their gasoline counterparts, only adding to the gravity of cheating on the emissions testing. In a time where environmental standards and climate change is such a widespread topic, Volkswagen failed its responsibility to protect consumers and the environment [3].

3- Using ethical frameworks

Based on Kantianism, Kantianism further illustrates that universal participation in certain actions is self-defeating and contradictory . If Volkswagen's unethical behaviour is universalized, all other automakers would follow (Caria & Hermans). Hence, Volkswagen's actions are not permissible . Controversially, Teck et al. suggest that Volkswagen has transitioned to Kantianism post the scandal. Volkswagen has apologized, shown remorse and adopted a solid framework of rules and duty [4].

Volkswagen's promise to regain the trust of all stakeholders shows a goodwill approach and may signify commitment to more categorically imperative standards (Orts & Smith). However, there is no evidence to support these claims and it is questionable whether Volkswagen can create unbiased, universal moral codes based on Kantian ethics [4].

Critics contend that Volkswagen is only trying to re-establish its corporate image through positive publicity. Additionally, Kantianism is criticized for being inadequate as it fails to elaborate on human emotions, virtue and moral characteristics. Kant does not justify the ethical obligations of managers toward customers and

employees. Furthermore, Kantianism can influence managers to adopt rigid and authoritarian approaches [4].

Based on Rule Utilitarianism, whether Volkswagen's actions are good or bad depend on its consequences . Volkswagen's sole goal was to maximize shareholder value with no regard for ethical .This contradicts Utilitarianism, as Volkswagen did not consider producing the greatest good for the greatest number of people [5] .

All the stakeholders have been adversely affected in different ways ranging from lost jobs, pay cuts, stock devaluation, sales drop, damaged corporate reputation and environmental pollution. Hence, Volkswagen's actions directly oppose Utilitarian views. The one good thing that may have emerged from this scandal is the awareness it created about corporate fraud .Utilitarians concur that efficiency is not about increasing profit, but about maximizing human good [5] .

Businesses should thus produce the maximum positive value or minimum disvalue for all stakeholders. Volkswagen's main aim was only to sell more cars. It did not show a Utilitarian judgment about the costs and benefits of its actions (Teck et al., 2018). Volkswagen failed to balance risks and benefits, in the process harming all stakeholders involved. ethical policies were not balanced within Utilitarian theory [5].

Based on Act Utilitarianism, Volkswagen's actions are unacceptable as the greater good was not maximized Although the fraud created short-term utility for Volkswagen, it did not lead to greater overall good. Everyone was

worse off once the cheating was detected [5].

4- What needs to change at large corporations so that cheating does not happen again?

To prevent similar cheating from happening again at large corporations, several key changes are necessary:

Increased Transparency and Accountability: Stronger internal oversight and reporting mechanisms are crucial. This could involve empowering whistleblowers and creating clear channels for reporting wrongdoing without fear of retaliation. Regulatory bodies could also require corporations to disclose emissions data more transparently [6].

Culture Shift: Prioritizing ethical conduct and environmental responsibility needs to be embedded within the corporate culture. This can involve leadership setting a strong tone from the top, along with clear policies and procedures that emphasize ethical behavior. Additionally, employee incentives should be restructured to reward long-term sustainability goals, not just short-term profits [6].

Stronger Regulation and Enforcement: Regulatory bodies around the world need to have the authority and resources to effectively enforce emissions standards and other environmental regulations. This could involve increased fines and penalties for violations, along with stricter enforcement measures [6].

CONCLUSION

The VW emissions scandal is one of the latest controversies to hit the automobile industry in the past few decades. Since its publicity, the controversy has cost the company huge losses in terms of brand equity and recall fees. The company has since accepted liability and

offered to recall all the non-compliant vehicles distributed across the world. The scandal is mainly attributed to the company's questionable corporate culture that did not promote its internal controls. Several officers have so far been charged for negligence. They are set to face legal actions. This paper outlines the lessons learned from the scandal and offers recommendations for the company that may help to restore its brand equity.

References

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