

Student: Kurt Williams
Instructor: Dr. Alice Q. Fox
Course: PHIL 355E (23294)
Date: 12/4/2024

Case Analysis on Professional Ethics: The code I'm still ashamed of

What was morally wrong about writing the code for the pharmaceutical quiz? Should Sourour have done anything differently? What and why? (or why not?)

As Bill Sourour recounts in the 2016 article *The code I'm still ashamed of*, he produced a code for a marketing firm on behalf of a pharmaceutical company that marketed a specific drug to teenage girls in Canada in the year 2000. Sourour was only 21 at the time, and this was his first full-time job as a coder for a company. He wrote the code for a quiz on the marketing firm's website using the firm's requirements that would always recommend the quiz-taker to seek out the prescription drug they were marketing, regardless of the answers provided. The firm was pleased with his efforts, and even treated Sourour and his team to a celebratory dinner. Unfortunately, Sourour writes, the "main side effects of that drug were severe depression and suicidal thoughts." The "good job" he had done was quickly disrupted by somber news that one of the teenage girls taking the drug had committed suicide the night of the dinner. Even worse was Sourour's realization the next day that his younger sister, 19 years old at the time, was also taking this drug. Sourour later notes that for any coder "there's a chance that at some point in your career, someone will ask you to code something a little deceitful – if not outright unethical." Sourour did not have a clear moral or ethical code instilled in him to recognize this hazard before writing the quiz's code. In this Case Analysis I will argue that the ethics of care shows us that the code was morally problematic because the quiz intentionally directed young girls to pursue for this drug despite the known harmful side-effects, and Sourour did not consider how writing this code could have affected those he cares about, such as his sister. Sourour should have done several things differently because he did not consider how writing this code as requested by the firm violated the ethics of care and several principles from the Association of Computing Machinery's (ACM) code of ethics, and he could have worked with the firm to pursue a course of action that helped all parties involved to mutually flourish instead of causing harm to everyone.

From the start of Sourour's coding career, he could have adopted a specific code of ethics such as the IEEE or ACM code combined with the ethics of care to avoid writing such a problematic code. The first principle of the ACM code of ethics states that, "As an ACM member... I will Contribute to society and human well-being." In the spirit of this principle, Sourour could have done the due diligence and researched the pharmaceutical company he was going to code for prior to taking the job. Pharmaceutical companies have their own ethical standards, and they do provide a significant number of prescription drugs to treat a multitude of sicknesses and conditions for all members of society. However, it is also common knowledge that every drug has its fair share of side-effects. Sourour's initial research could have queued him in on some of these negative side effects of the prescription drug that he helped to market to teenage girls. Sourour himself notes that it was clear based on the firm's website that they were heavily marketing this drug to young girls. From the start Sourour should have taken a moment to see if the pharmaceutical company he was working for contributed to society and human well-being with their drugs or was a detriment to this principle.

Student: Kurt Williams
Instructor: Dr. Alice Q. Fox
Course: PHIL 355E (23294)
Date: 12/4/2024

Under ACM code 1.2 “Avoid Harm to Others”, the code specifies that this principle prohibits writing code that causes injury or negative consequences to users, the general public, employees, and employers. The ethics of care is an ethical system that defines an act as good if that act helps the needs of others such as employers, employees, customers, and greater society. In addition, according to the ethics of care, a person such as Sourour should consider how their actions affect the various relationships between himself and those around him, so that these various people can all mutually flourish. Care ethics also does not ask Sourour to think about how his actions affect his relationship with everyone, but also to consider how his actions would affect the interconnected relationships between those around him. Since Sourour also happened to have a younger sister at the time, using the ethics of care he could have asked himself “How does writing this code affect those close to me? What if my sister took this quiz and decided to start taking this drug? How would this drug affect her well-being? Could selling this drug be helpful or harmful to my family?” The ethics of care would have helped Sourour to consider these kinds of questions and forced him to take that extra step of researching what exactly this drug does to help and/or harm people he genuinely cares about. Sourour could have picked up on his project manager’s initial confusion about the quiz being broken. Sourour wrote the code as requested by the customer, which recommended the drug no matter the answer provided with the two exceptions being users with an allergy and those already taking the drug. However, ACM code 1.2 goes another step further and states that even “well-intended actions, including those that accomplish assigned duties, may lead to harm unexpectedly.” In the event this happens, the ACM code stipulates that the “responsible person or persons are obligated to undo or mitigate the negative consequences as much as possible.” Again, Sourour should have asked himself, “why would the firm want to recommend this drug regardless of the answers given? Aren’t there other drugs they could recommend?”, instead of chalking it up to just “marketing”. Sourour recalls convincing his sister to stop taking the drug once he realized the suicidal side-effects may have affected her, which is a natural response to learning a loved one is taking such a harmful drug. However, Sourour could have used this portion of the ACM code at the start of the project. Sourour could have considered how coding this type of quiz that markets a drug regardless of the answer would negatively affect young girls like his sister.

ACM code 1.2 also stipulates that Sourour should have assessed the social consequences of systems such as his quiz to measure the likelihood of causing harm to others. Extending beyond how this would affect Sourour’s own loved ones, the ethics of care would also lead him to ask how writing this kind of code would affect others around him, such as the people at his company, the marketing firm, the pharmaceutical company, the customers who took his quiz, and the rest of society since they are all interdependent and require each other to mutually flourish. The most readily identifiable negative consequence is all the young girls who ultimately took their lives or are still living with depression after taking this drug. His coworkers at the coding company as well as the employees at marketing firm and the pharmaceutical company have almost certainly had to deal with the reputational and financial blowback from marketing such a harmful drug through a manipulative scheme to young girls. Sourour notes that there was still ongoing litigation between the patients as of writing the article in 2016. Finally, there’s the distrust and resentment developed in the rest of society that now must contend with another potential hazard from something as

Student: Kurt Williams
Instructor: Dr. Alice Q. Fox
Course: PHIL 355E (23294)
Date: 12/4/2024

innocuous as an online quiz. Following ACM code 1.2 and the ethics of care could have helped Sourour to point out the flaws and potential negative consequences of marketing this drug in such an unethical way, not just for the patients but also for the businesses involved with marketing and selling it. At the very least this could have helped everyone involved to avoid being mutually harmed.

The ACM code also notes that a computer professional should honor one's contracts with other parties such as employer. Under ACM code 2.6 "Honor contracts, agreements, and assigned responsibilities", the code acknowledges that this may even cause the computer professional to be "obligated, by contract or by law to proceed as directed". However, the code notes that the "computing professional has a responsibility to request a change in any assignment he or she feels cannot be completed as defined." Furthermore, the computing professional should accept an assignment "only after serious consideration and with full disclosure of risks and concerns to the employer of client", and the code does state that ethical principles may take priority over the assignment. Again, using the ethics of care combined with the ACM code of ethics, Sourour could have reconsidered his approach or outright refused to accept this coding assignment.

ACM code 2.1 also offers another solution for Sourour if he felt that he would still have to write the code on behalf of the firm out of a sense of having to honor the contract. This principle states that ACM professionals should "strive to achieve the highest quality, effectiveness and dignity in both the process and products of professional work." Furthermore, the ACM professional's work should strive to be of excellent quality, and they should be aware of how poor work quality would cause more harm to society. Sourour's project manager recognized that the code was "broken", but Sourour just stuck to what he was asked to do and delivered it with no questions asked. Sourour could have asked his project manager whether the firm had any other drugs they were attempting to market, and possibly to different demographic groups. If Sourour goes that extra step of committing to excellence, he could have asked how to improve the quiz and satisfied several goals to help everyone mutually flourish. Care ethics primarily deals with interpersonal relationships between people such as loved ones, friends, coworkers, bosses, and so on, instead of entities like a company. While at first it may seem difficult for Sourour to picture how care ethics would apply to an entity like the marketing firm, Sourour could have remembered that this company is made up of people too who rely on this business for their livelihoods. Instead of thinking of the company as a disembodied organization, he could have thought of them as another group of people who have families, loved ones, daughters, and sisters just like him. Not everyone working for the marketing firm and the pharmaceutical company was probably aware of the potential dangers of this drug to their clients, who probably would have objected to how this code was being written if they were made aware of it. They probably could have benefited from a course correction based on feedback from Sourour. Sourour could have asked himself "Are there other people working for this firm who are uncomfortable with how they're marketing this drug? Would they care if their sister or daughter took this quiz? Are there alternative routes I could offer that don't cause harm? What other drugs would this company like to market? What other demographic groups could I include as the target audience? Are there other services, such as mental health counseling, that the firm can offer besides prescription drugs to their clients?" Sending these

Student: Kurt Williams
Instructor: Dr. Alice Q. Fox
Course: PHIL 355E (23294)
Date: 12/4/2024

questions back to the people at the marketing firm could have greatly benefited everyone. The marketing firm and pharmaceutical company could have realized they were limiting themselves to only one product intended for a small portion of the market (teenage girls) and expanded the quiz to offer multiple drugs to several demographic groups. Sourour's coding firm could have received a bigger contract of work from the marketing firm, or future contracts since there are always new drugs and new demographics being developed that will need to be marketed. The relationships between Sourour and his coding company, the people at the marketing firm and the pharmaceutical company, and their patients could have all mutually flourished from Sourour's efforts to create a more precise and honest code. Perhaps most importantly, the quiz itself could have been written to avoid recommending teenage girls, or other possible patients, to take such a harmful drug no matter how they answered it. Instead, the quiz could have offered multiple options that guided them towards a more appropriate drug or mental health service that would actually benefit them, and benefit the marketing firm since they're still gaining a potential client.

Using the ACM code of ethics, Sourour could have found several ways to write a better code or perhaps just decide not to write the code. There was also a third option for Sourour, based on Mary Beth Armstrong writings, which was to escalate this matter above his project manager and to become a whistleblower that highlighted the dangers of marketing this drug with his code. Mary Beth Armstrong writes in her article *Confidentiality: A Comparison Across the Professions of Medicine, Engineering, and Accounting* that "All professions, by their very nature, must be concerned with and must strive to advance the public interest." Armstrong primarily relies on deontological and utilitarian arguments for why confidentiality is a *prima facie* duty between a professional and a client. However, the ethics of care can also apply to the reason maintaining or breaking confidentiality between a professional and their client is just as valid and important. After all, not writing the code and blowing the whistle on this unethical marketing practice could have helped Sourour uphold his ethical obligation to care for his sister, his professional reputation, his coding firm's reputation, and the well-being of all the other girls who may have taken the drug. Throughout Armstrong's article, she uses multiple professions such as engineers, accountants, lawyers, and doctors as examples for when these professions must balance their duty to confidentiality and a duty to not harm the public. In each profession that Armstrong addressed, there are clear examples and cases when these professionals can and should break with confidentiality so that they can prevent harm. If Sourour felt that there was no way he could have gone forward with writing the code, then he could have used Armstrong's examples on breaking confidentiality combined with the ethical obligation to care for his loved ones to not write the code.

Armstrong's example of the three BART engineers who realized the rail system they helped to create may have put lives at risk is a case that Sourour could have referenced when working on his code. These three engineers first attempted to inform their internal management of the problem but did not receive any reply. Instead of leaving the issue unresolved, they decided to go up the chain and disclose their concerns to the BART Board of Directors. After this effort failed the engineers were fired by BART, but thankfully one of them used the aid of an external organization, the California Society of Professional Engineers to study the case. After some public examples of the rail system failing and with the help of the CSPE, the three engineers' claims were validated and

Student: Kurt Williams
Instructor: Dr. Alice Q. Fox
Course: PHIL 355E (23294)
Date: 12/4/2024

the system's faults were publicly acknowledged. As Armstrong writes, "engineers have concluded that the duty to the public's safety, health and welfare is a higher duty than other, conflicting, *prima facie* duties" such as their duty to confidentiality. Sourour, as a coder and member of society, also has a duty to protect those he cares about, such as his immediate family, his coding company, their clients, and the greater public from potential harm caused by his work. After considering how Sourour's work would affect those closest to him, he had three potential options. There is the option he chose, which was to write the code as requested and live with the consequences of knowing he potentially helped sell a drug that led to severe depression and possible deaths of young girls. The second option is to attempt to expand the quiz's scope and attempt to market more drugs or services that were not harmful and beneficial to the greater public. The third option is to outright refuse writing the code out of an ethical obligation to those he cares about to protect them from harm and blow the whistle on the marketing firm.

The ethics of care combined with the various codes of ethics such as the IEEE or ACM code could have greatly informed Sourour's decision-making when he was first assigned to this project. His approach could have been to improve the quality and scope of the quiz to offer alternative drugs or services to those taking the quiz, or to include other demographic groups. This option does lead to potential complications, since it would still include offering the original drug to young girls. However, there would be other options that could prove beneficial and still allow everyone involved to mutually flourish. Sourour could have refused to work on the code so that he would not be involved in a scheme that would directly harm his loved ones like his sister. This option is probably the least satisfying, since the quiz probably would have been assigned to someone else in the coding company, and the quiz would still be written to direct young girls to take the harmful drug. The third option, following the examples from Armstrong's article, is to become a whistleblower on the unethical nature of the quiz. This would have put Sourour in the greatest amount of adversity, and likely cost him his job with the coding company. However, becoming a whistleblower could have helped to prevent the drug from being marketed to teenage girls like his sister in such an unethical way. Sourour himself states "As developers, we are often one of the last lines of defense against potentially dangerous and unethical practices." He learned this lesson too late to help guide his thought process for this incident, but this case should continue to inform future generations about the hazards of professional ethics.