* I would like you to carefully formulate a research question.   Your readings examine moral decision making and justice across multiple domains.  I would like you to choose an existing digital app.  The app could be used on people’s phones, etc.   Please choose an aspect of this app that involves moral decision making.  This could be on the part of the users, developers, company, etc.  Please formulate a precise research question around this moral decision and outline a method of investigation.   Please defend why your research question is important and why it is necessary to investigate it.

Comprehensive Exam Answers: Clint Davis-Stober

What existing digital app would you like to research, and what aspect of this app relates to moral decision making?

Amazon online shopping is unbelievably popular, with enormous prevalence throughout the entire world and a customer-base that parallels its prevalence. Due to its sheer popularity, there is likely a great volume of data available internally to Amazon data scientists. Thus, I believe that Amazon digital shopping would be a very fruitful digital app to examine for academic research. The aspect of this application that I would like to look at, as it relates to moral decision making, is the customer review system and process. The moral aspect of rating and reviewing items online is obvious, as there is a persistent belief that those who write reviews have an implied moral and ethical responsibility to the fellow consumers who rely on them to make purchasing choices with their limited resources (Bounie, Borreau, Gensollen, and Waelbroeck, 2008).

Specifically, I would like to experimentally extend some concepts in the domain of general moral and ethical reasoning that have not been previously applied to the niche of online product reviews. In general, people are able to engage in less moral activity when they are able to persuade themselves that they are not breaking their own ethical standards (Dana, Weber, and Kuang, 2007; Dana, Loewenstein, and Weber, 2012). There are many ways areas in which online reviewing can be susceptible to these immoral actions, as we will briefly review. One common aspect is that of exploiting hidden information, where there is a plausible excuse to not have to know the consequences of one’s own actions. For example, an individual who has an STD might not have sex with others if they knew for sure, which is a moral action. However, this person may choose to avoid getting tested, thus exploiting the ‘uncertainty’ of their situation, being able to feign ignorance of any actual STD’s they may have spread. Another concept that is common is that of ‘diffusing responsibility’. In this case, people avoid accountability for tough ethical decision by diffusing the responsibility for the choice across multiple individuals. Vertical diffusion is when there is a third party that sits between the decision maker and the stakeholders, the introduction of this third party ‘diffuses’ responsibility and results in the decision-maker being ‘less directly’ responsible for the outcome. For example, a company might have high standards with regards to paying their employees, but that company may hire contractors that pay less than the standards of the company’s own employees This can result in a supposedly more ethical company that pays higher wages in general, to pay lower wages for work that is ostensibly done on their behalf. Horizontal diffusion can be seen when decision makers rely on others to act in the best interests of the actual stakeholder, best described as the ‘bystander effect’ in traditional psychology literature.

There are several ways these concepts can be related to issues of ethics in online reviewing. For example, incentivized reviews are extremely common, and provide an obvious moral problem. How can someone be expected to provide an objective review when they were provided monetary or material gain for doing so? Researchers have found that is indeed the case, with reviewers who received compensation leaving good reviews for sub-par productg even when feeling uneasy about doing so (Rynarzewska, 2018). Likewise, many companies distribute promotional codes or rebates for their products through externally managed ‘review communities’, managed by administrators. There are clear examples of vertical diffusion here, as the ‘review communities’ take on the role of the third party between the decision-maker and the stakeholders. In these groups, while the company providing the resources did not explicitly demand biased reviews of the reviewers, the administrators of these review groups that distributed the monetary and material benefits clearly did. Participants in communities who were good reviewers were given more material benefits from the administrators, and those who gave ethically unbiased reviews (low scores if deserved) were chastised by group leaders and made to feel guilty for not ‘appreciating’ what they were being granted.

Why is this research question important?

Broadly, this research is important because a huge proportion of total commercial transaction in the United States occurs through e-commerce. This is especially true when considering the effects of the COVID-19 pandemic, which prevented many from engaging in physical retail shopping, and diverted demand instead to online platforms. This lead to a staggering 43% increase in e-commerce in 2020, the first year of the pandemic (Annual Retail Trade Survey, 2020). Online shopping has not cooled down since, with 257.3 billion dollars happening in the 1st quarter of 2022 alone, making up over 14.3% of total retail sales (US Economic Census Data, 2022). The largest online retail platform, Amazon, has made up over 110 billion dollars of net sales in e-commerce in the 3rd quarter of 2022 alone! It is obvious that online shopping is extremely popular, and growing.

Furthermore, while online shopping has many strengths, one of it’s clear weaknesses, at least for consumers, is that you cannot directly ‘experience’ the product itself, increasing consumer uncertainty of the quality of the item. One way of addressing this is looking at outside reviews of that product. Interestingly, compared to offline press, or ‘expert’ reviews, consumers value online ‘peer’ reviews even more highly, such as those commonly visible on an item’s Amazon shopping page, created by other Amazon shoppers (Bounie et al., 2008). Online recommendations systems are indeed commonly used as an anchor for the consumer’s preferences in product, and willingness to pay (Adomavicius, Bockstedt, Curley, and Zhang, 2013; Adomavicius, Bockstedt, Curley, and Zhang, 2017). Indeed, a 1-star change of rating in a 5-star rating system affects marginal willingness to pay for a product by as much as 17%. This holds true even when participants are even able to ‘sample’ the product beforehand, the recommended rating still predicted willingness to pay above and beyond personal exposure and judgement of the item itself.

Why is it necessary to investigate this research question?

This research question is necessary to investigate because there are tremendous implications for the average consumer who uses consumer generated reviews online under the assumption that they are unbiased. Online review manipulation has indeed been found to exist in various online marketplaces (Wayfair, Amazon, Walmart Shopping, etc.) and vitally, online review manipulation is a monotonically decreasing function of the product’s true quality (Hu, Liu, and Sambamurthy, 2011). Thus, while not all companies manipulate reviews of their products, the lower the product quality, and the lower the average rating of other items sold by that company, the greater the likelihood that their online reviews have been manipulated. This is exactly the ‘danger’ situation for consumers, purchasing a poor quality item that has been reviewed as good. The inverse, missing out on a potentially great product due to poor reviews is also possible. However, as the companies themselves have no incentives to lower their rating, it is less pertinent when considering consumer harms.   
 Furthermore, objectively being able to determine and distinguish between a biased reviewer of poor quality, and a honest reviewer with a strong reputation, can help consumers feel more confident in the quality of a review. When considering a review, consumers pay significant attention to contextual information about the reviewers themselves, such as measures of their reputation (awards, long history, etc.) as well as the total exposure of the reviewer (volume of reviews visible on a platform). Indeed, while in general consumer purchasing preferences are affected by reviews, consumers are ‘correctly’ indifferent regarding both favorable and unfavorable reviews from a low-quality reviewer (Hu, Liu, and Zhang, 2008). Thus, if we are able to indicate to consumers relative quality, it should be possible to defuse the negative effects of biased reviewers.

Finally, there is also some research indicating that there are indeed ways of providing sponsored or incentivized reviews without negatively affecting the consumer perception of that reviews helpfulness, credibility, or purchasing intentions (Tsao and Mau, 2018). A ‘failure’ to disclose sponsorship after producing a review is seen to significantly hurt consumer credibility of a review. In contrast as long as sponsorship is disclosed up front, perception of persuasiveness wasn’t affected by the reviewer receiving the product for free. More interestingly, there is a strong interaction between type of sponsorship and perceived quality of reviewer as well. For reviewers that are seen as lower quality, consumer perception of helpfulness, credibility, and purchase intention, were all significantly lower when receiving any form of direct monetary compensation (not just free product). For reviewers of high quality, they were seen as being more helpful, credible, and impactful on purchase intentions, when they were provided the product for free.

Please formulate a precise research question around this moral decision and outline a method of investigation.

The main concept I would like to examine is whether or not other forms of sponsorship in online reviews are able to exist, without harming the perception of the reviewer’s credibility and helpfulness. The framework that I would like to use to explore this idea is a concept that has been studied more generally in the field of morality, how to balance efficiency and equity. Roughly, people generally dislike inequitable resource allocation, even if it is inefficient. A good example would be distributing a gift card between two employees; only one employee can have it, thus distributing it at all results in some amount of inequity. However, in this scenario, the gift card expires if it isn’t distributed and used soon, thus, not distributing the card results in some amount of inefficiency (wasted resources). Generally, people are reluctant to favor a situation where there is the potential for appearing biased, even if it causes potential inefficiency in a system (Choshen-Hillel, Shaw, and Caruso, 2015). However, when resources are distributed unevenly, in an impartial manner (e.g. flipping a coin to decide who gets the gift card), this is seen as morally acceptable, and an even better outcome than equity with inefficiency (nobody getting the gift card, and it getting wasted due to expiry). Stepping back into the context of incentivized reviews, we can look at it in the framework of an equity and efficiency standpoint. From this perspective, it is rational to be concerned about impartiality in reviewing, as the reviewer has benefited from an inequitable resource distribution (by receiving either monetary compensation, or free/discounted products), even if it may be necessary from an efficiency standpoint (someone has to review the product, and if it’s not given to anyone to review, it is functionally ‘wasted’). From this perspective, it is plausible that if opportunities for incentivized reviews (free products, or monetary compensation for reviews) were distributed in an impartial manner (perhaps at random), and this information was known to consumers looking at the reviews thereby produced, that this would allow for incentivized reviews to exist, but without any reduction in perceptions of the reviewer’s credibility and helpfulness, or the consumer’s intention to purchase.

Assuming that we relatively unrestricted access to the Amazon online shopping network infrastructure to set up this study, the actual experimental design is relatively simple. As a proof of concept, we would initially choose five new items being added to the Amazon marketplace in their five most common categories of purchases made on the platform (Home and Kitchen, Beauty and Personal Care, Toys and Games, Clothing/Shoes/Jewelry, and Health). We would like to look at a variety of items to determine if there are any effects on consumer perception of review by item category. We choose to look at new items, as they do not have already existing reviews, or a large amount of customer sentiment built up through inertia. Next, we would split half of the webtraffic to each of the store pages for these five items to three different versions of the store page. The different versions of our store page can be seen as our independent variable in the study. One version, our control, would be the ‘normal’ store page, with no manipulation. Our second version, would be the ‘incentivized review’ where each of the reviews would clearly disclose that they were done in exchange for free product, provided at the discretion of the original product manufacturer. This allows us to have a condition where it is very clear that every review was incentivized. The third version of our webpage would be the ‘randomized review’ where each of the reviews would clearly disclose that the reviewer received this product without prior notice, completely at random, and was simply asked to review it. This allows us to see if impartial distribution of resources does indeed affect consumer preference in online reviewing. Our dependent variable would be how ‘helpful’ consumers rate the reviews on each of our three versions of the website, using the Amazon shopping website’s inbuilt ‘thumbs up’ or ‘thumbs down’ for helpfulness. Assuming web-traffic is split evenly for all three pages, we can both look at total volume of helpfulness feedback, as well as the proportion of ‘helpful’ or ‘unhelpful’ responses, as our metrics for ‘helpfulness’.