Using Instagram to Communicate COVID 19 Messages

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Overview

This study was conducted in the context of a larger effort by an interdisciplinary, University-convened taskforce to use science communication theory to develop an effective communication strategy during the early stages of the COVID-19 pandemic. As one element of the different studies conducted by the taskforce, this report summarizes our efforts to effectively test theoretically derived messages related to COVID-19 on Instagram to reach a specific audience.

While relying on theory to develop messages is considered "best practice," the use of theory or relevant insights does not guarantee that messages will resonate with target audiences. Therefore, once messages have been developed, they should be empirically tested to determine their effectiveness. In this report we detail the use of Moral Foundations theory for developing messages related to COVID-19 to be used on Instagram.

Moral Foundations

While initially developed as an explanation for cultural differences, Moral Foundations have also been used to examine the roots of political ideology in the U.S.A. Work in this area demonstrates how certain Moral Foundations relate to differences among political liberals, conservatives, and libertarians and politically charged issues (Iyer et al., 2012; Koleva et al., 2012). Liberals consistently show greater endorsement and use of the Care/Harm and Fairness/Cheating foundations, while conservatives endorse and use the five initial Moral Foundations more equally (Graham et al., 2009). The three foundations endorsed more by conservatives (Loyalty/Betrayal, Authority/Subversion, and Sanctity/Degradation) bind groups together for greater strength in competition, while the two foundations that are recognized by liberals (Care/Harm and Fairness/Cheating) tend to balance out those tendencies with concerns for individuals within the group.

With this reduced appreciation for the group binding foundations, liberals in the U.S.A. tend to promote a more universalist morality (Sinn & Hayes, 2017). For example, conservatives in the U.S.A. tend to believe that families, individuals, and businesses should be able to purchase health insurance to heighten competition and provide choices, whereas liberals tend to want a health care system that is accessible to everyone, regardless of their financial status (Bodenheimer, 2005).

Moral Foundations provide a great opportunity to merge theory and practice for communication during COVID-19. From a practitioner standpoint, messaging needs to be able to reach and appeal to audiences with different political views and ideologies. The Moral Foundations literature provides a framework for developing messages that appeal to specific groups, based on theory (Hurst & Stern, 2020). Our team built on the Moral Foundations literature to develop five messages communicating positive behaviors using a specific foundation:

- **Authority/Subversion**: "Be a good role model for others."

- **Care/Harm**: "Protect yourself and others from the coronavirus."
- **Fairness/Cheating**: "Everyone has an interest in defeating this outbreak."
- **Liberty/Oppression**: "We want our community to be free from contagion."
- **Loyalty/Betrayal**: "We need to protect our community."

For this study we also developed a visual to accompany the text in our messages described above (Figure 1), because visuals are useful in gaining the attention of an indifferent audience (Moriarty, 1987). Results from a survey fielded by members of our research team earlier in the year found that the audience most likely to be considered "indifferent" to social/physical distancing in the U.S.A., and thus should serve as our target audience, was young adult men (ages 18-34 years). To appeal to this target audience, we conceptualized a visual of a man defeating the virus with a crowd cheering him on. We sent our idea to a graphic designer for final development and execution of the visual, which was posted in the form of a video but displayed here, in print, by the starting image from the video. For consistency, the same image was used for each message headline that we wrote using the Moral Foundations constructs.

Figure 1. The starting image of our social media visual video loop (Instagram experiment).

Message Testing

We used a relatively simple way to test how well messages performed in comparison to one another, which is often referred to as A/B testing. In general, A/B testing is an online-controlled experiment in which participants are randomly exposed to a predetermined set of content variations, such as different versions of a website or headline, to measure which is the most effective for an outcome of interest (Shaw, Campell & Radler, 2021; Siroker & Koomen, 2013). Many large sites, such as Amazon, Google, and Facebook, run these online-controlled experiments to test user interface changes, changes to apps, and enhancements to algorithms that control ads, personalization, and recommendations (Kohavi & Longbotham, 2017). We used A/B message testing to evaluate and compare the performance of each of our messages with our target audience.

The Facebook advertising program in Ads Manager - which can be used for both Facebook and Instagram - tracks many different metrics, but for the purpose of this study we considered Cost per Click (CPC), Click Through Rate (CTR), post reactions, post shares, and post comments as relevant outcome variables. The CPC metric is calculated as the total dollar amount spent on the ad divided by the number of clicks to show an average of how much each click costs. The more effective an ad is in terms of generating clicks, the lower the CPC. The CTR metric is determined by dividing the number of clicks the ad receives by the number of times the ad was

shown. A higher CTR indicates a more effective ad in terms of attracting clicks from the target audience. Post reactions is a measure of engagement and refers to the number of reactions on the ad. For Instagram, researchers can measure post reactions by how many people 'liked' the advertisement. People can share posts on their own Pages or Timelines, and the post shares metric assesses the number of shares the ad receives. This metric counts shares while the ad is running and does not count any engagement that the post receives as a result of being shared on another person's timeline. Finally, "post comments" is an engagement metric that counts all comments that people from the target audience make on the ad while it is running.

Results

Our ad campaign ran for a total of three days, from May 18, 2020 at 6:00 am until May 20, 2020 at 11:00 pm on the social media platform Instagram. We designated $300.00 as the total dollar amount spent on each ad message, resulting in $1,500.00 as our grand total to test all five messages. The test we performed indicated that the Loyalty/Betrayal message resonated most with our target audience by accumulating 86 post reactions and receiving the highest CTR of 0.14 and the lowest CPC of $7.14 (Table 1). It appears that the Fairness/Cheating message resonated the least with our target audience, indicated by the lowest count of post reactions at 54, the lowest CTR at 0.09, and the highest CPC at $13.04. The Care/Harm, Liberty/Oppression, and Authority/Subversion messages all performed similarly with 68, 71, and 58 post reactions, 0.13, 0.11, and 0.12 CTRs, and a CPC of $8.11, $9.09, and $8.33, respectively.

Table 1. The performance results (cost per click, click through rate, post reactions, post shares, and post comments) for the five messages based on specific foundations.

Category	Cost per Click (CPC)	Click Through Rate (CTR)	Post Reactions	Post Shares	Post Comments
Care	$8.11	0.13	68	0	2
Liberty	$9.09	0.11	71	4	0
Fairness	$13.04	0.09	54	2	1
Authority	$8.33	0.12	58	0	8
Loyalty	$7.14	0.14	86	3	6

Our social media advertising test on Instagram using Moral Foundations Theory provided valuable insights related to which headlines were most likely to be effective with our target audience of young men. The CPC was high compared to industry averages, suggesting we should have tried other theoretical approaches to increase the effectiveness of our ad. The relatively poor performance of the ad may have been because the visual and headlines did not resonate with the target audience and provided some validation that this target audience was hard to reach for COVID-19 messaging.

Conclusion

Because of time limitations and financial resource constraints, we only commissioned one visual graphic for the advertisement while changing the headlines using Moral Foundations Theory as our guide. However, research has found that visual information can be more important than text in terms of capturing attention in message tests (Radler et al., 2020). Many decisions audience members make, especially early in the decision-making process, are driven more by "gut-level" reactions, and these are more readily influenced by images than text (Loewenstein, 2001). Although testing the effects of visual frames is an underexplored area of research (Cacciatore et al., 2016), a well-resourced campaign should test both textual and visual framing. Given the high CPC and relatively low CTR, we can also infer that young men are indeed a difficult audience to reach with COVID-19 related information as was suggested by the previous research that influenced us to target this audience to begin with (Brauer et al., 2020).

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