Donate for Credibility:
How Contribution Incentives Can Improve Credibility

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ABSTRACT

This study explores whether certain contribution incentives for online user-generated content can undermine or enhance contributor's credibility. Through an online experiment, we found that contributors who are rewarded by donations made in their names are perceived to be more credible than contributors who contributed voluntarily or are financially compensated through revenue sharing. In addition, disclosing the chosen charity for donation gifts can also impact credibility. Content viewer's self-identification with charity and the congruency between charity and content topic are all factors that may impact credibility. Our findings lead to practical contributions on when and how to use contribution incentives to enhance credibility.

Author Keywords

Credibility, contribution incentives, user-generated content.

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

Online user-generated content (UGC) has become indispensible in our everyday lives. We rely on blogs, reviews, wikis, podcasts, forums, and question and answer sites for news, research, gossip and problem solving. However, despite the apparent value of these sites, studies have consistently found that under-contribution is a problem [*e.g.*, 1]. To raise the volume and the quality of contribution, an increasingly common strategy is to offer incentives. For example, sites like Epinions, Knol and Mahalo, offer financial rewards to contributors using their content's advertisement revenue.

While these incentives may motivate contributors to provide more and potentially better content [9], there is a possibility that compensating contributors may inadvertently change their perceived credibility. But this effect on UGC has not been examined. Here, we pose the broad question: are there novel incentive schemes that can undermine or improve credibility? Answers to this question are important for site designers and contributors as they try to generate high quality content that people will actually use and reuse. Highly credible sources are more influential and lead to more behavioral compliance [*e.g.*, 2].

In this paper, we contrasted two general incentive models for UGC—revenue-sharing and donations made in contributor's name (DONAME). In the revenue-sharing model studied, contributors are financially compensated by the advertisement revenue generated from their content page. In the DONAME model, instead of retaining the financial revenue, the money is donated on behalf of the contributor to a charity of the contributors' choice. Both of these models are compared to the baseline (no incentive) model. In addition, we also explored how charity-selection within the donation condition impacts credibility.

This work offers both practical and theoretical contributions. On a practical level, this work provides guidelines for consumer-generated media on when and how to leverage incentives for contribution. It also suggests strategies for picking charities to maximize credibility. On a theoretical level, this is the first to examine how contribution incentives affect online user-generated content, and it leads to many interesting research questions for further exploration.

CREDIBILITY AND CONTRIBUTION INCENTIVES

Credibility has been a topic of much research across many domains, including communication, marketing and HCI [see 13 for review]. Credibility can be defined as believability and is a quality based on the audience's perception; it is not an inherent and objective characteristic of an object (*e.g.*, the author) [7].

This work focuses on the impact of disclosing the contribution incentive on source credibility. Research on source credibility has suggested two primary constructs for source credibility – expertness and trustworthiness [9].

Expertness refers to whether the source *knows* the truth whereas trustworthiness refers to whether the source *will tell* the truth [4]. Expertness has been defined by terms such as expert, skilled, knowledgeable, experienced and qualified, while trustworthiness has been defined by terms such as trustworthy, honest, dependable, reliable and sincere [*e.g.*, 4, 7].

Prior research has shown that knowing the sources' intentions and motives can affect their credibility. In one study, credibility was lowered when the participants were given an introduction that elicited suspicion of the communicator's motives. Credibility was higher when the introduction elicited belief in his impartiality [9]. This occurred because if the source is believed to have ulterior motives, the audience may suspect reporting bias, which can then undermine their trustworthiness, but not their expertness [3].

Financial implications and the involvement of corporate sponsorship are common factors that can arouse suspicion of motives. Studies in advertising and corporate sponsorship have shown that when profit-driven suspicion is aroused, consumers tend to evaluate the target less favorably [18]. Studies of web credibility have also found that commercial implications can decrease credibility [6]. Recently, a study presented at a marketing conference showed that the credibility of a person making referrals is undermined if he is paid for the referral [8]. Of the two credibility constructs, only trustworthiness is undermined.

Much prior work has compared the credibility of consumer-generated media (primarily blogs) to traditional media [*e.g.*,5], and have advanced our understanding of media credibility. However, as consumer-generated media start leveraging novel contribution incentives to encourage contribution, the impact of these incentives on the individual contributors' credibility needs to be examined.

Advertisement revenue sharing is one of the more common incentives used to encourage user-contribution. With this incentive, contributors can earn money by generating site traffic. This type of incentive is different from paid referrals, where the person making the referral has a clear motive for reporting bias – to sell a certain point or product. With shared-revenue, contributors are not rewarded for taking any particular side, so there may be less suspicion for reporting bias. However, these incentives are similar in that they both offer monetary rewards. Regardless of the contributor's actual motives, content viewers may still attribute that monetary incentive, as opposed to intrinsic motivation, is the contributor's primary motivator for sharing the content. This attribution can result in suspicions of reporting bias. In addition, we should note that the shared-revenue incentive structure reward neither biased content nor impartiality; content that generates traffic may not be the most impartial. Therefore, we hypothesize that informing the audience that the content is generated using a financial, shared-revenue model may lead the audience to question the trustworthiness of the source and undermine their credibility.

H1. Revenue-sharing model lowers source credibility by lowering trustworthiness.

An alternative to the financial revenue-sharing model is the DONAME model, where the contributors make a donation in their name using their share of the ad-revenue (*e.g.*, sites like Squidoo). Unlike the revenue-sharing model which may suggest that the contributors are financially motivated, this donation model could actually signal that the contributors are contributing due to good will, and have the audience's best interest at heart. Furthermore, contributors who donate can also trigger a positive halo effect – people who are altruistic and make charitable contributions are typically perceived to have higher trustworthiness and expertness [15,11]. Therefore, disclosing this type of contribution incentive may improve the perception of the contributor and enhance credibility.

H2. Donation revenue-sharing model improves credibility by improving both trustworthiness and expertness.

Typically, the charity organization chosen is disclosed in the donation incentive models, but disclosing this information could also impact credibility. Potentially, if the selected charity and the UGC topic are unrelated (incongruent), then disclosing the charity may also arouse the suspicion of motives and undermine trustworthiness. Prior work has shown that a good fit between a company and the cause it sponsors leads to attributions of altruistic motives and enhances credibility [14]. Selecting a charity that is related in the topic may also lead the audience to believe that the contributor is familiar with the domain, and may enhance expertness. Therefore, selecting congruent charities may lead to both higher trustworthiness and expertness, and hence, higher credibility.

H3. Congruency between charity and topic results in higher credibility (both trustworthiness and expertness) than incongruent charities.

Aside from the congruence effect, disclosing the chosen charity can also impact credibility by providing additional cues as to who the contributor is, such as interests and beliefs. Attitudinal similarity between source and receiver increases attraction, which leads to higher credibility [see 17 for a review]. Therefore, the more the content viewer identifies with the charity selected by the contributor, the more similar, and hence, the more credible the contributor may appear.

H4. Stronger content viewer's identification with the chosen charity will result in higher credibility.

EXPERIMENT
This experiment examined whether different types of contribution incentive impacts credibility when disclosed. All participants read the same three articles, but we

manipulated the information disclosed to the participants regarding the contribution incentives used for the articles.

In the baseline condition (*no incentive*), participants were told that these articles were written and posted voluntarily. In the financial shared-revenue incentive condition (*shared-revenue*), participants were told that the revenue generated from the advertisements to the article's page is paid to the contributor. In the donation conditions, participants were told that the revenue generated from the advertisements to the article's page is donated by the contributor.

To test the impact of charity-congruence on credibility, we included two additional conditions which disclosed to the participants the charities chosen for each of the articles they read. The articles used were chosen from knol.google.com, a user-generated content (UGC) site, and were intended to represent an array of UGC topics: (1) pregnancy tips, (2) how to register for a web domain and (3) a reference article on canine senses. In the congruent-charity condition (*congruent-doname*), participants were told that donations are made to March for Babies, Reading is Fundamental, and Animal Welfare for the three articles respectively. In the incongruent-charity condition (*incongruent-doname*), the charities are World Wildlife Fund, Habitat for Humanity International, and Breast Cancer Fund. In the baseline donation no-charity-disclosed condition (*doname*), participants were simply told that the revenue is donated. Therefore, a total of five conditions for three underlying incentive structures — *no incentive*, *shared-revenue*, and *doname* and the donation incentive model had two additional conditions, *congruent-donation*, and *incongruent-donation*.

Measures
After reading each article, one set of participants was asked to rate the trustworthiness and expertness of the source using the aforementioned ten adjectives (expert, skilled, knowledgeable, experienced and qualified for expertness, and trustworthy, honest, dependable, reliable and sincere for trustworthiness). Some items were reversed in the study. After reading all three articles, all participants answered a few background questions, such as age and gender, and rated their familiarity with and how well they identified with all of the charities used in this experiment.

Statistical Analysis
Each analysis was a repeated-measures analysis of covariance in which the 5 conditions (*no incentive, shared-revenue, doname, congruent-donameand incongruent-doname*), control variables of gender of participant (male, female), and age of participant (5 tiers), were repeated. Because each participant rated the same 3 articles, and their ratings were not independent of each other, article id nested within participant id, were modeled as a random effect. The dependent variables were trustworthiness, expertness and their averaged score (credibility). To compare between the donation conditions, familiarity-with and identify-with ratings and their interaction were included as covariates.

Participants
The study was conducted on Amazon's Mechanical Turk, an online marketplace for work. Participants were paid $1 for completing the study and participation was restricted to workers residing in the US to ensure basic English proficiency. 427 participants completed the experiment. Our manipulation check showed that 97 participants were unable to recall whether and how the contributors were incentivized; they were removed from our analyses.

Results and Discussion
Our results did not support H1 that the shared-revenue model undermines truthfulness of contributors (Table 1.1). There was no significant difference in the truthfulness rating between *no-incentive* and *shared-revenue*. There was also no significant difference in terms of expertness and also the combined credibility rating. This was surprising given the prior work on financial incentives and their attributions. However, it may be possible that the shared-revenue structure does mitigate the suspicion of reporting bias, even though there are financial implications. More work is needed to compare other types of monetary-based incentive structures.

	no-incent.	shared-revenue	doname	cong.	incong.
trust.	5.23_b	5.28_b	5.53_a	5.48_a	$5.41_{a,b}$
expert.	5.17_b	5.27_b	$5.42_{a,b}$	5.50_a	$5.30_{a,b}$
cred.	5.20_b	5.27_b	5.48_a	5.50_a	$5.35_{a,b}$

Table 1.1 Credibility by Incentive Types. "a" and "b" subscripts denote means that are significantly different ($\alpha=0.05$)

On the other hand, our results do support H2 that the DONAME model improves credibility ($F(966)=4.81$, $p=0.01$). It lead a significantly better trustworthiness rating ($p=0.01$) and a weakly significant difference in expertness rating ($p=0.08$). *Doname* also resulted in higher credibility rating compared to shared-revenue ($p=0.04$).

What happens when the chosen charities are disclosed? H3 hypothesized that congruency improves trustworthiness and expertness. We found that when comparing between the donation conditions using familiarity with and identification with charity as covariates, congruency between charity cause and topic resulted in higher expertness ($p=0.04$) but had no effect on trustworthiness. This suggests that congruency can affect credibility, as hypothesized in H3, but only through impacting expertness. However, given that the *congruent-doname* and *doname* led to comparable effects, it may be possible that congruency in charity selection is more of a "hygiene factor" in online evaluation of credibility, where having it does not improve credibility, but not having it can undermine credibility. Additional research is needed.

Finally, H4 hypothesized that content viewer's identification with selected charity may also affect credibility. Our results showed that familiarity-with and self-identification with the chosen charity seemed to have positive effects on credibility. The more the participants identify with the charity, the more credible they find the source ($F(1,445)=3.13$, $p=0.08$). At the same time, a charity that participants are also more familiar with further enhances credibility (interaction: $F(1,445)=3.18$, $p=0.08$).

Practical Contributions
This work highlights an additional benefit of using DONAME for contribution – it can improve credibility. The implication is that the DONAME model may be more applicable in scenarios where credibility is important and its usage should be publicized when possible. In addition, contributors may want to consider varying the charity they choose to donate to based on contribution content and its target audience to maximize credibility. This can also be done at a site level, where sites can be designed to limit the charity selection to organizations and causes that may enhance credibility. Sites may even consider lowering the salience of certain chosen charities.

CONCLUSION AND FUTURE WORK
As we develop and use novel reward systems to encourage content contribution, we must consider the side effects of leveraging these incentives. Here, we demonstrated that credibility can be affected by these contribution incentives and we that a donation incentive from shared-revenue (DONAME) can actually improve credibility.

As more and more e-commerce and technology enabled incentive structures are used to encourage content generation, we must gain a better understanding of how contribution-incentives impact credibility. By doing so, we can also contribute to our knowledge of credibility. This work opens up many unanswered research questions. For example, does DONAME generalize to all other types of incentives that offer some form of donation contribution? Are the changes in credibility indeed caused by the various reasons proposed here, or are there other factors? Furthermore, how do these contribution-incentive effects on credibility compare against and interact with other cues that also impact credibility (*e.g.*, aesthetics)?

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