Towards Understanding the Implications of Social Role Manipulation in Online Tasks

Mieke H. R. Leyssen
Centrum Wiskunde & Informatica
P.O. Box 94079
1090 GB Amsterdam
The Netherlands
Mieke.Leyssen@cwi.nl

Martha Larson
Delft University of Technology
Mekelweg 4
2628 CD Delft
The Netherlands
M.A.Larson@tudelft.nl

Abstract
This paper provides an initial discussion of the ethical issues arising when people are asked to assume a role and, from the perspective of that role, asked to carry out an online task. We identify the following considerations: (a) People's responses when playing a role can reveal personal information about themselves. (b) When people are asked to review the contributions of others who have a particular role, their behavior might indicate how they feel about these roles in their own life. (c) It is difficult to explain to people what they reveal about themselves when reporting their perception of the views of others. (d) People's own view might change when they play a certain role for an extended period of time.

Author Keywords
Social roles, User Behavior, Manipulation, Ethics

ACM Classification Keywords
K.4.1 [Public Policy Issues]: Ethics.

General Terms
Experimentation, Human Factors, Legal Aspects

Social Roles
Social roles structure life in every day society since people's behavior changes to fit the expectations they and

others have of their roles. Social roles are variable depending on the situation people are in and the others who are present [2].

Online society is emerging and therefore also the interest in online social interactions [4]. Online, people can create their own identity to escape daily life [7]. This dimension of control suggests that online social roles are not necessarily the same as the roles people have in daily life. Since social roles are not so strictly assigned online, the questions arise as to whether or not they can be manipulated, if this manipulation can result in behavioral changes, and if this manipulation can improve the results of online tasks.

The purpose of this paper is to provide an initial discussion of the ethical issues arising when people are asked to assume a role and then, from the perspective of that role, asked to carry out an online task.

We feel that this topic is particularly important since, at first glance, the assumption of a fictitious role when carrying out an online task seems entirely harmless. Imagining oneself into a role is easy to associate with make believe and with children's games, and does not immediately occur to researchers as an area which gives rise to ethical considerations. In social psychology, several experiments have been conducted to investigate the manipulation of social roles. A famous and controversial experiment is Zimbardo's Stanford Prison Experiment [3], in which half of the participants were told to pretend to be 'prisoners' and the other half to be 'guards'. The participants acted out the roles that were assigned to them, even to a pathological degree. This example suggests that assigning roles to participants might not be as harmless as one might think.

If we assume that users who are role playing get caught up in their imagination, then there might be an important parallel between our observations about information collected from role-playing users and the observations of Zittrain [9] considering data collected via unobtrusive sensors (specifically, vital sign sensors), namely, that it might "...fool many of our natural protective mechanisms: we lack the normal social cues that remind us how much information we are broadcasting..." (p. 3818).

The contribution of this position paper is to provide a first exploration of the ethical implications of asking people to imagine themselves into a role before carrying out an online task. We discuss examples in which asking users to assume a role provides specific benefits for the collection of human judgments concerning multimedia items. We describe a structured experiment that investigated the influence of assigning social roles to participants before tagging images and reviewing tags that others have added. We conclude by stating possible ethical concerns about these examples and providing an initial list of suggestions of safeguards which we believe can help to assume that roleplaying can be applied ethically for online tagging and reviewing tasks.

Related Work

Vliegendhart and colleagues [8] conducted a crowdsourcing experiment on a commercial crowdsourcing platform. The microtask asked crowdworkers to label files in a filesharing system (represented by their filenames and some additional metadata) with information concerning their similarity. The task requested the workers to imagine that they were considering the files from the point of view of a small filesharing community. The benefit of having the crowdworkers assuming a role in this case can be considered to be threefold. First, it can make the

microtask more engaging, if part of the assignment includes imagining to be someone else. Second, it can allow the crowdworkers to distance themselves from the act of filesharing. In other words, they can answer the questions without worrying that they are implicated as using filesharing because they personally have an opinion about the similarities of shared files. Third, it encourages crowdworkers to think beyond their own personal opinions concerning the similarities of files to provide information on similarities that they feel are most relevant at a community level, i.e., to people beyond themselves.

Conotter and colleagues [1] asked crowdworkers to compare two images within a specific context of use. One is a reference image (the image in its original form) and the other is an altered image (an image that has in some way been edited). The overall goal of the study was to assess whether the acceptance of Internet users of images being edited varies according to how the images are used and who is using them. In order to answer the question, crowdworkers were asked to assume one of four roles: 'photographer', 'blogger', 'journalist' and 'advertiser'. The benefit of having the crowdworkers assume a role in this case is twofold. First, the crowdworkers are protected from providing their own personal opinion about the acceptability of different image modifications. Second, as in the above example, it allows the microtask to be used to collect information about people's perceptions of the acceptability of image editing in certain contexts by the overall community. This information provides insight into values and conventions that go beyond the personal level.

Use Case

Leyssen and colleagues [5] investigated the influence of manipulating social roles of participants on their tagging and reviewing behavior. In a structured experiment, users were asked to imagine to be in a certain role (that of a 'teacher' or a 'student') and were asked to describe what is depicted in images by adding tags or by reviewing tags that were supposedly added by other teachers or students. They were told that correctly describing the object would facilitate searching for specific images.

In this research, the role of the participant and the role of the people who supposedly added the to be reviewed tags was manipulated. This was done to investigate whether users would change their behavior according to the role that was assigned to them and also if their behavior changes according to the role that was assigned to others.

The 'teacher' and 'student' roles were selected for this experiment since describing and reviewing is part of the everyday tasks of teachers and students. Another reason is that these are common roles with differing levels of authority that many people can identify with.

The results showed that there was a difference in the tagging and reviewing behavior of participants that imagined to be a teacher or a student.

Ethical Discussion

Our specific use case was not, in contrast to the above mentioned related work, carried out on a crowdsourcing platform. Instead participants were recruited by social media and mailing lists. The process of actively asking people to contribute tags can be considered a form of crowdsourcing, since it involves exploiting the human intelligence of a group of people outside of a conventional employment relationship. The full scope of ethical implications of tagging and reviewing tags online will not be discussed in this paper. Here, we restrict ourselves to specifically focus on experiments in which people are asked to imagine that they are taking on a fictitious role

while they asked to tag images and review tags that others have entered.

In the experiment, the participants were asked to describe objects that were depicted in the images. Participants did not only enter objective, factual descriptions of the images (e.g., the scientific name of a flower that was depicted), but sometimes they added subjective descriptions (e.g., "pretty"). The subjective kind of tags could reveal something about the participant.

We believe that asking people to imagine that they are playing a role when they describe an image involves the following aspects that are potential sources of ethical consideration.

First, images elicit a wide range of responses from humans. The range of variation in these responses can reveal personal information about the person tagging the image. For example, asking someone to describe the color of the figure in an image can reveal whether the person has normal color vision or not. If the person is asked to assume a role, they might have the impression that they are not revealing personal information. In reality, however, their answers will still reveal something about their vision. More research is necessary to consider the extent of the danger that people assuming roles have less awareness of the personal information that they reveal about themselves in their answers.

Second, when people are asked to review the contributions of others who have a particular role, their reviewing behavior might indicate how they personally feel about these roles. In the experiment, participants were asked whether they agreed or not with a tag that was provided either by a student or a teacher. When participants have an underlying disagreement or conflict with authority in their daily life, this could be expressed by constantly disagreeing with tags that were believed to be added by a teacher. Additional research is needed to investigate whether people generalize their own attitudes towards others when reviewing contributions of others.

Third, it is difficult to explain to people what they reveal about themselves when reporting on the views of others. For example, "Bayesian Truth Serum" is a method that asks people to estimate the number of others in a population who share a taste or an opinion [6]. People who are truthfully reporting a taste or opinion tend to overestimate the number of likeminded people in the population. This example demonstrates that people's opinions about the point of view of others (i.e., something that they are expressing when they assume a role) have a complicated relationship to their own points of view. This relationship is so counter-intuitive that it might not be possible to completely explain it to people participating in the experiment. Instead, they might be inclined to be convinced that reporting information from the viewpoint of imaginary other people says nothing about their own opinion. More research is necessary to determine if there are ways to allow people to report their perceptions of community-level conventions and interpretations without revealing their personal views.

Fourth, it is an open question how people's own view of images changes when they report judgments on these items from the perspective of an imaginary role. More research is necessary to determine the extent to which people who carry out roles for an extended period of time in the end integrate them into their own identities and value systems. It is also necessary to understand the extent to which people remain in control of changes in their identity catalyzed by participation in role playing.

Recommendations

We conclude this paper by providing an initial list of recommendations for ethical practices when manipulating social roles during online tasks. These are based on our own reflections about our use case.

1. Don't assume that it ruins the experiment for people to know why they are asked to play roles. More experimentation will reveal in which cases roles can have benefits without have to hide the nature of these benefits from users. If the users can be told the purposes of the role, the experiment will be more truthful and transparent.

2. When subjective descriptions are not needed for the research, this should be mentioned to users. This would discourage users to add this kind of descriptions and limit the information that they reveal about themselves.

3. Realize that what users report while playing a role is not entirely free of traces of information about themselves. Treat this data with the same protections as if they were reporting information about themselves or about their personal opinions.

Acknowledgements

We would like to thank Jacco van Ossenbruggen, Lynda Hardman and Arjen de Vries for their advice. The experiment was carried out in the context of the SEALINCMedia project in the COMMIT/ research program. Martha Larson is funded in part by EC FP7 Grant Agreement No. 287704 (CUbRIK).

References

[1] Conotter, V., Menendez, M., Dang-Nguyen, D.-T., Boato, G., and Larson, M. Assessing the impact of image manipulation on users' perceptions of deception. In *SPIE 2014 Human Vision and Electronic Imaging XIX* (2014, to appear).

[2] Goffman, E. *The presentation of self in everyday life*. Anchor, June 1959.

[3] Haney, C., Banks, W. C., and Zimbardo, P. G. A study of prisoners and guards in a simulated prison. *Naval Research Reviews 9* (1973).

[4] Haythornthwaite, C., and Hagar, C. The social worlds of the web. In *Annual Review of Information Science and Technology* (2005).

[5] Leyssen, M. H. R., van Ossenbruggen, J., Hardman, L., and de Vries, A. P. Manipulating social roles in a tagging environment. In *Proceedings of Human Computing & Crowdsourcing 2013* (2013).

[6] Prelec, D. A Bayesian truth serum for subjective data. *Science 306*, 5695 (2004), 462–466.

[7] Turkle, S. *Life on the Screen: Identity in the Age of the Internet*. Simon & Schuster Trade, 1995.

[8] Vliegendhart, R., Larson, M., Kofler, C., Eickhoff, C., and Pouwelse, J. Investigating factors influencing crowdsourcing tasks with high imaginative load. In *Proceedings WSDM 2011 Workshop on Crowdsourcing for Search and Data Mining* (2011).

[9] Zittrain, J. Ubiquitous human computing. *Philosophical Transactions of the Royal Society 366*, 1881 (2008), 3813–3821.