Designing for Constructive Online Discussion

Emma Lieu
Royal Holloway, University of London
Egham Hill, Egham
Surrey, TW20 0EX
UK
emma.lieu.2011@live.rhul.ac.uk

Online commenting systems have changed the boundaries of traditional discourse, allowing more people than ever to engage in public discussions. However, these platforms are subject to design and social behaviour issues that undermine their potential. This doctoral work aims to provide pluralistic online communities with an improved online commenting tool to better structure and facilitate discussions. To date, a novel commenting system has been built and evaluated in preliminary studies.

1. INTRODUCTION

Online commenting systems – such as forums and comment sections under blogs and media – allow more people than ever to have their say and see what others have to say too. This scale and scope of discussion has the potential to expose people to diverse viewpoints; inform decision-making; and enable new group actions such as large-scale deliberation (Wright and Street 2007). However, these systems require expensive moderation and typically feature unstructured lists of repetitive, disjointed comments with limited ordering. This design is unscalable and allows for issues such as incivility (Chen 2017), opinion cascades (Muchnik et al. 2013), and group polarisation (Sunstein 2017), undermining the potential of these systems.

Researchers have tried to address these design limitations through novel interfaces, utilising nested trees (Klein 2007; Zhang et al. 2017); dimensionality reduction (Faridani et al. 2010; Kim et al. 2021); and topic modelling (Hoque and Carenini 2015). Most of these systems only enable exploration or synthesis of existing discussion, or feature workflows that are limited to supporting rational discourse, known as “type I deliberation” (Bächtiger et al. 2010). Work remains to be explored on how systems can be designed to adequately support “type II deliberation” which can involve rich forms of communication, such as story-telling and rhetoric (Bächtiger et al. 2010).

To address these gaps, my research aim is to provide pluralistic online communities with a tool to better structure and facilitate discussions. The potential contributions of this doctoral work include conceptual frameworks and working artefacts for online discussion; design implications for online commenting systems; and an empirical understanding of the main factors to healthy online discussion.

2. RESEARCH QUESTIONS

My primary research question is: How can online commenting systems be designed to facilitate healthy and constructive discussions in pluralistic groups?

SQ1.1 What strategies can be employed to improve the structure of discussions on online commenting systems?

SQ1.2 Which of these are the most effective strategies?

SQ1.3 To what extent do these strategies influence the health of the discussion?

SQ2.1 What are the main contributing factors to healthy discussions in online spaces?

SQ2.2 How can these factors be implemented in online commenting systems?

3. RESEARCH APPROACH

To answer these questions, I am using a Research through Design approach which iterates over three phases:
Phase I: Conceptual. The conceptual phase sets out to answer SQ1.1 and SQ2.1. The objectives in this phase are to (a) investigate strategies to structure online discussion and (b) identify key factors to healthy online discussion. The findings from this phase are fed into Phase II.

Phase II: Technical. The technical phase aims to answer SQ2.2. The objective is to (c) design and implement a novel online commenting system, informed by the outputs of Phase I and III. The resulting artefact is passed into Phase III.

Phase III: Empirical. The empirical phase will be used to answer SQ1.2 and SQ1.3. The objectives are to (d) evaluate the artefact from Phase II with different communities and (e) evaluate the artefact with discussion data taken from existing online commenting systems. This phase collects data from participant activity on the artefact, surveys and follow-up interviews which are subsequently fed back into Phase I and II.

4. PROGRESS

Based on the findings in Phase I, I conceptualised a novel system workflow for online discussion in Phase II. This workflow was then implemented in prototypes of Potluck: a scaffolded discussion system that aims to promote reflection and inclusion of differing views, while mitigating the risks of social biases.

In Phase III, I conducted rounds of same-day pilot studies of Potluck v0 on-campus. The results were used to inform the design decisions of Potluck v1, notably the addition of a facilitator role and pseudonymous users. The pilots demonstrated the feasibility of the system workflow in small groups and motivated a subsequent 10-day field deployment with alumni of the World Health Organisation infodemic management training programme and a facilitator. While the system was found to be informative and present a relevant overview of the comments, engagement was a challenge to sustain.

5. PLANS

I am currently seeking different communities from settings online (such as subreddits and below-the-line comments) and offline (such as seminars) to participate in future iterations of Phase III (d).

Meanwhile, the outcomes from the recent field deployment will be fed back into Phase I where I will conceptualise scalable strategies for user engagement and investigate strategies of extrinsic motivation (such as gamification) as a potential contributor to SQ2.1. Since this conceptual investigation will not conflict with SQ1.2, I will continue with Phase III (e) in parallel.

REFERENCES


