Catch me if you can: Online protests on sites powered by user-generated content

Leiser Silva, Hesam Panahi*

Department of Decision and Information Sciences, Bauer College of Business, 334 Melcher Hall, Houston, TX 77204-6021, USA

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ABSTRACT

This study concentrates on online protests in websites that rely on user-generated content. We develop a case study on Digg, a website powered by user-generated content that encounters backlash from their community. Through an interpretive analysis of the case we identify how the context and interactions among key players lead to what we call a "catch me if you can" game, where users and administrators of the website battle in an effort to outsmart and outmaneuver each other. The findings reveal a tension between users and administrators that intensifies during the protest, and should be considered carefully by site administrators.

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1. Introduction

The most highly trafficked sites on the World Wide Web, such as Facebook, YouTube, and Wikipedia, are produced with user-generated contributions. Sites that rely on user-generated content provide their users tools to contribute data, whether through a profile, video, comment, or other means; these contributions ultimately determine the site's value. This type of interaction and the technologies that facilitate it have been labeled by practitioners as web 2.0 [49]. User-generated content websites have experienced rapid growth and high valuations: by the time of Facebook's initial public offering, the company was valued at nearly 100 billion dollars [58] with over one billion active users [78]. Other user-generated content websites have been the target of acquisitions: Google purchased YouTube for $1.65 billion less than 2 years after it was founded [35] and YouTube is now the third most visited site in the world [3]. The recent rise and explosive growth of startup companies that are driven by user-generated content has contributed to what some consider a second dot-com bubble, called *Bubble 2.0* [31].

However, while users typically contribute with good intentions and their contributions are central to a site's success and growth, there is a need for a greater understanding of the risks associated with user-generated content. As we see in this study, dissenting actions by a user community can harm the site's integrity and reputation. In the context of our research, we deem protests as a type of dissenting action that can quickly spread, and one in which users actively rebel against the site's administrators and owners. The effects of protests can be long lasting and can potentially tarnish a site's reputation. While some scholars have concluded that the Internet has limited impact for protests [18], evidence discussed below suggests otherwise (e.g. [30]).

Protests, and how groups engage in collective action in general, have evolved considerably with the emergence of new communication methods [8,40]. Thanks in part to new information technologies, the resources required to participate in collective action have declined dramatically [40], rendering previously well-accepted theories of collective action [48] as no longer completely accurate. The rise of online-supported protests in recent years has led to the "The Protester" being selected as Time Magazine's Person of the Year in 2011 [65,27]. While the media tends to focus on protests that occur offline that in part are mobilized using online resources, we believe that another fruitful area of research is protests that occur online, particularly those that have been enabled by newer web 2.0 technologies.

We aim to make sense of online protests in the context of organizations that adopt user-generated content as a key source of value creation. The empiric content of our study concentrates on user protests and administrative retaliation that occurred on and against a popular social bookmarking site called Digg. Digg allows users to submit links to interesting content on sites and other users vote on the content's newsworthiness. Digg was one of the first web companies to empower users with the ability to share news with others and actively create content, leading to the emergence of news sharing via sites such as Facebook and Twitter [41]. Because Digg, Facebook, and other social sites primarily monetize

* Corresponding author.
E-mail addresses: lsilva@uh.edu (L. Silva), hpanahi@uh.edu (H. Panahi).

through advertising, continued user contribution and engagement is critical. Accordingly, we have two research objectives. First, we aim to empirically study how these protests unfold and second, by interpreting our empiric account, we propose a theoretical generalization of this phenomenon. Our theorization consists on analytical generalizations [37] of the context of the protests and of the main properties that characterize the interactions between users and administrators which in turn define the protest.

The findings of our paper reveal a tension between the users and administrators of web 2.0 websites that is not adequately addressed in the practitioner or researcher literature. This tension intensifies and becomes salient during an online protest, as users continue to protest and administrators continue to penalize, eventually leading to one side capitulating. In this study, what began as a website user's submission about the leaking of an encryption key quickly transformed into a protest against the website itself, using the same tools and technologies that users had been equipped with to provide a more democratic platform of content creation and curation. Administrators must be aware of the conditions, processes, and consequences of these online protests, and carefully monitor and adjust their actions in face of potential unrest among its users. While researchers have studied protests both online and offline, there has been little research on how web 2.0 technologies contribute to the conditions and development of a protest. The conclusions of this study suggest that there is still more work to be done to understand how and why these protests begin, develop, and conclude.

The remainder of this paper is organized as follows. Following this introduction, we present an overview of online protests in the literature including past empirical cases and key properties. We identify a gap in the literature of online protests, particularly regarding empirical cases where a protest occurs completely online. We follow with an account of our research approach: an interpretive case study. We then present the case, which is divided into two parts: (1) a context of Digg, including its history, functionality, and a discussion of its business model (2) a narrative of a series of protests that occurred on Digg's site. The case is followed by the results of its interpretation. We conclude by reflecting on the implications of our study.

2. Online protests in the literature

In this section we concentrate on the literature that discusses the emergence and main properties of online protests. We first propose a working definition of online protests and provide a general background on how these protests have originated. We deem an online protest as an event that occurs when a significant number of site's users strongly oppose the administration and, in doing so, manifest their discontent by taking belligerent actions against the site, such as defacing web pages or participating in a denial of service attack. Before user-generated content sites were widespread, protests against Internet-based services were not as straight-forward; i.e. an act of protest such as defacing a site or causing serious damage required technical competency to 'hack' and change the content of the site. Since users did not always have the means or tools to voice their discontent in such a radical manner, they engaged in milder forms of rebellion, such as through online petitions and boycotts [15]. As the barrier of technical proficiency has decreased, the nature of online protests has changed as well. We begin our analysis of the literature by examining empirical and theoretical investigations of online protests.

Since Internet related protests can range from *Internet-supported* to *Internet-based* [68] it is worth further demarcating what we mean by the term online protest. An Internet-supported protest may involve an action as simple as an online petition

expressing discontent for a change in a corporation's privacy policies. In these type of protests, the Internet is a vehicle for coordinating, but not the primary source of action. Internet-supported protests continue to become more prevalent, most notably in 2011, where the Internet was used to coordinate activities in the Arab Spring, and consequently in other countries where other protests emerged [27]. Conversely, Internet-based protests are aimed at the site itself, occur completely on the Internet, and may include hostile activities such as defacing of the site [68].

For the purposes of our study, we focus on protests that are completely Internet-based, with very limited or no offline presence. Specifically, we are interested in protests within the context of what has been referred to as a hacktivist rhetoric [77], whereby the protesters attempt to deface a site or bring the site down through, for example, a denial of service attack. The site is not only the location of the protest, but also the reason that the users are protesting; faced with a potential threat to their beliefs and values, users express their discontent using no new tools or resources. Rather, the users creatively repurpose the existing tools and platform they are given as members of the website's community.

To position our contributions in the section below we discuss what the extant literature has found and proposed when attempting to explain the nature of these types of protests. Specifically, we focus on the properties that characterize online protests. We do not claim such properties are exhaustive, rather we present them with the purposes of organizing our literature review and, as mentioned above, to position our theoretical contributions.

Properties of online protests

Online protests reflect the properties of the Internet, and more specifically, the World Wide Web. In this sense, after examining the literature that concerns online protests, we found that this phenomenon is enabled by the following social properties of online participation: (1) the rapid diffusion and availability of information [25,29,30], (2) the ability for groups to self-organize through computer networks [5,8,25,38], and (3) low costs of participation [17,25,68]. Each property along with its relationship with online protests is discussed in further detail below.

The rapid diffusion and availability of information [25] has created an environment where actions by corporations are more visible, leading to greater accountability and what [25] labels a "reversal of the Foucaldian panopticon". *The reversal of the panopticon* occurs, Garrett argues, when organizations realize that they are being monitored through groups such as corporate watchdog sites, thereby inducing them into self-censorship. Instances of protests leading to tension between organizations and protesting groups can be traced back to the early days of the Internet. For example, empirical studies of online protests demonstrate how self-organizing online groups have successfully convinced large organizations such as Intel [38] and the U.S. government to reverse actions related to consumer privacy [29,30].

One example of a protest and the *reversal of the Foucaldian panopticon* occurred in 1999, when Geocities, a web site hosting company owned by Yahoo!, made changes to its terms of service that indicated any content hosted on their servers could be used by Yahoo! for whatever purposes they deemed fit [30]. In response, web page owners who had content on Geocities mobilized together and "grayed out" their web pages, making the content difficult to read, while also putting a short notice that indicated their anger towards the terms of service changes. The defacing of their own sites sent a powerful message, and combined with an online petition and an e-mail campaign, resulted in Yahoo! modifying the offending clauses in the terms of service [33].