

# Necessary, Unpleasant, and Disempowering: Reputation Management in the Internet Age

Allison Woodruff

Google

1600 Ampitheatre Parkway, Mountain View, CA 94043

woodruff@acm.org

## ABSTRACT

In this paper, we report on a qualitative study of how users manage their reputation online. We focus particularly on people who are bothered by content online about themselves and how they manage reputation damage and repair. We describe how users view reputation management chores as necessary but unpleasant, and how they feel disempowered to repair their online reputation. Participants were unable to identify feasible repair mechanisms and ultimately failed to resolve their problems. Given the current state of dysfunction indicated by our findings, we advocate for increased HCI research attention to this area.

## Author Keywords

Reputation management; online reputation; privacy

## ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## INTRODUCTION

“Megan” was a manager at a company that went out of business due to a hostile takeover. The employees all lost their jobs, Megan included. Months later, Megan was visiting her family for the holidays, and her family members were taking turns Googling themselves for fun. When it was Megan’s turn, a page came up that she had never seen before. Former employees had started an “I Hate this Company” webpage to bash all the managers, and Megan’s name appeared on the list. Stunned, Megan talked with her family about posting a response, but ultimately decided not to because other managers’ responses had been met with a proliferation of nasty comments. Megan’s family told her that once the information was on the Internet, she had no recourse and there was nothing she could do or any money she could pay to remove it. Nonetheless, over the coming months Megan researched reputation management firms. She decided they were “sketchy” and she didn’t trust them to help her. Megan is currently training for a new profession. The webpage still appears in a search for her name, and she is concerned it will negatively affect her ability to get clients when she starts her new career. – *Story told by study participant*

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the Owner/Author.

Copyright is held by the owner/author(s).

CHI 2014, Apr 26 - May 01 2014, Toronto, ON, Canada

ACM 978-1-4503-2473-1/14/04.

<http://dx.doi.org/10.1145/2556288.2557126>

Reputation plays a key role in social interaction, providing a means of assessing the trustworthiness of others and enforcing social norms [49]. Managing one’s reputation has always been a complex task, and it has become even more challenging with the advent of the Internet, which creates a potentially permanent record of people’s alleged or actual actions that is readily accessible throughout much of the world. Online damage to one’s reputation can translate into offline harm, limiting an individual’s opportunities to find a job, attend college, or establish social relationships. Solove observes that “throughout history, people have found some mechanism for vindicating their reputations” and “every society needs some mechanism to resolve reputational harm” [49]. Nonetheless, as we will argue, the Internet era as yet offers few if any appropriate repair mechanisms for reputation harm, since those who are impugned have limited legal, social, or technical recourse. The research community has the opportunity to affect the new mechanisms that evolve. Accordingly, in this paper, we explore reputation damage and repair in the Internet era, with an eye to informing current and future systems. Our main contributions are:

- We present a novel qualitative study of participants’ experiences with online reputation damage and repair.
- We describe how participants view managing their online reputation as necessary, yet unpleasant and disempowering. Participants were unable to find feasible repair mechanisms and ultimately failed to resolve their problems.
- We argue for further HCI research in this area to inspire and inform evolving technological, social, and legal mechanisms for handling and preventing reputation damage.

The remainder of the paper is organized as follows. In the next section, we review related work. We then introduce our participants and methodology. Next we present our findings. We close with discussion and conclusions.

## RELATED WORK

A decade ago, Palen and Dourish identified search engine results as a self-presentation challenge [38]. Since then, numerous researchers have explored self-disclosure and self-censorship in social network services [e.g., 1,5,16,26,52,55,58]. Zhao et al. investigate how users make decisions about producing and curating content on

Facebook [58]. Wang et al. investigate regretted sharing on Facebook and report that some incidents had serious consequences such as job loss or relationship breakup [55]. Further, Lampinen et al. explore how users negotiate disclosure by others in their social circles [26]. By contrast with these, we focus on content which the user did not generate themselves, and content over which they have little direct influence or control.

Studies have also shown that users are concerned with online availability of public records [36], as well as online harassment, drama, and profanity [7,33,50]. Similarly, numerous journalistic reports (both online and print) have chronicled online reputation damage over the years [e.g., 2,3,10,15,29,53]; while these sources are not academic, they warrant consideration because they cover issues that are not yet well represented in the academic literature, and because our participants had often read articles in the press that informed their perspective on reputation damage. Solove draws on such journalistic reports as well as legal cases [49]; by contrast we conducted an empirical study in which we interviewed participants directly about their attitudes and practices. Additionally, Solove's work was published in 2007, and our work offers an updated perspective since many new Internet services and practices have arisen in the intervening years. The process by which rumors spread has also been investigated; Liao and Shi report on the transmission of rumors in a Chinese microblogging system and provide a useful summary of related work [27]. We focus here on how users go about handling such content when it does appear online.

Reputation systems in services such as eBay have also received considerable attention [e.g., 24,44]. Such systems operate in highly constrained environments in which users explicitly rate entities such as sellers or goods; by contrast we consider reputation in the broader context of what is generally represented about an individual on the Internet.

Little work has been done on repair, although Sleeper et al. discuss how Twitter users sometimes ameliorate harm by apologies or other means [47]. In Europe, the idea that data should be "forgotten" when it has outlived its usefulness has gained prominence and is now being tested in a rash of legal cases [3], and some technical directions have been proposed for forgetting online data [5,34,48]. This topic is however riddled with complexity since mechanisms for deleting digital content can be circumvented by users who make analog copies of the content before it expires. Little research has been done on reputation management services, although websites, industry reports, and press provide information about them [e.g., 6,13,42,43,51]. In a rare exception, Bartow considers reputation management companies, arguing they are incentivized to foster online conditions that perpetuate harassment [7]. Further, legal scholars such as Bartow, Fahimy, and Solove lament the lack of legal protection for online reputation and propose legal remedies such as increased liability for defamatory

acts [7,19,49]; by contrast, we focus on design-relevant findings.

In this paper we extend these discussions by exploring how individuals handle reputation damage and attempt to repair their reputation on the Internet. To our knowledge, this is the first such study of this topic.

#### PARTICIPANTS AND METHODOLOGY

In our initial pilot, we interviewed 7 people (4 men and 3 women) recruited by an external recruiting firm. These participants were not selected based on their concern with reputation management but rather were chosen to represent a wide range of Internet users, in order to contextualize the research in a more general population. They lived in the San Francisco Bay Area, and ranged in age from 26 to approximately 60. They represented a wide range of occupations, such as teacher or county clerk. We conducted semi-structured interviews in person in February 2012. The interviews were exploratory and brief, lasting approximately 15 minutes. They were video-taped, detailed notes were taken, and illustrative quotes were transcribed.

We then interviewed 21 people (11 men and 10 women) who have been 'bothered' by information about themselves or their small businesses on the Internet.<sup>1</sup> These participants were selected based on responses to a screener distributed by an external recruiting firm to a large national panel of potential participants. The screener included multiple choice and free-text responses; all responses were reviewed and participants were selected to represent diversity of demographics and experiences with problematic online content. They lived in metropolitan areas, suburban areas, and smaller towns throughout the United States in states such as California, Kentucky, Pennsylvania, and Texas. Participants represented several ethnicities and ranged in age from 24 to approximately 70. They represented a wide range of occupations, such as life coach, stay-at-home parent, writer, attorney, and employment recruiter. We conducted semi-structured interviews by phone in May and June 2012. Interviews lasted approximately 1 hour and were recorded and transcribed.

We used a general inductive approach [54], which relies on detailed readings of raw data to derive themes relevant to evaluation objectives. In our case, the primary evaluation objective was to inform the design of reputation management mechanisms by understanding and characterizing: (1) participants' practical and emotional experiences with online reputation management; and (2)

---

<sup>1</sup> Intermingling of personal and professional reputation is common. Participants reported that reputation attacks related to their personal lives affected them in their professional lives and vice versa. For this reason, we included people who had been slurred personally and/or professionally as well as owners of several small businesses who primarily reported issues tied to their reputation as an individual (e.g., the owner of a small tutoring company was accused of being unintelligent and therefore unqualified to tutor). The findings we report in this paper appear robust across the recruit.

participants' online reputation management strategies and the outcomes of their application of these strategies. Accordingly, we focused on these issues in the interviews, and then we jointly analyzed the data from both sets of interviews, closely reviewing the text, performing an affinity clustering to identify emergent themes [9], and iteratively revising and refining categories. We also created a collection of all stories of reputation damage told by the participants and characterized them according to emergent features such as whether the accusation was true, the participant's strategic response, and the outcome. In keeping with the general inductive approach, our analytic process yielded a small number of summary categories indicating that managing one's online reputation (and in particular reputation damage) is: (1) necessary, (2) unpleasant, and (3) disempowering. In the next section, we broadly discuss reputation damage, and then we dedicate a section to each of these three categories in turn.

### REPUTATION DAMAGE

In this section we discuss the nature, impact, and prevalence of damaging information online.<sup>2</sup>

#### Damaging Information Online

Numerous sites afford users the ability to put favorable or unfavorable content online about themselves or others. Naturally users can publish extensive information about themselves and others on social networking services, blogs, or other sites. High-profile blogs such as Gawker [21] and Wonkette [56] have created reputation management crises for numerous celebrities and politicians. Sites such as Hollaback! [22] and Don't Date Him Girl [17] provide the opportunity for users to shame or reprimand others. Revenge porn sites show nude photos submitted by former romantic partners [12].

Third party sites can gather and profit from various data sources. Dozens of data aggregators such as BeenVerified [8] and MyLife [37] draw on public records databases and publish information such as people's home addresses, ages, relatives' names, and criminal records. Online mug shot databases show mug shots of people who were found innocent as well as guilty, and they have been accused of extortion for charging exorbitant removal fees [35].

Online review sites such as Yelp [28,57], Angie's List [4], and Ripoff Report [45] have become critical tools for consumer selection of services and businesses, and review sites such as RateMyTeachers [41] cover professionals. Some have been accused of extortion, e.g., Ripoff Report

<sup>2</sup> A note about terminology is in order. Like [24] and consistent with the perspective of our participants, we draw on lay definitions of concepts such as reputation (what is generally said or understood about the character of a person or thing), reputation management (efforts to influence the reputation of a person or thing), and reputation damage (unfavorable information that is disseminated about a person or thing). While a discussion of academic definitions is beyond the scope of this paper, see the cross-disciplinary survey in [31].

has been accused of authoring false reports and charging \$2000 to remove them via its "Arbitration Program" [45].

To give a sense of our participants' experiences, we provide the following examples:<sup>3</sup>

*P14's<sup>4</sup> client posted scathing comments about him, as well as personal information about his wife, in a public forum in an attempt to force him to provide additional services for no additional charge.*

*P02 was at an event at the beach when she was supposed to be at work. A reporter was covering the event. The reporter took photos of P02 in a bikini and included them in an online article along with P02's full name and employer and the fact that P02 was "playing hookey." The article still appears prominently in searches for P02's name, even though the event was years ago.*

*Eight years ago P01 listed a degree he does not have on his resume, and a small town newspaper ran a story about the falsification. The article still comes up in the first page of his search results and he does not understand why, since much more recent content about him exists.*

#### Impacts of Reputation Damage

The stakes are high when it comes to one's online reputation. Reputation harm can limit career, academic and social opportunities – human resources recruiters, college recruiters, insurance agents, potential clients, potential romantic partners and many others use search engines to do online "background checks."

"The Internet never forgets. Once something negative is posted online about you it's there forever, slowly eroding your reputation and **limiting your opportunities for a better life.**" – Reputation.com website [43]

"Suppose they did a search and they find all those pornographic links this guy associated me with? Well, I have zero chance..." – P03

"I have a lot of women friends who have bad luck with boyfriends so I've occasionally [done an online search to find information about their boyfriends]..." – P19

For example, there are numerous journalistic reports of companies conducting online background searches and/or reviewing social media content for potential employees, and one survey found that 70 percent of human resources professionals in the United States have rejected a job

<sup>3</sup> As can be seen from these examples, reputation damage varies according to factors such as whether the content is true or false, the motive for posting, and the recency of the information. In our modest sample size, we did not observe any particular patterns related to these factors. For example, participants reported similar difficulty removing information regardless of whether it was true or false. The findings that we report here are therefore representative of our participants, but examination of the potential nuances relating to such factors remains a topic for future work.

<sup>4</sup> Notationally, we indicate participants from the main study with pseudonyms P01-P21, and participants from the pilot with P22-P28. We decline to provide additional demographic indicators in the pseudonyms to maximize anonymity, given the nature of the interviews. Further, we anonymize companies' names in participants' quotes. We use bold font in select quotes to emphasize content of particular interest.

applicant based on content they found online [23]. Such practices are controversial.

“It was a little cubicle, and she thought they were taking her in for further testing because she had been there all day. They said this is the last stage and then your application process is done, and they asked her into a cubicle, and she had signed something agreeing for them to take a look at her [social networking service] page... Somebody in a desperate situation is liable to do anything. You really really want that job, you’ve been without work for a while, you might let somebody enter your house if you think it’s gonna make some money... she told me she did it [logged in to her account for them].” – P07

“I would never [look at a potential employee’s social networking service page]. It’s totally personal. No.” – P17

Reputation harm can also be dangerous. For example, when hip hop artist Daniel Lee was wrongly accused of diploma falsification, outraged netizens threatened to kill Lee and his family [15]. Some Internet shamers have been alarmed by unexpectedly vicious responses to what they have posted and have begged Internet mobs to stop harassing the victims [49]. Further, reputation harm can cause emotional trauma such as humiliation, and online attacks have been implicated in a number of suicides [e.g., 29]. Some argue that cyberbullying is simply traditional bullying in a new media. However, others suggest it is qualitatively different because it is “always on”, and because information is disseminated more widely and quickly than with traditional bullying [2]. Beyond specific impacts on career, social life, and emotional and physical well-being, reputation damage on the Internet is also concerning because it limits opportunities for rehabilitation and self-exploration [49].

Of course, in some cases reputation harm to an individual benefits society. When allegations have basis in fact and someone is a danger to others, it may be appropriate and useful for the information to be highly publicized. Similarly, legitimate whistleblowing merits support. Further (and arguably problematically), public safety organizations are increasingly utilizing publicly available social data for investigative purposes, and some have recruited the public to provide information about potential criminals [40].

### Prevalence

Little concrete data is available about the prevalence of reputation harm on the Internet. However, in a survey in 2010, 4% of online adults reported bad experiences because embarrassing or inaccurate information was posted about them online, a number unchanged since 2006 [30]. Our recruiting responses suggest the same order of magnitude. Further, unpublished studies we have conducted suggest the number of people bothered by information online about themselves may be very roughly 20%. By comparison, the number of people searching for themselves is fairly large (57% in [30] and higher in our small sample). While the number of people who feel they have been negatively impacted by content online may be quite low, the impact can be severe when it occurs.

### NECESSARY

Participants perceived that managing their online reputation is necessary. Further, when it was damaged, they were highly motivated to improve their reputation and they took action to do so. They explained that the Internet has become a central part of daily life, and therefore the information that can be found about them online plays a key role in establishing social relationships, job opportunities, business clientele, etc. They explained that handling one’s Internet presence has recently become an important part of being a mature, responsible adult and/or a successful professional.<sup>5</sup>

“I think a lot of people judge based on [what’s on the Internet] because the Internet is so prevalent today... they go to the computer for all of their information... I think the Internet is becoming most people’s bible of information about everything... as a business **I have to adapt and realize that is happening and that it’s important and it’s something that has to be dealt with.**” – P05

“That’s new to most people’s lives in the last 10 years and it seems like it’s permanent, it’s not going anywhere.” – P06

They generally presumed that everything on the Internet is public and permanent, further elevating the importance of online information. As a result, they often regulated their behavior online (variations on activity reported in e.g., [1,16,26,52]) and advised their children to do the same.

“**You have to assume that anything you say online is now the property of the entire world.**” – P04

“Once you have a history in that [social networking service] world I wouldn’t imagine you could clean it up.” – P10

“I’ve never spoken badly about somebody online because I know that that doesn’t go away.” – P02

“When it comes to online, that’s a whole different boundary... Let’s say I’m talking to you. It’s a personal expression from me to you... there’s something implied about the trust of the moment I think... **once it hits online, it becomes just verbiage that follows you around...** the whole public sharing thing, that’s just too raw.” – P09

Some participants said that even if they were not currently concerned about information about themselves online, they had to act responsibly on behalf of their future selves, e.g., they were concerned about what their children or potential employers might see about them in the distant future.

“**I think that’s kind of a new thing that is part of maturing now.** Our parents didn’t have to worry about that, but **part of our growing up process I think is being more conscious**”

<sup>5</sup> A note is in order regarding the relationship of the three main categories to precipitating events. Necessary and unpleasant apply broadly to reputation management and often occur even before any specific problems arise (e.g., participants often reflected on reputation management and/or took proactive action prior to any precipitating event). However, feelings of necessity and unpleasantness were generally intensified by specific events. Further, anticipatory fear of hypothetical events exacerbated unpleasant feelings for some participants. Disempowering as we observed it occurred primarily when participants were reacting to specific damage.

**about yourself and what you do on the Internet, and how you represent yourself...** Where I am in my life now, **I feel like I don't want my nieces or my children to see me doing things... I do bad things and I don't want them to be there forever... It's okay for them to be there now because it's funny or cool** or whatever that I'm like drunk and smoking a cigarette or acting like an idiot on the sidewalk. And it's kind of funny the next day, so you want to show your friends, 'Oh, look what a big idiot I was last night!' And that's fine. **But next week it's not going to be funny anymore when I'm looking for a job, or in years, when I have children.**" – P27

### UNPLEASANT

Managing one's online reputation was experienced as tedious, unpleasant, and even frightening. Participants oriented to reputation management as a chore for which they were too busy, and expressed a tendency to avoid or neglect it. For example, while participants did search for themselves online, they often did so infrequently. As a result, damaging information was often online for months before participants knew about it, and they were usually notified about it through social channels, e.g., phone calls from family. Some added that they disliked thinking about it because it was "negative energy." Therefore, they wanted to hire someone to whom they could delegate these tasks, although as discussed below they had reservations about current reputation management offerings.

"I guess that's why I contacted these firms because it is such a time consuming process... I just don't have the time (laughs) to work six months on getting a negative comment that's not accurate down." – P05

"Dealing with a lot of negative energy, I would just prefer not to do it myself... I know it has to be dealt with if it's affecting the business, but it's just hard for me to get into that kind of combative mindset. That someone is being negative for no reason..." – P05

A number of participants reported being frightened by reputation-related horror stories in the media. Small business owners said they are terrified of being struck down by a random negative review, and they have no idea how they would recover (although a few believed they could sustain a little bit of negative information if there were sufficient positive information online). Some felt it was inevitable that they would eventually be attacked. By contrast, some had not anticipated such an event and had been caught by surprise.

"I'm very scared of [getting a negative review]. That's my biggest fear is someone comes and they don't like their workout and they leave me some crazy... review that they hated me or something... and I can't take it down... It can easily be swayed so simple, like somebody doesn't like the lighting, or the water you serve tasted funny... It could be something so minor and people take to the web to just blurt it out... That one day, it could kind of ruin your business." – P02

"I had everything covered except what I didn't foresee... it never occurred to me someone would take an interest in destroying my reputation... One day I put in [search terms for my newsletter on a search engine], and up comes xxx

something to do with pornography, something else to do with pornography... the whole page is like that... I'll never know why he was doing it. I don't know who this guy is, he's just some crackpot in India." – P03

"I didn't realize that people could get out there and say negative things about you that weren't really true and how easy that was to do." – P05

Participants were particularly concerned because they felt negative information could "snowball" and go viral, and because there are no (or few) protections or consequences.

"Someone could put something on there and it might catch on and really have a negative effect." – P03

"It's like we can't even control [the technology]... It's getting out of hand... People are posting information they should not post." – P08

"The anonymity that you have online is frightening because you can really get away with anything, especially if you're very smart. I'm a little bit of a civil rights activist, I don't believe in censorship... [but] I do think that there need to be things in place that keep people accountable whether it's some twelve year old bullying the neighbor or some bad guy connecting with some teenage girl online." – P09

"There's not really any merit behind it but they do it anyway. You can put really anything out there you want with no filter or really no negative consequences usually." – P05

Participants also believed that the motives of the antagonists were often malicious and the information that they posted often had no value to society.

"I don't interact really with the kind of people that would just get a hair up their you know what, and just decide to go trash me. But I think there is a world of random people out there that that's their entertainment... people that just go how can we give someone a bad day... **people that their charge comes from not serving the world, it comes from trashing the world.**" – P09

"It never occurred to me that someone might want to damage my reputation just for fun, not because of a grudge but just for the fun of it. **There's a lot of crazy people that are out on the Internet that just like to destroy things for fun.**" – P03

### DISEMPowering

Participants were originally optimistic that with sufficient effort they might mitigate damage to their online reputation, and they actively worked to do so. However, their efforts generally failed, and over time they lost confidence in their ability to influence online content about themselves. In this section we describe the strategies participants considered for handling reputation damage, as well as their experiences and results when pursuing these strategies.

#### Ignoring it... is unsatisfactory

Participants wanted to ensure their online reputation was as positive as possible, and they did not feel comfortable ignoring reputation damage.

"I thought, well, maybe I will just ignore it, it's just stupid anyway, but it was bothering me." – P14

**Persuasion... is ineffective**

Participants did not generally expect or experience success in convincing people to remove adversarial content. By contrast, many participants had easily persuaded friends and family to delete photos they had posted without malicious intent on social networking services.

“Things had deteriorated too much at that point for me to actually ask [her to take it down].” – P14

**Rebuttal... is risky**

One might expect rebuttal to be a viable option (consider for example Pasquale’s proposal to provide individuals a “right of reply” for search engine results [39]), but most participants were reluctant to rebut or refute negative content online. Some were afraid that a rebuttal would only incite further attack. Others did not want to dignify unfair attacks with a response. In general, they could not imagine a good outcome from anything they might say. Many reputation management experts also express reservations about the usefulness of rebutting, because a rebuttal may elevate the negative content in search engine results and an angry poster can rarely be appeased in any case [e.g., 6,13].

“[There were] derogatory comments about I was a cheerleader in high school, and they’re like how can a dumb cheerleader expect to run a positive business... I kind of feel insulted, and **I shouldn’t have to defend myself on that level.**” – P05

**“I decided it wasn’t worth my time to lend that any credence.”** – P07

“There were some people that were speaking about my race... I didn’t do anything about [it]... There’s nothing you really can do about that. You just have to accept it and move on.” – P16

**TOS violations... do not apply**

Many participants considered filing Terms of Service (TOS) violations with the hosting site so it would remove the content. However, the damage they faced was not usually covered by TOS.

“I did a search, put my name in quotes, and it came up with [a teacher review site]... It’s just total slander... **You can only have it down if there’s certain criteria**, like ‘talks about physical appearance’, ‘uses profanity’, things like that, **and none of that applied.**” – P23

**Legal recourse... is limited**

In theory, legal action has the potential to facilitate takedown or vindicate a victim of reputation harm in the public eye. In practice, however, it is difficult for an injured party to prevail in court; numerous legal scholars have argued that in the United States, laws are outdated and provide insufficient protection for online reputation damage [e.g., 11,19,49]. The notion of freedom of speech (the right to express opinions without censorship or restraint) frames much of the dialog regarding what content can be posted, and what if any content must be removed. Citron and Fahimy lament that in the United States freedom of speech is weighted too heavily against other factors such as public interest, and argue for a more balanced position (such as that taken in the European system) that would more harshly

sanction misrepresentation and defamation [11,19]. Further, Section 230 of the Communications Decency Act (CDA) of 1996 plays a key role in the United States in determining legal liability for Internet content. It essentially says that operators of Internet services are not considered publishers and thus are not liable for the content posted by others (although it is a complex legal question whether services have liability once they have been made aware of defamatory content [49]).

Even if and when the laws offer protection for reputation damage, legal recourse may be inordinately costly and time-consuming, hard to pursue if the attacker has posted anonymously [11], or complicated by international issues when attackers or site owners reside in other countries (as experienced by one of the participants). Additionally, some reputation management experts recommend against legal action because it can exacerbate the problem by drawing additional unwanted public attention to the issue [49].

**Asking for help... fails because no one is responsible**

Some participants lamented the fact that *all* the parties who could help them defend themselves (e.g., forum owners, hosting sites, search engines) took a “hands-off” position regarding content written by third parties [20]. Further, participants’ attempts to reach site owners or search engines were often futile, which was a great source of frustration. Participants often judged the reasonability of one site or search engine relative to how the others behaved.

**“There’s no mechanism to [hold the author accountable] because of the [forum] owner being removed and [the search engine] being removed...** the only leverage I had at that point was to say, ‘Ok, let me provide you [the attacker] ten thousand dollars worth of product for you to remove that post.’” – P14

“Some of the sites, somebody says something about you and it’s done, it’s there and they absolutely won’t take it down and that’s their god given right and that’s just the way it is... you can’t get a hold of anybody, there’s no process or anything else... you can email them till you’re blue in the face, won’t nobody respond to you.” – P15

“I kept checking to see if it was there. And it was. I wrote in three or four times, and then I finally just gave up, because I never got a response from [the search engine]...” – P09

“I was really having anxiety about it, like ‘this has to come down, immediately.’ ... so I started emailing [the site]. There was no real way to contact them, they didn’t have a phone number, and they weren’t a real legitimate business.” – P02

Some participants believed that sites and search engines should be held accountable to remove certain types of content because it is clearly without merit and easily identifiable (although [50] suggests automatic identification may in fact be difficult).

“They’re not too sophisticated. I mean if you have, ‘John Smith is a homo’... things that are completely insulting and hostile and all that, **that surely is not communication that should in any way be protected...**” – P06

“I don’t like to censor anything. I am all about this is America, you can do what you want, but [cyberbullying is] an area where I really think that there should be more responsibility. I think if there’s a website floating out there [and] there’s just clear and blatant and hideous cyberbullying... I feel like come on you can clearly see what’s going on... they should be able to build the technology that could filter out the key words that bubble up in bullying...” – P21

Search engines were of particular concern to participants, as they have become the de facto arbiters of online reputation.

“**Your online reputation is determined by the top [search engine] rankings...** Because most people rarely look past the first page or two of search engine results, your online reputation is determined by the top 10 or 20 search results.” – Don Sorenson, CEO of Big Blue Robot, in [51]

“[Search engines] say they are not publishing, so you should address yourself elsewhere. But **they are the ones that are spreading the word. Without them no one would find these things.**” – Javier de la Cueva, Madrid lawyer, in [14]

### Reputation management services... seem sketchy and expensive

In this subsection we discuss reputation management services, techniques used by these services, and participants’ perceptions of these services. We dedicate extra attention to this topic because such services are heavily represented in the press and were significant in the minds of the participants.

#### Players

Reputation management services are provided by players in an interlocking set of industries, such as public relations, marketing, social media monitoring, security and risk management, and crisis management. Although some firms have a full-service model to serve many of these needs, a number of companies have emerged recently that focus primarily on reputation management. While reputation management has typically been in the purview of the corporate world, more recently it has extended to politicians and celebrities, and then to ‘regular folks’ [32]. Several notable firms include Reputation.com (formerly Reputation Defender) [43], Reputation Management Consultants [42], Big Blue Robot [6], and REXXfield [13].

#### Techniques

Reputation management firms offer services such as advice on self-presentation, routine monitoring for adversarial content, and damage control in the event that problems arise. To ensure favorable search results, the firms generally use a combination of positive content creation (often ‘astroturfing’ to make it appear the content was created by an independent entity), search engine optimization (SEO), and data removal efforts. Typical positions are:

“**We inoculate the first pages of Search Engine Results** against negative listings by introducing more authoritative positive listings... [we can] also create Micro-Sites, Blogs and various Social Media sites, and create and submit Press Releases and Syndicated Articles...” – Reputation Management Consultants [42]

“**Anything bumped to the second page (or lower) is, for all intents and purposes, rendered invisible.** Our patented technology... can make good content rank highly in your results.” – Reputation.com [43]

#### Sketchy and Vague

A number of participants had spoken with reputation management companies and/or tried free trials of their services. The participants understood the basic approaches being proposed. However, they registered three key objections to reputation management services.

First, participants found the companies “sketchy” and were worried they might be a “scam.” The brands of the companies were unfamiliar to the participants, and they were frustrated by “vague” descriptions of what the companies do. They explained that they would be more confident about reputation management services from companies or individuals they know and trust (e.g., large corporate brands; computer consultants they had employed previously; or even family members).

“I’ve decided not to use reputation management services... they don’t wanna just give all the information out cause they don’t want people to do it on their own, they’re in there to make money so I understand that. But on the flip side of that, **the vagueness of their methods and their inability to guarantee specifics tends to make me suspect.**” – P14

“Everybody and their brother is springing up to do [reputation management services] anymore it seems like. I looked at some of em, did a trial on one... **Sounded kinda black hat to me so I was kinda leery...**” – P15

“**I’ve gone though probably 25 of these companies...** I just don’t feel comfortable paying someone a price when I don’t understand what they’re doing and why they’re doing it... I don’t have to fully understand the technical aspects of everything of course, and that’s not what I’m looking for, but I guess **I’m just looking for straight talk.**” – P05

“It’s your reputation, you just don’t trust it to anybody. If somebody’s doing that type of work for you or doing that type of service then I have to be real comfortable with them.” – P15

“I have a brother that’s great at computers, maybe he could do that if it’s not that difficult...” – P05

Second, ethics about modifying content varied a bit, but participants often found SEO strategies such as creating link farms to be unfair or unethical.

“What I did eight years ago was unethical and I’m trying to cure it, I don’t think curing it with doing something unethical is going [to help].” – P01

“If I start using dirty tactics, then I’m not no better than the person that I’m going up against. So I don’t get into that, that’s a slippery slope right there. I don’t want to go down that path.” – P15

Third, a few participants were concerned that they had to provide *additional* personal information in order to get unwanted information removed.

“I’m a little wary about opting out [of data aggregators], because **a lot of times the validation for opting out is giving more information than they already have**. Come on. I may be dumb but I’m not stupid.” – P12

“All the sites smacked of that gimmicky kind of language... On top of the fact that I don’t know who these people are and now you’re going to them because of something negative out on the web about you, it almost feels like jumping from the frying pan to the fire to then sit around and give them all this information when you don’t know the company, you’ve never heard of them...” – P21

### Costs

Costs for reputation management services vary widely, depending on factors such as the current ranking of negative content or the number of other people with the same name. Entry-level services are in the \$100 range at sites such as Reputation.com, but such services are largely targeted at people who have no negative content online and/or limited online presence. When negative content exists, costs grow quickly into the thousands or tens of thousands of dollars, and success is not guaranteed [53]. Programs for celebrities, politicians, and executives reportedly average between \$5,000 and \$10,000 per month [10]. REXXfield CEO Michael Roberts says he knows one person who spent \$600,000 in one year trying to improve their online reputation [13].

Participants generally felt these costs were far out of reach, and they often perceived reputation management services as being for large companies or celebrities.

“I actually got in contact with an Internet reputation management company... [they were going to charge me] **\$3000 a month**. And I just can’t afford that. **For a small [tutoring] business**, that’s too much.” – P05

“I’ve heard that the reputation management companies are fairly expensive 750 bucks, 1500 bucks. **They’re expensive, so it’s not for us**. I wouldn’t consider using them.” – P17

Due to a combination of the factors described above such as high cost and perceived sketchiness, and despite being concerned about unresolved reputation management problems and having spoken with numerous companies, *no* participants had purchased reputation management services.

### I’m afraid... to do anything

Numerous additional factors contributed to feelings of fear and helplessness. Some participants were afraid that monitoring negative content would elevate it in search results, making it even more prominent. Some participants also mentioned that monitoring information without the ability to take it down is simply upsetting. A few participants felt they did not have the skills necessary to manage their online reputation. Further, reputation damage was often an isolating experience, as participants were often too embarrassed to talk to friends or family about it.

“I’m kind of afraid [to look]. I don’t want to personally put any more hits on it and give it any more views than it deserves... I

**realized every time I clicked on it, I was giving it more power so I had to stop looking at it.”** – P02

“I don’t click on it... I know that if I click on it, it’s going to improve its results... That would always be my concern with anything that I do [such as using a monitoring tool]. That’s the last thing that I would want to have happen is for it to somehow generate a click through on that link.” – P14

### Giving up... is all that’s left

Participants had often tried hard to fix negative content, eventually concluding no realistic course of action existed and giving up. Most participants had ultimately failed to “fix” their problems.

### DISCUSSION AND IMPLICATIONS

Based on the experiences of our participants, feasible mechanisms do not currently exist for preventing and repairing online reputation damage. This is not to say that it is impossible to prevent and repair online reputation damage, but at a minimum the resources required in terms of time, money, and technical skills appear to be beyond what one might reasonably expect of most users. This disadvantage is exacerbated by the asymmetric nature of attack versus defense in online reputation; in the current state of affairs it is far easier to harm someone’s reputation than to repair it [49].

Given the current dysfunctional state of affairs, we advocate that the HCI community work to inspire and inform more effective technological, social, and legal mechanisms for reputation repair as well as the prevention of reputation damage. Clearly, these issues are not easy to address, because efforts to limit speech in order to protect reputation may stifle legitimate discourse. This is further complicated by the fact that the inherent tension between protecting reputation and protecting freedom of speech plays out differently in different cultural and legal contexts. Nonetheless, we remain optimistic that knowledge and skills from the HCI community can be brought to bear to improve the situation.

### Design Relevance of Primary Categories

We begin by discussing design principles that emerged from each of the categories of our analysis.

*Principle 1: Focus on repair and prevention mechanisms rather than awareness and motivation.* Journalistic reports and industry materials about online reputation often focus on raising awareness and motivation. Based on this guidance, researchers might pursue directions such as persuasive technology to encourage users to behave in certain ways. However, as reported in the Necessary section, our findings indicate that the primary obstacle to managing damage is not lack of awareness or motivation (or at a minimum raising awareness or motivation is not sufficient). Rather, the key problem is that the strategies people pursue are not effective.

*Principle 2: Design reputation management tools and services to minimize required engagement and negative*



*emotion*. For example, our findings as reported in the Unpleasant section suggest that occasional focused use would be preferable to frequent casual use, so tools should be designed to minimize notifications and number of visits. Further, negative information should be carefully contextualized and users should be reassured as appropriate.

*Principle 3: Develop feasible solutions to everyday reputation problems.* As seen in the Disempowering section, addressing reputation management damage requires disproportionate effort, when it is possible at all. Legal remedies are being pursued, but these are typically heavyweight and we would like to encourage complementary efforts by technologists. Therefore, we recommend the development of effective, viable technical mechanisms appropriate for everyday problems and people.

#### Value and Credibility

Legal scholar Meiklejohn provocatively argues that meaningful dialog is more important than freedom of speech per se.

“What is essential is not that everyone shall speak, but that everything worth saying shall be said.” – Meiklejohn, in [49]

However, determining “worth” is clearly complex and subjective, and research might yield improved models for assessing and presenting it. For example, crowdsourcing might be used to assess the value or credibility of online content. Previous research on determining and visualizing credibility (e.g., [18,25,46]) might be leveraged as well.

#### Collaboratively Edited Resource for Reputation

Many current efforts to handle reputation damage aim to manipulate search engine results via SEO, astroturfing, or other means. However, these are not stable solutions since search engine algorithms typically evolve in response to these manipulations. By contrast, we can take as inspiration a resource such as Wikipedia, which by virtue of its perceived credibility and popularity stably appears high in search results. The HCI community is well positioned to address the complex challenges of creating a high quality, collaboratively edited resource for representing personal reputation.

We encourage the reader to envision other potential research directions, bearing in mind that based on what has happened in other media, mechanisms for reputation repair may take decades or even centuries to evolve [49]. Therefore, we need not limit ourselves to readily available technological capabilities, but rather we can also imagine building on techniques that do not yet exist but are likely to exist in the future.

#### CONCLUSIONS AND FUTURE WORK

In this paper, we discussed participants’ experiences managing online reputation damage, illustrating how they find it necessary, yet unpleasant and disempowering. In the current environment, lay people cannot reasonably be expected to handle reputation damage on their own. Given this unfortunate state of affairs, we argue for increased HCI

attention to this area so that more feasible means might be found for preventing and repairing reputation damage. Future work includes research to more fully characterize different cultural perspectives, a rigorous analysis of the potential of specific HCI programs to inform mechanisms for reputation damage and repair, and survey-based research to establish the prevalence and concrete impacts of reputation damage.

#### ACKNOWLEDGMENTS

We thank the following for their thoughtful comments and contributions to this work: Paul Aoki, Sunny Consolvo, Jonathan McPhie, Martin Ortlieb, Rob Reeder, Steve Rogers, Lauren Schmidt, Sebastian Schnorf, Nikhil Sharma, Jessica Staddon, Cindy Yepez, and the CHI 2014 ACs and reviewers. We are deeply grateful to the study participants for sharing their stories.

#### REFERENCES

- Acquisti, A. and Gross, R. Imagined Communities: Awareness, Information Sharing, and Privacy on Facebook. *Proc. PET 2006*, 36-58.
- Andalo, D. Ban Cyber-Bullying Clips, Johnson to Urge Websites. *The Guardian*, April 10, 2007.
- Anderson, N. ‘Algorithms Can Have Errors’: One Man’s Quest to Purge Horrific Pictures from His Google Results. *Ars Technica*, March 4, 2012.
- Angie’s List. [www.angieslist.com](http://www.angieslist.com)
- Ayalon, O., and Toch, E. Retrospective Privacy: Managing Longitudinal Privacy in Online Social Networks. *Proc. Soups 2013*, Article 4.
- Barack, L. Protect Your (Online) Rep. *Registered Rep*, February 27, 2012.
- Bartow, A. Internet Defamation as Profit Center: The Monetization of Online Harassment. *Harvard J. of Law and Gender* 32, 2 (2009), 101-147.
- BeenVerified. [www.beenverified.com](http://www.beenverified.com)
- Beyer, H., and Holtzblatt, K. *Contextual Design: Defining Customer-Centered Systems*. Morgan Kaufman, San Francisco, 1998.
- Bilton, N. Erasing the Digital Past. *The New York Times*, April 1, 2011.
- Citron, D.K. Cyber Civil Rights. *Boston University Law Review* 89, 61 (2009), 61-125.
- Citron, D.K. and Franks, M.A. Criminalizing Revenge Porn. *Wake Forest Law Review* (forthcoming 2014).
- Crowell, G. Comprehensive Interview with Michael Roberts. *ReelSEO.com*, August 24, 2010.
- Daley, S. On Its Own, Europe Backs Web Privacy Fights. *The New York Times*, August 9, 2011.
- Davis, J. The Stalking of Korean Hip Hop Superstar Daniel Lee. *Wired*, April 24, 2012.

16. DiMicco, J.M. and Millen, D.R. Identity Management: Multiple Presentations of Self in Facebook. *Proc. Group 2007*, 383-386.
17. DontDateHimGirl. [www.dontdatehimgirl.com](http://www.dontdatehimgirl.com)
18. Ennals, R., Trushkowsky, B., and Agosta, J.M. Highlighting Disputed Claims on the Web. *Proc. WWW 2010*, 341-350.
19. Fahimy, G. Liable for Your Lies: Misrepresentation Law as a Mechanism for Regulating Behavior on Social Networking Sites. *Pepperdine Law Review* 39, 2 (2012), 367-421.
20. Flynn, L. Google Says It Doesn't Plan to Change Search Results. *The New York Times*, April 13, 2004.
21. Gawker. [www.gawker.com](http://www.gawker.com)
22. Hollaback! [www.ihollaback.com](http://www.ihollaback.com)
23. Ingram, M. Yes, Virginia, HR Execs Check Your Facebook Page. *GigaOm*, January 27, 2010.
24. Jøsang, A., Ismail, R., and Boyd, C. A Survey of Trust and Reputation Systems for Online Service Provision. *J. Decision Support Systems* 43, 2 (2007), 618-644.
25. Kittur, A., Suh, B. and Chi, E. Can You Ever Trust a Wiki?: Impacting Perceived Trustworthiness in Wikipedia. *Proc. CSCW 2008*, 477-480.
26. Lampinen, A., et al. We're in It Together: Interpersonal Management of Disclosure in Social Network Services. *Proc. CHI 2011*, 3217-3226.
27. Liao, Q., and Shi, L. She Gets a Sports Car From Our Donation: Rumor Transmission in a Chinese Microblogging Community. *Proc. CSCW 2013*, 587-598.
28. Luca, M. and Georgios, Z. Fake It Till You Make It: Reputation, Competition, and Yelp Review Fraud. *Harvard Business School Working Paper 14-006*, 2013.
29. Maag, C. A Hoax Turned Fatal Draws Anger but No Charges. *The New York Times*, November 28, 2007.
30. Madden, M., and Smith, A. Reputation and Social Media. *Pew Internet Report*, May 26, 2010.
31. Malaga, R.A. Web-based Reputation Management Systems: Problems and Suggested Solutions. *Electronic Commerce Research* 1, 4 (2001), 403-417.
32. Martinez, J. Harsh Reality for Hopefuls: You are What You Tweet. *Politico*, May 5, 2011.
33. Marwick, A.E., and boyd, d. The Drama! Teen Conflict, Gossip, and Bullying in Networked Publics. *A Decade in Internet Time: Symposium on the Dynamics of the Internet and Society 2011*.
34. Mayer-Schönberger, V. *Delete: The Virtue of Forgetting in the Digital Age*. Princeton University Press, 2009.
35. McLaughlin, M. Mug Shot Websites Face Lawsuit Alleging Violations of Arrestee Publicity Rights. *The Huffington Post*, January 14, 2013.
36. Munson, S.A., et al. Attitudes Toward Online Availability of US Public Records. *Proc. dg.o 2011*, 2-9.
37. MyLife. [www.mylife.com](http://www.mylife.com)
38. Palen, L. and Dourish, P. Unpacking "Privacy" for a Networked World. *Proc. CHI 2003*, 129-136.
39. Pasquale, F. Asterisk Revisited: Debating a Right of Reply on Search Results. *J. Bus. & Tech.* 3, 1 (2008), 61-85.
40. Piatt, T. How Law Enforcement Uses Social Media for Forensic Investigation. *Mashable*, February 3, 2012.
41. Rate My Teachers. [www.ratemyteachers.com](http://www.ratemyteachers.com)
42. Reputation Management Consultants. [www.reputationmanagementconsultants.com](http://www.reputationmanagementconsultants.com)
43. Reputation.com. [www.reputation.com](http://www.reputation.com)
44. Resnick, P., et al. Reputation Systems. *CACM* 43, 12 (2000), 45-48.
45. Ripoff Report. [www.ripoffreport.com](http://www.ripoffreport.com)
46. Schwarz, J. and Morris, M.R. Augmenting Web Pages and Search Results to Support Credibility Assessment. *Proc. CHI 2011*, 1245-1254.
47. Sleeper, M., et al. 'I read my Twitter the next morning and was astonished': A Conversational Perspective on Twitter Regrets. *Proc. CHI 2013*, 3277-3286.
48. Snapchat. [www.snapchat.com](http://www.snapchat.com)
49. Solove, D.J. *The Future of Reputation: Gossip, Rumor, and Privacy on the Internet*. Yale Univ. Press, 2007.
50. Sood, S., Antin, J., and Churchill, E.F. Profanity Use in Online Communities. *Proc. CHI 2012*, 1481-1490.
51. Sorensen, D. Protecting Your Company's Online Reputation. *Direct Selling News*, March 1, 2011.
52. Stutzman, F. and Kramer-Duffield, J. Friends Only: Examining a Privacy-Enhancing Behavior in Facebook. *Proc. CHI 2010*, 1553-1562.
53. Sullivan, P. Negative Online Data Can Be Challenged, at a Price. *The New York Times*, June 10, 2011.
54. Thomas, D.R. A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American J. Evaluation* 27, 2 (2006), 237-246.
55. Wang, Y., et al. 'I regretted the minute I pressed share': A Qualitative Study of Regrets on Facebook. *Proc. SOUPS 2011*, Article 10.
56. Wonkette. [www.wonkette.com](http://www.wonkette.com)
57. Yelp. [www.yelp.com](http://www.yelp.com)
58. Zhao, X., et al. The Many Faces of Facebook: Experiencing Social Media as Performance, Exhibition, and Personal Archive. *Proc. CHI 2013*, 1-10.