# From Reputation Capital to Reputation Warfare:
## Online Ratings, Trolling, and the Logic of Volatility

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## Abstract

What are the consequences of the tendency for ubiquitous online reputation calculation to lead not to more precise expressions of reputation capital, but, rather, to greater reputational instability? This article contrasts two conceptions of online reputation, which enact opposing attitudes about the relation between reputation and the calculable. According to an early online reputation paradigm – *reputation capital* – users strove to achieve high scores, performing the presumption that reputation could be incrementally accumulated and consistently measured within relatively stable spheres of value. Yet, ubiquitous calculation led not to more precise measurements of reputation, but rather to the increasing volatility of online reputation. Thus, a second online reputation paradigm – *reputation warfare* – has become increasingly prevalent, in which strategic actors indirectly capitalize on systemic volatility produced by reputation's ubiquitous online calculation. Steve Bannon's 2016 Trump campaign strategy, which mobilized trolls, exemplifies the indirect optimization of online reputation, placing an option on reputational volatility.

## Keywords

reputation, metrification, social capital, trolling, Steve Bannon, volatility, financialization

## Introduction

In online environments, reputation is pervasively quantified. Ebay sellers, TaskRabbit taskers and Airbnb hosts strive for high scores. Facebook 'Likes' and article view counts promise to render popularity palpable. Online reputation is a complex and contested construct, co-constituted across countless utterances, acts, judgments and calculations, involving myriad actors, apparatuses, governing bodies and networks. In spite of this complexity, online reputation's quantified expressions purport to place it robustly within the

realm of the calculable. Yet, with the pervasive optimism that online reputation can be readily quantified also comes great anxiety about the instability of online reputations. Online trolling flourishes alongside Online Reputation Systems. Victims of online attacks have experienced how changeable reputation can be in highly networked environments – and how systemic vulnerabilities (the promiscuous circulation of images and data) can be reframed as online users' personal transgressions (Chun, 2016: 145), often along racialized, gendered lines (Osucha, 2009; Nakamura, 2009). In the 2016 U.S. presidential race, candidate Donald Trump's late-arriving chief campaign strategist, Steve Bannon, made extensive use of online trolls, encouraging them to contribute their own anti-Hillary Clinton memes to Trump's campaign. While reputational attack has long been used in the pursuit of money, social advantage, political gain, justice and revenge (Hepworth, 1975), such tactics have 'scaled up' online. What are the consequences of the tendency for the ubiquitous foregrounding of reputation in online platforms to set the stage for increased conflict over the value of reputations?

This paper argues that there has been a recent shift between two predominant paradigms of online reputation, which enact opposing attitudes about the relation between reputation and the calculable: an incremental paradigm – *reputation capital* – and a volatile paradigm – *reputation warfare*. Prior to 2016, particularly within the 'sharing economy,' a predominant understanding of online reputation, *reputation capital,* presumed that online reputation's value accumulated relatively stably over time, 'adding up' as positive platform-based interactions increased. Myriad apparatuses for measuring online reputation tacitly performed the presumption that reputation could be ever more accurately measured with sustained platform interactions, although measuring reputation has never been a straightforward proposition. However, from the ubiquitous calculation of online reputation emerged a second, volatile paradigm of online reputation – *reputation warfare* – which

emphasizes the conflicts that inevitably arise over constantly-calculated reputational capital. The reputation warfare paradigm emphasizes *volatile* and *indirect* means for understanding the value of online reputation. Online reputation decisively breaks from steady, incremental accumulation, particularly on platforms that do not share a stake in upholding their users' reputations; further, strategic actors produce means to capitalize on others' reputational volatility. I define reputational volatility as the dispersion of reputational risk – potential gains and losses in reputation capital – rendered visible and actionable by platform metrics (such as star ratings and 'Likes') and the interactions through which they accrue. Many online platforms, such as Amazon and Twitter, make volatility readily available to reputational thinking, enabling users to visualize a measurable range of reputational values. Donald Trump's 2016 presidential election campaign capitalized on systemic volatility, producing what corporate financiers might call a 'real option' on reputational volatility. Steve Bannon understood online crowds as optionable swarms of racist, misogynist and anti-political-correctness reputational violence, and thus understood reputation's volatility as itself a potential source of value. (While this paper focuses on Bannon, similar risk-based understandings of online reputation could also be identified in left-leaning hashtag activist movements.) The three sections below – Reputation Capital, Reputational Volatility, and Reputation Warfare – aim to demonstrate a progressive shift in discursive attention over the last decade or so, away from an incremental understanding of online reputation, and toward an increasing operationalization of reputational volatility. In light of this paradigmatic shift, the conclusion further considers the need to theorize online reputation as *financialized* reputation – for which an understanding of volatility is key.

**Reputation Capital**

The early 2010s witnessed a wave of enthusiasm for online reputation. Advocates of the so-called 'sharing economy' (comprised of online platforms facilitating collaborative

consumption and peer-to-peer exchange) claimed that reputational measures reliably

translated trustworthiness across disparate contexts. As Rachel Botsman proclaimed:

> Imagine a world where banks take into account your online reputation alongside traditional credit ratings to determine your loan; where headhunters hire you based on the expertise you've demonstrated on online forums such as Quora […] Welcome to the reputation economy, where your online history becomes more powerful than your credit history (2012).

For Botsman, measuring reputation capital online enabled peer-to-peer sharing across

networks, empowering users. This characterization seems over-simple in light of recent

developments – from critiques of labour conditions in the sharing economy (Martin, 2016;

Scholz, 2017; Schor et al., 2015), to online defamation (Cheung and Schulz, 2018), to the

dystopian implications of China's Social Credit System, set to become mandatory by 2020,

which assigns each citizen a universal 'sincerity' score (Backer, 2017). Nonetheless, it

typifies the *reputation capital* paradigm of online reputation. This paradigm, firstly,

understands online reputation capital as an intangible asset; and secondly, posits an

incremental understanding of the accumulation of online reputational value, performing the

presumption that online reputational value could straightforwardly 'add up' across platforms.

This section offers a brief contextualization of the *reputation capital* paradigm, and surveys

some recent theories of reputation. It then argues the need for a theory of online reputation as

financialized reputation. As we shall see, the metrification of online reputation, far from

'pinning down' the value of reputation capital, set the stage for reputational volatility to come

to the fore.

*Defining Reputation Capital*

First, it is necessary to contextualize the term 'reputation capital,' used with some

frequency in management studies, socio-economics, and even self-help literature, though far

less often clearly defined. Broadly speaking, reputation capital could be defined as the

aggregated value of signs indicating the perceived esteem, honour, respect, likability,

importance and/or trustworthiness attributed to a given person or entity, understood as that person or entity's intangible asset. For example, in the Botsman passage above, heterogeneous signs attributing expertise and trustworthiness to an online user, from star ratings acquired as an Airbnb host to becoming a 'most viewed writer' on Quora, generalize *beyond* the platforms on which they accrue, as reputation capital. This intangible asset translates across contexts, and may lead to indirect monetary rewards (such as a lower interest rate on a loan, or better chances when applying for a job). From a management studies perspective, Kolesnikova, Fakhrutdinova and Zagidullina argue that personal reputation is partially, but not solely, a subsidiary form of human capital; since reputation capital is inevitably based on information circulating *around* its object, it transcends the bounds of human capital (2016: 80). Reputation capital also borrows from social capital, in that it encapsulates particular social attitudes toward its object (*ibid.*: 80). In spite of the tendency to associate reputation with social capital (*ibid.*; Origgi, 2018, 98; Gandini, 2015: 28), Pierre Bourdieu's sociological work might better cast online reputation as a form of symbolic capital, defined as "any property (any form of capital whether physical, economic, cultural or social) when it is perceived by social agents endowed with categories of perception which cause them to know it and to recognize it, to give it value" – for instance, honour as a form of repute (Bourdieu, 1994: 8). Symbolic capital is not a form of capital in itself; rather, it is an effect of capital, and one that guarantees other forms of capital's effectiveness. Thus, online reputation might be understood as a meta-logic that tends toward volatility (as we shall see below) precisely because it is based on the groundless self-referentiality of symbolic capital.[i]

*Theorizing Reputation*

Though increasingly visible online, reputation has remained an under-theorized concept until relatively recently; current work from a variety of disciplines has begun to

further consider how reputation has changed within post-digital contexts, and interrogate the tricky relationship between reputation and value. As Gloria Origgi writes, "reputations are made or lost within dynamic processes. Social capital is therefore *uncertain capital*" (2018: 98, emphasis in original). Yet reputation, however biased and flawed, remains an indispensable social-epistemological tool within information-rich societies. Due to the sheer volume of information, assessing the reputations of those who proffer information supplements necessary judgments of that information's quality (Origgi, 2012). Drawing from social epistemology, Bourdieu's account of social capital (2005), the Sociology of Valuation and Evaluation, and Erving Goffman's writings on the presentation of self in everyday life (1956), Origgi theorizes reputation's dynamic processes: for instance, the robustness of reputational signals (how difficult they are to fake); the informational asymmetry inherent in scenarios in which reputations are assessed (for instance, when non-experts must choose experts) (2018: 108); and the ways in which group dynamics (for instance, open vs. closed networks) affect the spread of reputations (*ibid*.: 96).

Alessandro Gandini analyses reputation as a newly foregrounded product of digital cognitive labour. Combining labour process theory, digital sociology and critical management studies, he theorizes 'the role of reputation as a specific form of individual social capital for knowledge workers, that finds empirical visibility and potential measurability across online social media platforms' (2015: 2). Focusing on digital marketplaces for freelance knowledge work such as Upwork, Gandini highlights that 'one's personal reputation within the knowledge economy is today a newly determinant element for career success' that 'translates social interaction into economic outcomes' (*ibid*.: 8). Freelancers work on their reputations as a form of 'venture labour' (*ibid*.: 91): investment in some indeterminate future payoff, in the form of more available work. Thus, understanding reputation as 'the social capital of a digital society' (*ibid*.: 28) nuances discussions of

immaterial labour and virtuosity within freelance knowledge work, providing new means to critique (self-)exploitation in online platforms.

Alison Hearn has described online reputation as a networked logic of selfhood, which inscribes power relations between platforms and users. Drawing from Barbara Ehrenreich (2009), and Maurizio Lazzarato (1996), Hearn critiqued the 'smiley-faced' disposition of the online reputation economy as, ultimately, an expression of the power of companies who benefit from the pressure users feel to maintain stellar online reputations (2010). More recently (2016), she has argued that the predominance of reputation, incubated in reality television's promise of mini-celebrity and perpetuated by social media, reshapes the political sphere, such that 'For Trump's followers, his brand *is* his substantive skill set and all the qualification he needs to become president' (2016: 658). As Hearn quips, Trump 'embodies what many people are now doing daily. In this age of perpetual connection and high stakes visibility, everyone is required to hustle and shill, to be a little bit "Trump"' (*ibid*.: 658). This ubiquitous emphasis on reputation-seeking for its own sake marks a shift toward what Hearn describes as a speculative self:

> … we can posit a move from the "flexible personality" of the late 1990s and the "self-brander" of the 2000s, to the "anticipatory, speculative self" of 2016. Here, the pursuit of meaningful individual identity, autonomous forms of self-presentation, and processes of self-valorization have come to function in an entirely different register; their actual intent, content or outcome matter little – what matters is that they are pursued, and ceaselessly, relentlessly so. […] Mirroring the speculative logics of finance capitalism, the speculative self's value is predicated entirely on externally generated predictions about our future potential "optimization" (Hearn, 2017: 74).

For Hearn, what Gandini might call 'venture labour' has significance far beyond the gig economy, shifting online self-performance ever closer to financial speculation.

Michel Feher's *Rated Agency: Investee Politics in a Speculative Age* (2018) expands on the possibilities for activist interventions in the speculative spheres of reputation. Reputation, which Feher describes as one of several 'flavours' of creditworthiness (others of

which include funding and trust) (2018: 227), becomes an increasingly important site of intervention in neoliberal milieus. Due to the vast expansion of the credit market in the Regan and Thatcher 1980s, the pursuit of creditworthiness has outstripped the pursuit of profit in importance for neoliberal subjects (seeking loans or opportunities), corporations (appealing to shareholders) and governments (appeasing bondholders). Given the predominance of creditworthiness in all its forms, neoliberal-era activists must understand themselves as investees, and see acts of rating and ranking as viable sites of intervention:

> …however constrained by what credit providers deem appreciable, investees are still endowed with an agency – rated as it were – that empowers them not only to invest in their own reputational capital, but also to speculate, with other like-minded investees, on what assets should be recognized as appreciable and thus on who deserves to be called creditworthy (Feher, 2018: 210-211).

Both Hearn and Feher emphasize the importance of speculation in theorizing contemporary reputation; for the former, as a newly externalized identity-form; for the latter, as a ground for resistance through counter-speculation.

*Financializing Reputation*

Hearn and Feher already point to the claim that online reputation is *financialized* reputation – a crucial basis for the volatile, *reputation warfare* paradigm. Below, I extend their important work by considering how particular financial meta-logics and apparatuses, such as volatility and real options, nuance accounts of financialized reputation – but first, it is necessary to further elaborate on how and why reputation might be understood as financialized. While there are many strains within financialization theory (Van der Zwan, 2014), online reputation might be broadly understood according to what Randy Martin termed the 'financialization of daily life' (2002): financially driven market expansions reshaping the 'typical habits of life' (*ibid*.: 7). More specifically, recent examinations of the relationships between data, finance and social media enable detailed understandings of how market expansions are able to access and capitalize on daily life processes, and thus enact

biopolitical power (Foucault, 1980, 2003). Louise Amoore has described aggregated scores

derived from disaggregated data sets as 'data derivatives' (2011). Like financial derivatives,

data derivatives are derived from, yet indifferent to, underlying assets (such as the lives

reputational scores ostensibly represent). Appearing as scores and symbols on screens, data

derivatives make data actionable in real time:

> … screened scores and red and blue maps appear acutely visual. Yet, the appeal to the
> 'sovereign sense' of the visual further establishes the data derivative as an already
> encoded set of possibilities, this apparently 'most reliable' of senses underwriting the
> rationality of the association (2011: 34).

Though aggregated according to complex methods, data derivatives' simple visual

appearance renders them intuitive and actionable – a crucial means for enabling speculation.

Adam Arvidsson (2016) argues that Facebook is embedded in the logic of the financial level

of the economy, and enacts a 'social logic of the derivative' (Martin, 2015): firstly, insofar as

Facebook mirrors the logic of finance; secondly, since Facebook's innovations share a

common genealogy with financial innovations via shifts in the logic of branding, which

understood 'lifestyle' itself as 'a derived asset' (Arvidsson, 2016: 15); and thirdly, insofar as

Facebook envisions itself "enabling new and more detailed forms of credit ratings, the

pricing of health insurance, and the valuation of freelance labor based on reputational

measurements of risk" in future (*ibid.*: 18). Thus,

> Facebook comes to perform the direct biopolitical function of financial capital,
> integrating ordinary life into its processes in a calculable way. It provides a way of
> giving universal value to the lived excess of the global multitude while abstracting
> from its lived practice (*ibid.*).

These works provide a crucial basis for the claim that metrified online reputation is

financialized reputation – insofar as its aggregated, visible signs are rendered actionable and

integrable with daily life processes, yet also abstracted from these. Extending from this work

below, I will explore how the values associated with these signs tend toward volatility – and

how the volatile logic of financialized reputation might operate *across* online platforms and

not just within them – even in cases in which online behaviours (from participating in someone's online shaming to sharing politically motivated memes) may not be directly motivated by the desire to gain money, credit, or repute.

*Unstable Measures*

The theories of reputation above hint at some of the reasons why the incremental, *reputation capital* paradigm has given way to the volatile paradigm of *reputation warfare* (below). There are two further reasons for the increasing instability of online reputation that are worth underscoring: the recursivity of measures, and the complexities of platform-profile synergies. Of course, quantitative reputational measures, such as the FICO® credit score, predate the World Wide Web (McClanahan, 2014; Poon, 2009); equally, informal, ostensibly qualitative means of evaluating reputation (such as gossip) persist today alongside reputational metrics. Nonetheless, pervasive online rankings and ratings have vastly increased the visibility of reputation metrics between users (Gandini, 2015: 38) – and multiplied their uses 'behind the scenes' in the form of corporate databases (Pasquale, 2015) and Online Reputation Systems allowing for the calculation and display of reputational scores (Gandini, 2015: 30). The pervasive drive to quantify reputation online, which blurs the distinction between 'economic' and 'other' values, finds an early precursor in Gabriel Tarde's *Economic Psychology* (1902/2007), which argued for economics to understand value as quantifiable not in spite of, but precisely *because* it was (inter-)subjective. Tarde called for economists to quantify a far broader range of values, including glory, insisting that all assessments (even the most informal, like gossip) had a 'quantitative core' (Latour and Lepinay, 2007: 11-12). In Tarde's time, newspapers made reputations' ebb and flow newly tangible. Today, as Facebook 'Likes' exercise the 'capacity to instantly metrify and intensify user affects' (Gerlitz and Helmond, 2013: 1349), Tarde's expanded theory of economic values seems all the more prescient – although 'Likes' and similar apparatuses foreground the

recursivity of measures (their capacity to intensify the very affects they ostensibly record) to an extent that Tarde might not have fully anticipated.

Recent theorists have elaborated on how social measures of value actively reshape the spheres of valuation in which they operate. As Celia Lury, Luciana Parisi and Tiziana Terranova argue, the 'circulation of social quanta of beliefs and desires' (2012: 19) that Tarde described has become part of a widespread becoming-topological of culture: a 'new order of spatio-temporal continuity of forms of economic, political and cultural life today' (*ibid*.: 4), fuelled by continual feedback between live data and automated information processing. Andrea Mubi Brighenti has elaborated on Tarde's observation that, as he puts it, '*measures turn what we want into what we believe*' (Brighenti, 2017: 29, emphasis in original); thus, 'the relation between measure and value is necessarily circular – better, entangled' (*ibid*.: 23). These authors' attention to the blurred distinction between measurement and the measured helps to conceptualize how reputational metrics, which might have aimed to clearly define reputation capital, instead intensify reputation's recursivity, thereby leading to more systemic volatility.

It is also key to understand how online reputations perform synergies (or discord) between platforms' and users' reputations. As Natalie Roxburgh (2016) has argued, the fledgling Bank of England's success in the mid-17th century depended on a virtuous feedback loop, according to which financial subjects learned to align their private credit (their reputations) with the Bank's public credit (its reputation as a public institution, representing the public good). Early banks produced more banknotes than they had backed up in bullion; thus, a run on the bank, resulting from a collapse of trust, was an inherent risk. Establishing a feedback loop between public and private credit, such that customers' and banks' trustworthy behaviour and good reputations would mutually reinforce each other, was the basis through which the Bank could produce relatively stable circulations of currency in the first place. The

'smiley-faced' online reputation economy that Hearn denigrates – the slightly nervous feeling that one must uphold everyone else's reputation in hopes that the favour might be returned (2010) – operates according to a similar feedback loop, which ultimately aligns online users' and platforms' good reputations. Private credit is not simply speculation on personal trustworthiness or worth; it is also the performance of provisional *agreements* or *tensions* between a user's value, and the value of the institutions through which that user's reputation has been rendered legible. Whereas a 'sharing' platform like Airbnb has a clear stake in upholding its users' reputations (it stands to earn more when both its users and its reputational measures are trusted), a site like Twitter, which simply seeks increased platform engagement, does not necessarily share a stake in upholding any particular user's reputation. Platforms without a clear stake in upholding users' reputations may be more likely to exacerbate some users' reputational volatility.

**Reputational Volatility**

Following Origgi (2018: 98), we might easily agree that reputation remains *uncertain*. But when did it become *volatile?* In this section, I argue that the ubiquitous calculation of online reputation does not reduce reputation's uncertainty, producing more 'stable' expressions of reputation capital. Rather, it translates reputational *uncertainty* into reputational *volatility*. Uncertainty refers to the unpredictability of future outcomes, given imperfect information and/or multiple unknowns. In contrast, volatility implies a propensity for changeability, which in finance has come to be understood according to a *statistically measurable* dispersion of values: the range of returns associated with a particular security. Benjamin Lee writes, "volatility is the randomness in things that is felt as the intensity of change. In finance this instantaneous or 'actual' volatility is transformed into a historically based statistical measure, the standard deviation of price movements over some fixed time frame" (Lee, 2016: 4). For Lee, derivative finance's fundamental breakthrough was "the

discovery and pricing of volatility" with the early 1970s Black-Scholes pricing formula

*(ibid.*: 4). Thus, literature on risk societies (Beck, 1992; Giddens, 1999), could expand to

more clearly distinguish between uncertainty and volatility, and address the gap between

volatility in finance and the social sciences:

> …most social science research does not clearly distinguish risk and uncertainty from
> volatility. The distinction is the fundamental insight of Black-Scholes and is
> foundational for contemporary financial capitalism. At the same time, financial work
> on volatility tends to focus on its mathematical aspects, eschewing the social and
> cultural dimensions of volatility that trading and market activity presuppose (Lee,
> 2016: 4).

According to this much-needed expansion, online reputation could be understood as

expressing a conception of dispersion germane to that of financial market volatility.

*Instantiating Reputational Volatility*

The development of a volatility-based understanding of reputation could arguably be

traced back at least to reputation's early quantification with the FICO® credit score, through

which it became intuitive to visualize a range of possible reputation 'scores' (say, from 300-

850). Within the post-digital context on which I focus here, Online Reputation Systems –

computational apparatuses, such as eBay seller rating systems, which seem pervasively aimed

toward 'pinning down' the value of online reputations – produce the preconditions for the

emergence of online reputation's increasingly foregrounded expression of volatility as a

cultural logic. Think, for instance, of a relatively simple Online Reputation System:

Amazon's seller ratings. Looking up a book on amazon.co.uk, I receive a list of 23 sellers

(including Amazon itself) from whom I could purchase it. Seller information for vendors

other than Amazon includes a percentage of positive ratings (eg. 98% positive) over the last

12 months, accompanied with a star-rating icon illustrating the given percentage, and the total

number of ratings the seller has received. The positive ratings range, in my sample search,

from 79 – 100%, and numbers of seller ratings range from 9 – 3,907,325. Seller metrics are

not the only reputational metrics Amazon employs (which also include product reviews, for

instance) and they may often only reinforce purchasers' decisions, primarily based on price. Nonetheless, by translating trustworthiness into percentage points, these metrics express the ready availability of volatility to reputational thinking. Using Amazon's Online Reputation Systems as a visualization aid, prospective purchasers can easily translate *uncertainty* – will my purchase arrive without a hitch? – into *volatility*: a sense of the range of deviations from the standard of excellent service and timely delivery within the past year. Amazon's Online Reputation System foregrounds the *range* of customer experiences associated with each seller within a given timeframe. The absence of reputation metrics for Amazon itself expresses the platform's exemption from 'transparent' reputational measurement when it competes with its complementors (Zhu and Liu, 2018), and hints at a meta-reputational logic: that the complementor businesses' ratings are displayed to reinforce Amazon's reputation as the platform that holds its hosted sellers to account. With a similar logic, some online discussion forums, such the mountain biking forum mtbr.com, attempt to increase the quality of discussion threads by assigning users 'reputation rating' and 'reputation power' scores, which aggregate all scores the user's posts have been given by others, and give more established users higher weighting when they rank others, respectively (mtbr.com, 2011). Users see other users according to a range of possible scores. Online Reputation Systems impart a dispersion-image of reputation: a means to visualize the range of possible measurable values, alongside the qualities of particular profiles and posts.

*Increasing Volatility*

Online platforms and Online Reputation Systems not only visualize, but can also actively *increase* the volatility of online reputations, for several reasons. In addition to the recursivity of measures and the potentially discordant relations between profiles' and platforms' stakes mentioned above, acts of online reputational violence – intended and/or automated attacks on users' online images, which sabotage their social standing – have

become increasingly visible in recent years. Feedback loops between profile and platform reputations – or, indeed, between various users' reputations – can be reversed, so that an attack on someone's reputational capital might be viewed as the source of potential increase in a perpetrator or platform's stakes. Even if a perpetrator does not have a *direct* stake in tarnishing another user's reputation (i.e. they will not profit from it), they may act on the possibility that their relative reputation capital will increase by virtue of having less instability than the local 'market average'.

Of course, reputational attack, in itself, is nothing new (Hepworth, 1975). In the digital age, however, reputational measures weave themselves ever more tightly into online users' potential to act. Databases remember pasts all too well – so much so that, as Viktor Mayer-Schönberger argued, we need to reassert the right to be forgotten (2009). This profoundly reshapes reputational violence. Revenge porn and other acts of online defamation can have adverse mental health effects which survivors perceive as far worse than physical violence (Bates, 2017: 32). For-profit revenge porn sites, such as myex.com (shut down by the US Federal Trade Commission in 2018), which encouraged men to post intimate images of ex-partners without permission, established 'online shaming… as a profitable business enterprise, constituent of a political economy of reputation' (Langlois and Slane, 2017: 121). Various commentators have spoken of the racialized and gendered lines along which reputational attack is meted out (Abbott, 2017), personalizing and gendering the pervasive promiscuity of networks as 'female shame' (Chun, 2016: 135-165).

The recursivity of measures; the prominence of platforms that maximize engagement without seeking to increase their users' reputations; and online reputational attacks all increase the volatility of online reputations. To get a sense of how these factors intertwine, it is worth considering an example of extreme online shaming. In December 2013, Justine Sacco, a publicist with 170 Twitter followers, became the number one worldwide trend on

Twitter. Just before boarding a plane to South Africa, she posted a distasteful tweet ("Going to Africa. Hope I don't get AIDS. Just kidding. I'm white!"), which she intended as a parody of white privilege – but which many Twitter users took to be blatantly racist. In a matter of hours, tens of thousands of users piled on to shame her. The Twitter storm is thought to have erupted after Gawker journalist Sam Biddle, who had 15,000 Twitter followers, retweeted Sacco, thereby greatly expanding the reach of her tweet – and the extent of her shaming (Ronson, 2015:73). The hashtag #HasJustineLandedYet went viral – aided by Twitter's new 'trending' algorithms, launched in 2013 – as online crowds anticipated the moment Sacco got off the plane, turned on her phone, and realized her life had profoundly changed. An image of Topsy's analytics for Justine Sacco on Twitter in late December 2013 (Figure 1) expresses Sacco's notoriety as a distribution, and encapsulates the capacity for reputational volatility to drastically increase on platforms seeking to fuel engagement, with little stake in bolstering their users' reputations. (One might imagine a similar graph for a user suddenly subject to intense adulation; increased quantities of attention can be positive, ambivalent or negative and thus do not straightforwardly correlate to reputation.) The graph translates the unpredictability of Sacco's shaming – who could have known the extent to which she would be retweeted? – into an image of volatility: a measurable distribution of notoriety. Her analytics encapsulate the scope of reputational risk on a platform that allows tweets to be reposted far beyond the bounds of a user's social network, vastly expanding their reach according to a logic of contagion (Parikka, 2007) which feeds volatility.
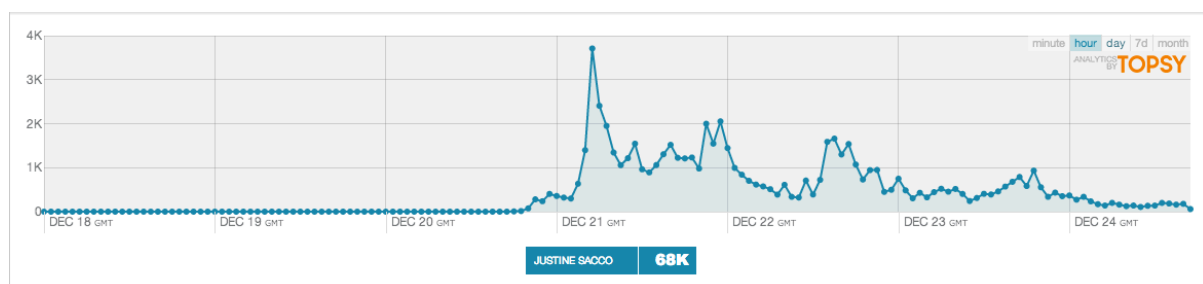
Figure 1. Topsy graph of "Justine Sacco" on Twitter, 18-24 December, 2013 (Source: Hewitt, 2013)

*Volatile Behaviours*

Online shaming – one contributing factor to reputational volatility – might be understood as 'volatile behaviour': user behaviour attuned to inciting the changeability of reputations. This is prevalent in cases of online shaming on platforms such as 4chan, 8chan and reddit, routinely filled with racist, misogynist, anti-Semitic, and homophobic abuse – and which platform delight in the spectacle of actively changing reputations. Such platforms were highly influential in the Trump presidential campaign. Angela Nagle argues that a pervasive culture of self-deprecating, abject anti-political-correctness on such platforms is in part a rejection of what she terms 'competitive virtue signalling' (2017: 5) on left-leaning online platforms such as Tumblr. Ultra-politically correct 'call-out culture'

> …is about creating scarcity in an environment in which virtue is the currency that can make or break the career or social success of an online user […] the counterforce of which was the anonymous underworld from which the right-wing trolling cultures emerged (*ibid*.: 76).[ii]

Nagle extends previous studies of online trolling (Phillips, 2015; Mantilla, 2013; Milner, 2013) for a moment at which its political import (though still conflicted and complex) has become clearer. Self-identified trolls, according to Whitney Phillips, tend to be 'relatively privileged white males" (2015: 142), and express 'a profound sense of entitlement, one spurred by expansionist and colonialist ideologies' (2015: 43). Even as they are often relatively privileged, trolls ambivalently reject online reputational measures – forfeiting their online virtue as a means to enjoy the pleasurable spectacle of increasing others' reputational volatility. Doing so might improve their reputations within online subcultures (such as 4chan boards).

Indeed, 'volatile behaviours' (including shaming, cyberbullying, and trolling aimed at inciting the changeability of online reputation) may be read, in part, as amplifications of the

volatility already present in countless online infrastructures that measure reputation. 'Likes', ratings, credit scores and identification calculations already instantiate a meta-violent (ill)logic, which re-personalizes the 'impersonal' reputational measurements pervasively made online. Writing of private credit-scoring databases, whose unchecked errors can ruin credit scores for years, Frank Pasquale writes, 'reputation systems are creating new (and largely invisible) minorities, disfavoured due to error or unfairness. Algorithms are not immune from the fundamental problem of discrimination, in which negative and baseless assumptions congeal into prejudice' (2015: 38). Databases, platforms and users partake of various volatile operations and behaviours – and afford varying levels of immunity to subjects whose identity more- or less-readily shields them from discreditation.

**Reputation Warfare**

Online reputational volatility exacerbates the troubled boundaries and mutating scales of subjects' network extensivity. What I term *reputation warfare* aims to capitalize on reputational volatility at large scale.[iii] A recent iteration of this paradigm, Donald Trump's 2016 presidential campaign, conceptualized online communities as producers of reputational volatility, which could then be optimized, using real options theory-inflected tactics. If political campaigns are theatres of reputation – arenas in which politicians' personal reputations are circulated, judged, and, to a certain extent, 'voted on' – then Steve Bannon effectively rethought the political theatre of reputation for an age of online platforms. (Equally, activists mobilize interventions into reputational volatility within the 'court of public opinion' instantiated by hashtag activism.) My use of the term 'warfare' to describe this paradigm highlights the intensity of tactical interventions into the conflicted edges of online reputation. It is predicated, in part, on a breakdown of the seventeenth-century distinction between war and peace (Davies, 2018: xi), which, as Will Davies has recently argued, inflects practices of daily life – as seen, for instance, in persistent references to the

weaponization of 'everyday tools:' from planes used in terrorist attacks to memes in online forums (*ibid.*: 18). Following Davies, we might say that online reputation itself has been weaponized.

Of course, Bannon is not the first campaign chief executive to rethink online strategy; indeed, Barack Obama's 2008 U.S. election campaign was considered ground-breaking in its ability to harness grassroots efforts online (Levenshus, 2010). Yet Obama's online campaign strategy instantiated a virtuous feedback loop of mutually reinforcing, shared values. Bannon's harnessed online vitriol on a massive scale, and aimed to capitalize on what he termed the 'monster power' of 'rootless white males' who spent much of their time online (Green, 2017: 235). My account of Bannon must be prefaced with a caveat: it is perhaps impossible to give an account of the 2016 Trump campaign without risking playing into Bannon's desired self-image as a master manipulator. As I hope the below account demonstrates, Bannon conceptualizes reputation warfare, but does not initiate it, so much as he seeks to mobilize and harness tendencies already present on platforms. I read his campaign as an agent through which platform tendencies are taken to their logical limit, and through which their financiality comes readily to light. Since reputation warfare is quickly generalizing, the urgency of clearly understanding these tactics, in my judgment, far outweighs the risks.

Taking over from Trump's previous campaign strategist Paul Manafort in August 2016, Bannon has been credited with turning Trump's then floundering candidacy toward victory. Yet Bannon had long been discrediting Trump's opponents-to-be. Arguably, his campaign begun in 2012, when he took over the far-right American news, opinion and commentary website Breitbart News, using it to interest the aforementioned 'rootless white males' (Green, 2017: 235) in populist nationalism. He installed controversial tech editor Milo Yiannopoulos at Breitbart, stating: "I realized Milo could connect with these kids right away.

[…] You can activate that army. They come in through Gamergate or whatever and then get turned onto politics and Trump" *(ibid.,* 2017: 237). Bannon also backed Peter Schweizer's book *Clinton Cash: The Untold Story of How and Why Foreign Governments and Businesses Helped make Bill and Hillary Rich* (2015): a thoroughly researched attack on Trump's opponent, Democrat Hillary Clinton's reputation from which, as Green argues (2017: 11), she never fully recovered. While attacking political opponents' reputation is nothing new, several factors made reputation especially significant in the 2016 Trump-Clinton race, in addition to Hearn's point above that Trump's candidacy tapped into the general foregrounding of reputation in an age of mini-celebrity and high-stakes visibility (2016: 658). Among these were the 'professional anti-Clinton operatives' (Green, 2017: 81), such as Kellyanne Conway, working on the Trump campaign, who had spent entire careers specializing in attacking the Clintons. Another factor was the importance of a group of prospective voters that Cambridge Analytica data scientists installed in the Trump campaign dubbed 'double-haters' (*ibid.*: 364), who disliked both Trump and Clinton, but were highly likely to vote. Because swing voters were likely to vote *against* the candidate they disliked the most, attacking the opponent's reputation was especially important. The Trump campaign was innovative in both its online targeting of voters, and its mobilization of online trolls, on a number of fronts – not all of which were perpetrated by Bannon, and many of which I will not focus on here. The controversial data firm Cambridge Analytica – backed by hedge fund billionaire and far-right funder Robert Mercer, who knew Bannon for years through Breitbart – allowed it to micro-target swing voters with unprecedented psycho-social detail, gleaned from breached Facebook data on over 50 million users (Percily, 2017; Cadwalladr, 2017; Cadwalladr and Graham-Harrison, 2018). (Bannon is a former board member and vice-president of Cambridge Analytica.) As I write, debates continue as to the level of impact the Facebook data breach had on the 2016 U.S. election. Also suspected of influencing the

election was Russia's notorious, government-backed Internet Research Agency (nicknamed The Troll Factory) in which under-cover St. Petersburg trolls were paid in cash to infiltrate message boards with destabilizing, pro-Putin, and sometimes pro-Trump messages (MacFarquhar, 2018; Aro, 2016). While mobilizing 4chan, 8chan and reddit communities was but one trolling innovation associated with the 2016 Trump election, focusing on this aspect of the campaign allows us to analyse how strategists have begun to capitalize on 'grassroots' reputational volatility, fomented in online forums.

*Steve Bannon's Reputation Strategy*

To understand how Bannon understood reputational attack according to real options theory, it is helpful to look at his career history. While I do not wish to over-emphasize biography, Bannon's unusual career path doubtless enabled a blend of militaristic, business and financial insights to inform his approach to online reputation. Bannon served as a U.S. naval officer, (Green, 2017: 17), and later enrolled at Harvard Business School and landed a job at Goldman Sachs during the hostile-takeover boom (*ibid*.: 113). Heading to Hollywood during a Wall Street-driven merger frenzy, Bannon found himself devising new methods to value Hollywood film companies' intellectual property (*ibid*.: 121), and advising on multiple takeovers and acquisitions. After briefly staging a takeover of the Artist Management Group and rethinking the way it branded its talent (*ibid*.: 132), Bannon joined Internet Gaming Entertainment, a gold farming company which paid largely Chinese workers low wages to play the massively multiplayer online role-playing game World of Warcraft, so that the company could sell in-game prizes on to paying customers. Bannon raised $60 million from Goldman Sachs for Internet Gaming Entertainment; nonetheless, angry online gamers shut down the business, unimpressed by the cheating Internet Gaming Entertainment enabled. They expressed some of their anger in the form of racist attacks against low-paid gold farmers. (Racism directed against Asian World of Warcraft players has long been intertwined

with suspicions of gold farming – see Nakamura, 2009). The shut-down made Bannon think about how he might harness the political power of angry white men who spent much of their lives online (Green, 2017: 135). This, in turn, influenced his subsequent management of Breitbart News, through which Bannon aimed to interest vitriolic online communities in far-right politics. Throughout his career, Bannon developed a skill set that enabled him to develop an options theory-inflected understanding of online reputation, based on the online crowd as swarm of optionable vitriol, which could be tapped into as and when politically expedient.

*Options-Theory Optimal*

In derivative finance, an option contract gives the option, but not the obligation, to sell or buy an underlying asset at a fixed price, at a fixed point in the future. By giving access to a fixed price on a future trade, options allow prospective buyers and sellers to hedge the uncertainty of the market. As Gong, Van der Stede and Young argue, real options – 'the right, but not the obligation, to undertake a business decision' (2011: 1438) are essential in the film industry, which continually faces high degrees of uncertainty. For instance, a company's decision to continue marketing a particular film, or not (depending on how well it tracks on its opening weekend) is an *abandonment option*; the decision to make a sequel of a popular film is a *growth option* (*ibid*.: 1439). Bannon, steeped in finance on Wall Street and in Hollywood, was well-placed to conceptualize online crowds through real options frameworks: as potential reputational volatility, which could be claimed for one's own campaign, or abandoned, as expedient in future. As Randy Martin writes, 'the logically incompatible maneuver of committing to one decision and keeping open others is what derivatives make possible, general, and desirable' (2015: 58). By engineering a line from the 'monster power' of rootless white men online, through Breitbart News, to far-right politics, Bannon orchestrated a scenario by which he was able to render online communities' 'monster

power' optionable, such that "before long, denizens of 4chan and reddit were coordinating support for Trump's campaign" (Green, 2017: 238).

Indeed, some members of the 'shitposting army' understood themselves as efficient value-generators for Trump's campaign. For instance, a post on the reddit board r/The_Donald contains a meta-commentary about "4chan on Hillary vs Trump," featuring a screenshot of an anonymous 4chan post, dated 23 July, 2016 (just before Bannon took over the Trump campaign, though possibly already influenced by Bannon through Breitbart News):

> hillary
> \> 732 staff
> \> dumps $1,000,000 to spread propaganda online
> \> has to hire millennials to think up memes for her
> \> has most of MSM [*sic*] in pocket
> \> 313M in donations, 5x what trump has
>
> trump
> \> 70 staff
> \> blessing of kek
> \> has army of NEETs and centipedes shitposting 24/7 for free
> \> generates 2 billion in free media airtime through the power of 5D chess
> \> 65M in donations, 97% small donators [*sic*]
>
> \> tied in polls (Anonymous, 2016)

This characterization of the race tacitly acknowledges that the two campaigns *shared* some common tactics, even though their status as paid or unpaid differed. This commentator understands the blessing of 'kek' (an ambiguous word associated with online alt-right, pro-Trump culture) in terms of an ability to generate voluntary online vitriol. Further, it expresses pleasure in generating expropriable value for the campaign. Since these communities were at arms-length from the campaign, Bannon could both mobilize, and disavow, the often racist, misogynist 'shitposting army', as expedient, as if purchasing an option on online reputational volatility.

For Martin, derivative finance understands volatility itself as a source of value. Far from reducing the volatility of financial value, 'the myriad protocols of risk management evident across professional fields […] generate, foment, and constitute the very volatility they seek to master and profit from' (2015: 3). Derivatives, while ostensibly managing risk, actually amount to 'instruments of risk management that generated unmanageable risk' (*ibid.*: 5). Derivatives perform the limits of knowledge, as pervasive risk management actively distorts the futures calculated: 'the very mathematical models meant to control risk wound up making the markets unsustainably risky' (*ibid.*: 27). Understanding derivative logic as broadly social, rather than merely economic, Martin contends, allows us 'to recognize ways in which the concrete particularities – the specific engagements, commitments, and interventions we tender and expend – might be interconnected without first or ultimately needing to appear as a single whole or unity of practice or perspective' (*ibid*: 52). Martin's analysis of the social logic of the derivative can be applied to ubiquitous reputation-calculation – which, far from producing any certainty in reputation's value, produces even more reputational volatility, which in turn produces new fields of tactical intervention. The reddit post above is but one reflection on how producing reputational volatility becomes a distinct and recognized aim – one that strategists like Bannon are all too happy to optionalize.

Bannon' real options-inflected approach to reputational volatility was mirrored by Trump himself – the very figure of volatility, spreading disruption all around him, yet seemingly immune to its effects. Since Trump made little attempt to build 'incremental' reputation capital as a trustworthy, consistent presidential candidate (as Clinton had done throughout her career), his reputation seemed much less affected by attempts to discredit him than was his opponent's. Trump and Bannon's double act as 'front of house' and 'behind the scenes' figures of reputational volatility arguably emblematized not the ideal of the 'good' president, but rather finance's increasing stranglehold on politics. As Ivan Ascher asks, 'is

there not an elective affinity between the world of modern finance – which runs on risk and volatility – and the prospect of an erratic, nihilistic, fear-mongering billionaire becoming the next President of the United States?' (2017) For Ascher,

> …today's portfolio managers do not care about yesterday's stock price, any more than the President-elect will care tomorrow about what he tweeted this morning. In both cases, all that matters is the volatility created by unpredictable quotes – a volatility that may be devastating for those whose reputations are at stake, but can be wildly lucrative for those who know how to capture it (*ibid.*).

Bannon (and surely many figures to follow) typify the eagerness to capture the volatility of online reputations. In doing so, they instantiate revenge politics as a 'cultural illogic of belated capitalism' (Haiven, 2017: 31), which extends and exacerbates capitalism's long-standing vengefulness against whole populations at random (*ibid.*: 32), yet offers substantial gain to well-placed tacticians.[iv]

## Conclusion

From reputation capital to reputation warfare: online reputation has shifted away from incremental, measurable and relatively stable reputational paradigm, toward an understanding of reputation according to a cultural logic of volatility. This logic has provided the basis for indirect, real-options-inflected interventions into reputational volatility: reputation warfare. The tactics associated with reputation warfare are infused with financial logic; thus, accounting for these developments requires close attention to how online reputation extends the reach of financial valuation, forming part of a biopolitical framework that governs users' online existence and everyday practices. In this paper, I have extended existing accounts of financialization within the spheres of reputation, data aggregation and social media, in hopes of demonstrating how the financialized, 'reputation warfare' paradigm *generalizes* as a platform metalogic, transcending the bounds of both specific platforms, and specific behaviours that appear motivated by direct capital gain. Rather than focusing exclusively on how a particular platform financializes its users' reputations, I have instead aimed to draw

attention to how financially-inflected means of modelling reputational volatility imprint themselves across a wide range of apparatuses and behaviours – from seller ratings on Amazon, to Twitter shaming, to Bannon's mobilization of anti-Hillary Clinton posts. My account of the *reputation warfare* paradigm emphatically de-emphasizes the direct profitability of specific reputational attacks. The *reputation capital* paradigm (also a financial paradigm, but one more firmly tied to credit than to volatility and real options) still operates today, even if it has been eclipsed. It strongly emphasizes the potential payoff of cultivating a good online reputation, insofar as polishing one's profile constitutes a form of 'venture labour' (Gandini, 2015: 91), leading to indirect gains such as higher-paid work or better interest rates. On the other hand, the *reputation warfare* paradigm is split. Platforms such as Twitter, and tacticians such as Bannon, find the 'payoff' in reputational volatility (for instance, increased platform engagement, or eventual election votes). On the other hand, a 'shitstorm''s (Han, 2017: 3) participants may simply have little to lose (Davies, 2018: 20). Their meta-commentaries suggest motivation, in part, by the feeling of co-constituting the online crowd's violent meta-(ill)logic: collectively moving the dials, voting on someone's online repute or notoriety and watching the change come over the measures in real time. Strangely collectivized attacks against users seem to heed the demand for volatility itself to be *voiced* – to speak through, and *as*, collaboratively-orchestrated shifts in reputation capital. Of course, this urge to voice volatility is readily trumped.

I can think of no better language to describe this emergent layer of tactical intervention into reputational volatility than real options theory, which both harnesses and exacerbates volatility, keeping options open for some actors far more than others. According to the 'financialization of daily life' (Martin, 2002), we might attribute great reach to what Edward LiPuma has termed the 'politics of optionality' (2017:352). Embodying the problematic personalization of online networks, online reputation is a crucial site in which to

study who can devise means to 'purchase options' on volatility, and who remains

dispossessed: from the value of reputation's volatility, and from reputation capital as such.

Equally, understanding how online reputation enacts a 'social logic of the derivative'

(Martin, 2015) across heterogeneous acts, apparatuses and platforms can inform activist

counter-strategies, which also intervene in reputational volatility, and find ways to answer to

the widening distribution of inequality in online reputation. Reputation, as a concept, has

long lent social inequality a logic, of sorts. Today, via reputation warfare's tactical

interventions into volatility, that inequality has a double valence.

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[i] I would like to thank one of the anonymous peer reviewers for contributing to this point. As Luciano Floridi argues, Bourdieu's forms of capital tend to "presuppose economic capital as a foundational concept" (2018: 483), by reading other forms of capital as if they were not *yet* economic. Elsewhere, it would be interesting to expand on a theory of reputation as it relates to Floridi's recent theory of semantic capital – which understands capital primarily "in terms of what we care about, not merely of what we are ready to pay for" (*ibid.*).

[ii] This point is underscored by Florian Cramer's study of alt-right meme culture, in which online trolls often self-deprecatingly cast themselves as abject, lonely, unshaven white men (2017).

[iii] The term 'reputation warfare' has been previously used – for instance, by Gaines-Ross (2010) to refer to targeted attacks on corporate reputation. I would like to reframe this term to emphasize large scale, indirectness of strategy, and an emphasis on volatility.

[iv] Although it is beyond the scope of this paper, it would be fruitful for future work to focus on how activist movements, such as #MeToo, also mobilize reputational volatility – even though there is no consensus that this is an express aim of the movement. As Debra Jackson argues, #MeToo should be understood in terms of "victim empowerment and solidarity, not vigilante justice" (Jackson, 2018: 16).