



Historically Informed HCI: Reflecting on Contemporary Technology through Anachronistic Fiction

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As computing technology comes to dominate every aspect of social and political life, HCI must take greater account of History. The article considers four different historical periods impacted by division and denunciation: the European Witch Hunts, the Soviet Purges, the McCarthy Era, and the Chinese Cultural Revolution. Historians have identified patterns common to such periods including: the unity of accusation and action; condemnation as a show of virtue, and defense of the accused as collusion with enemies. These patterns are mapped to findings from social media research such as: impulsive shares are easy to make but difficult to retract; angry posts travel fastest and furthest; likes and retweets express group identity and solidarity. Anachronistic memes, tweets and selfies explore what previous eras might have looked like if contemporary technology had existed in the past. It is argued that such anachronistic fiction may be a useful method for exploring the potential impact of particular design choices.

CCS Concepts: • Human-centered computing → Ubiquitous and mobile computing; Ubiquitous and mobile computing design and evaluation methods;

Additional Key Words and Phrases: Design fiction, research fiction, thought experiment, history

ACM Reference format:

Kien Mensonge. 2023. Historically Informed HCI: Reflecting on Contemporary Technology through Anachronistic Fiction. *ACM Trans. Comput.-Hum. Interact.* 29, 6, Article 60 (March 2023), 39 pages.

<https://doi.org/10.1145/3517144>

1 INTRODUCTION: DIGITAL CROWDS

In *A Connecticut Yankee in King Arthur's Court*, Mark Twain imagines a nineteenth-century engineer transported back in time to the Middle Ages. In one of the novel's most memorable scenes, knights in shining armor battle against gatling guns:

“Within ten short minutes after we had opened fire, armed resistance was totally annihilated, the campaign was ended, we fifty-four were masters of England. Twenty-five thousand men lay dead around us.” [142]

It would be missing the point, somewhat, to imagine that Twain was simply depicting technological progress here. But there is a persistent assumption that technology will always improve society and make life better for everyone. Karl Marx's recently discovered manuscript “fragment on machines” imagines a society emancipated from work by technology [91]. Here, the individual

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1073-0516/2022/03-ART60 \$15.00

<https://doi.org/10.1145/3517144>

is free to pursue their own development, much like the nation of artists Oscar Wilde imagined in *The Soul of Man Under Socialism* [152]. Phoebe Sengers has argued that the field of **Human Computer Interaction (HCI)** can be understood in terms of Modernism and the idea that:

“people can and should change the world for the better through analyzing present conditions and improving them with the help of scientific, technical, and practical knowledge.” [123]

Even where it is clear that new technologies are exacerbating existing social problems or creating new kinds of catastrophe, the solutions most often suggested are technological [92]. But it is increasingly clear that well intentioned slogans such as the 2016 CHI conference theme “CHI4Good” are no longer adequate. Indeed, a recent CHI workshop took the title CHI4Evil to redress the notion that technological advances are always positive [127].

The potential catastrophes afforded by weapons technology are, perhaps, always obvious; less clear are the consequences of new forms of HCI. It has been suggested that future historians may look back on our historical time in terms of a pre and post 2009 world [61]. What epoch making event occurred in 2009? Facebook added the like button and Twitter followed suit with the retweet button. When one of the engineers, who developed the retweet tool, saw it being used by Twitter mobs, he reflected that “we might just have handed a 4-year-old a loaded weapon” (*ibid*). The addition of the like and retweet functions may have seemed, to many, like minor design tweaks. It was certainly not immediately obvious that they would amplify echo chambers, propagate fake news and intensify social polarization [61].

Carl Jung made clear distinctions between group and individual psychology:

“The individual in a crowd easily becomes the victim of his own suggestibility. It is only necessary for something to happen, for instance a proposal backed by the whole crowd, and we too are all for it, even if the proposal is immoral. In the crowd one feels no responsibility, but also no fear.” [71 p. 126]

The association of crowds and madness is a very old rhetorical trope. Critiquing this “crowds and madness” trope as reactionary and anti-progressive also has a long history. The Marxist literary critic Terry Eagleton satirized such critiques in his *Ballad of English Literature* (sung to the tune of Land of hope and Glory)

“Chaucer was a class traitor,
Shakespeare hated the mob,
Donne sold out a bit later,
Sidney was a nob.” (Eagleton 1986)

The twentieth century writer Elias Canetti insisted that the crowd must be considered as its own unit of analysis in social psychology. For Canetti, “the crowd is the same everywhere, in all periods and cultures” and once in existence it “spreads with the utmost violence” [29 p. 92]. He argued that the most important aspect of the crowd is the moment of “discharge”.

“Before this, the crowd does not actually exist; it is the discharge which creates it. This is the moment when all who belong to the crowd get rid of their differences and feel equal. These differences are mainly imposed from outside; they are distinctions of rank, status, and property.” (*ibid* p. 10)

The crowds that Canetti was writing about were physical: individuals were present with one another, pressed into ever closer proximity as their numbers swelled. Digital crowds are not physical

and yet there is also a “discharge” where individual differences are dissolved. In digital crowds all are equal, there is no differentiation between tweets or likes, there is only the logic of number. The discharge from individual distinctions is all the greater under conditions of anonymity. Although digital crowds are new, they exhibit patterns of behavior that echo Canetti’s characterization of the crowd as a universal human phenomenon:

“Few can resist its contagion; it always wants to go on growing and there are no inherent limits to its growth. It can arise wherever people are together, and its spontaneity and suddenness are uncanny. It is multiple, but cohesive. It is composed of large numbers of people, but one never knows exactly how many. It can be destructive; and it can be damped and tamed. It seeks an enemy. It dies away as quickly as it has arisen, and often as inexplicably; and it has, as goes without saying, its own restless and violent life.” (*ibid*)

Although current social media technologies are, in some respects, unprecedented, there are parallels with older historical forms. HCI has always been a fundamentally interdisciplinary field, drawing on computer science, psychology, sociology the Humanities. But it is becoming increasingly urgent that the field pays some attention to History [43, 127, 74].

There is a great deal of work on the impact of technology within History itself and specialist fields such as the History of Information and Computing Technology, Socio-Technical Studies as well as Media and Communication studies. No paper could exhaustively map so many fields and therefore much related work is outside the scope of this article. However, it is important to note that Historians of computing are doing vital work, which shows that the most complex technologies are fundamentally human endeavors [48, 141, 63, 96]. Contemporary sociology also provides in depth accounts of the impact of emerging technology [49, 102]. The field of HCI itself is aware of sociological critiques such as those of techno utopianism and solutionism e.g., [20, 85, 125, 9, 115]. Srinivasan et al. have also critiqued “information determinism” as a belief that the “right information will precipitate desired action” [132]. “Solutionism” offers technological silver bullets for complex social, political and ecological problems [101]. The term originates in city planning where complex problems must be simplified if they are to be addressed at all, but it was applied more broadly to innovators in Silicon Valley and also academia [20]. Much of the work criticizing such techno utopian thinking in current technology suggests feminist or post-colonial approaches as alternatives [e.g., 99, 85, 69]. But the idea of simple fixes for complex problems is much older than contemporary techno-utopianism and it is more vital than ever that we do not forget the larger histories from which we emerge.

1.1 Thought Experiments and Research Fiction in HCI

From its very inception, the development of computing technology involved thought experiments and fictional depictions of “imaginary engines”. The Difference Engine invented by Charles Babbage is often cited as the first computer. It inspired Ada Lovelace to enter into an imaginative dialogue with Babbage, exploring the possibilities of an Analytical Engine. This was never built but their speculations are an important part of the history of computing [87]. Had Babbage been given funding, the digital revolution may have occurred at the same time as the industrial revolution. Bruce Sterling and William Gibson’s novel *The Difference Engine* speculates about what a steam driven Digital age might have looked like. Ian McEwan’s novel “Machines Like Me” is also based on a counterfactual history where Alan Turing lived into the nineteen eighties contributing to an AI revolution that is simultaneous with the development of the personal computer [92].

The making of fiction is a standard method for advancing thought across a number of disciplines [27], including computer science itself with much of Turing's early work based on thought experiments [79, 2]. There is now a well-established literature on the use of design fiction to speculate about trends and patterns in technology development [e.g., 16, 18, 19, 21, 23, 82, 83, 84, 134, 135]. Overviews of such research fiction can be found elsewhere (e.g., 82, 21) and an account of the diverse forms of research fiction is beyond the scope of this article. But it is important to note that the aim of this kind of work is not necessarily focused on product development, indeed it is sometimes framed as product prevention. Sengers et al., for example, imagine a technology called *Fit4Life* which draws on behavior change literature to imagine a technology that would nag the user about fitting into an outfit for an upcoming wedding [110]. This article is, of course, a critique of design trends rather than a suggestion for product development. Brown et al. argue that as HCI begins to consider global populations of users engaging with billions of devices the field must address widely different contexts of use [26]. They point out that small scale studies of narrowly recruited participants using prototype technologies for short periods of time do not help us to understand the potential impact of global technologies as they are adopted by widely different users. They suggest a number of strategies for this new context of study including the use of fiction (*ibid.*).

1.2 Counterfactuals in History

Historians also make use of fiction to make “counterfactual” arguments. When considering the influence of important historical figures, it is difficult not to wonder how things would have been without them. How different, for example, would the twentieth century have been if one of the assassination attempts on Napoleon had succeeded? The development of decisive military technologies also prompts inevitable counterfactual questions. What if Japan had beaten the USA in the race to develop a super weapon? Such questions can lead to simplistic determinism. Funding for Babbage’s analytical engine would probably not have resulted in the world imagined by Sterling and Gibson any more than an extension to the lifespan of Alan Turing would have resulted in the alternate 1980s imagined by McEwan. But the value of such work does not lie in tendentious arguments suggesting simple causality: rather it is in picturing worlds that are not the same as the one we live in. Counterfactuals can also actively resist deterministic accounts that place too much emphasis on particular variables. Stephen Fry’s novel *Making History*, for example [57], imagines a world where Hitler never existed but the plot depicts the rise of another leader, equally ruthless but more charismatic and effective.

Niall Fergusson begins a collection of counterfactual histories with a long essay on the epistemology of the genre. He points out that any history takes the present as an endpoint arising from the past and argues that this amounts to a “teleology of the narrative form” that implies inevitable causes and effects. The construction of narrative makes for clear shapes like the one in the title of “*The Decline and Fall of the Roman Empire*”. Such narratives suggest strong causes and effects rather than contingent events which might have gone one way or another. For Fergusson, the idea that the present is an inevitable end point is a misguided form of teleology.

“The present alone is actual; the past and the future are ideal and nothing but ideal. It is necessary to insist on this because our habit of “spatializing” time, or figuring it to ourselves in terms of space, leads us to imagine that the past and future exist in the same way.” [p. 51]

Counterfactual arguments can be important ways of avoiding deterministic accounts of history, however, Fergusson emphasizes the importance of plausibility:

“no sensible person wishes to know what would have happened in 1848 if the entire population of Paris had suddenly sprouted wings, as this is not a plausible scenario.” [p. 850]

The counterfactual presented in this article is that people of the past are provided not with wings but (perhaps just as fantastically) smartphones. Although counterfactuals are used in history to resist personality-based determinism, imagining current technologies in previous epochs risks determinism of another kind. Technological determinism might suggest that many historical atrocities would have been simply impossible if the population had been armed with smartphones because social media would have been used to organize resistance and revolt. In order to avoid this kind of heavy-handed determinism the “anachronistic fictions” in this article leave the historical events as they are recorded. Rather than imagine totally new events the article pictures the same events supported by different technologies. To be clear, this article makes no claims whatsoever regarding any of the historical periods discussed and relies entirely on secondary research conducted by historians. The focus is not primarily the past but rather, present day technology seen through the lens of history.

1.3 Fictional Technology and Technologies of Fiction

In “*Technology of the Novel*” the literary scholar Tony Jackson considers fiction in terms of what it is made of, i.e., alphabets. He contrasts traditions of oral story telling with written texts and begins with a passage in the Gospel of John where Jesus is asked whether an adulterous woman should be stoned or not. Before he responds Jesus writes in the dust, though we are never told what he has written:

“This action calls attention, not to the law, not to the punishment, not to any ethical or moral issues, but to the physical action of writing itself. In fact, throughout John, Jesus speaks to the issue of writing in general and especially to the idea of the letter versus the spirit of the law, an antagonism implicit in any law but one that is drastically amplified in written law.” [64]

The letter of the law is written in dust, the spirit of the law is quite different. The distinction between the written and spoken word was perhaps most clearly articulated by Socrates:

“Written words seem to talk to you as though they were intelligent, but if you ask them anything about what they say they go on telling you just the same thing forever.” [cited ibid p. 197]

In some respect Socrates’ observation applies to the vast reams of text produced on social media, but unlike the writing of previous eras, social media does answer back. Social media is made not only from text but also every form of audio-visual media. Academic studies are running behind technologies which change too quickly for traditional forms of peer reviewed publication to keep pace. But Hegel suggests that the fine distinctions of philosophy can only be made when the world it considers is passing:

“when philosophy paints its grey in grey, then has a shape of life grown old. The owl of Minerva spreads its wings only with the coming of the dusk.”

We are perhaps too close to the present moment to see it very clearly. But perhaps historical and philosophical understandings of the past can be a useful lens for reflecting on the new.

A common strategy within design fiction is to take an existing technological trend and exaggerate it to imagine new kinds of devices. An alternative approach is to imagine existing technology

in a different historical context. This can result in what Schlovsky termed defamiliarization [124]. For example, the Twitter feed “WW2 Tweets” defamiliarizes or “makes strange” historical events from 1940 by framing them as live tweets. The children’s show *Horrible Histories* features several comedic sketches with, for example, Vikings logging into their e-mail account “enter thy username”. Anachronisms in popular culture are often also accidental. Freeze frames of the movie *Ben Hur*, for example, show that one of the charioteers is wearing a wrist watch. But the “anachronistic fictions” here add contemporary technologies to past events in order to consider how they might have been used in different times. Typically design fiction is situated in a near future which is much like our own except for the new device. Anachronistic fiction reverses this procedure, placing already existing technology in the past to speculate not about changing technology but rather changing contexts of use.

One of the criticisms sometimes made of design fiction is that it is overly dependent on Western sources with writers like Bruce Sterling and shows like *Black Mirror* being frequently cited. Rarely are Indian or Chinese science fiction writers taken as inspiration. Cixin Liu’s *The Three Body Problem* is increasingly recognized as a profoundly important work of science fiction. It opens, not in the future, but rather the past, with scenes of a “struggle session” during China’s Cultural Revolution when Red Guards hunted for “capitalist roaders” and the “ghosts and demons” that sought to undermine revolutionary communism from within. Reading this prompted the question: what if social media had existed back then? As Edward Said points out – western representations of China often simply “other” the Chinese; accounts of the cultural revolution can sometimes prompt an argument that this kind of thing could never happen “here”. In order to insist that what happened during the cultural revolution is not unique to China, this article also asks what similar periods of division, denunciation and crowd power would have looked like had social media existed in those times as well.

2 CROWDS, DENUNCIATION, AND DEMONIZATION

The periods discussed here all revolved around trials where the accused had to satisfy their questioners in order to save, if not their lives, then at least their livelihoods. In *Crowds and Power* Elias Canetti argues that all questioning is a form of intrusion. For Canetti, even a stranger making an innocuous enquiry on the street “has us” for a moment, and compels our attention. If we answer clearly, we can go about our business but if the questioner is not satisfied, they may detain us for longer with further questions:

“On the questioner, the effect is an enhanced feeling of power. He enjoys this and consequently asks more and more questions; every answer he receives is an act of submission. Personal freedom consists largely in having a defense against questions. The most blatant tyranny is the one which asks the most blatant questions.”
[29 p. 364]

For Canetti, the cross examination is always directed at someone weaker than the questioner and it is a mechanism by which the crowd finds its enemies. During a trial, the questioned stand in a “relation of hostility” to the examiner and will escape only if they can prove themselves not to be an enemy.

The Historian and political commentator Rodney Barker identifies patterns of denunciation and demonization across four different historical contexts marked by crowds and power: the European witch trials, McCarthyism in the USA, the Chinese Cultural Revolution and the “Greek Conspiracy” when immigrants were accused of defrauding the Australian state in the late 1970s [8]. Barker identifies patterns including: the demonized being represented as “alien” while accusers are “super ordinary”; a metaphysical or supernatural dimension to the rhetoric; and the context of an

existing ideology or worldview [11]. Barker also notes a “unity of accusation and action” in the process of demonization. This echoes an argument made by R.L Austin who pointed out that some statements are neither true nor false but rather performative, giving as example, utterances such as “I do” in a marriage ceremony [7]. For Barker, an accusation during periods of demonization is similarly performative: regardless of whether it is true or not, it performs a function, it is an act. Crucial to the process of demonization is the characterization of the accused as radically “other” to the accuser:

“In demonization narratives, one way in which human opponents are denied the status of equals is by not only giving an account of them as not ‘normally human’, but by demoting them also to the status of mere instruments of some non-human or extra-human phenomenon. An ideology, a belief, or demonic powers, may each be treated as foes, in which case mere humans are no more than their agents, and both less than human whilst at the same time malevolently beyond the normal capacities of human resistance, so that special acts against them can be presented not only as justified but as necessary. If it is the Devil against whom the battle is being fought, then witches are mere pawns in his strategy. Whether the manipulative super-human power is spiritual or secular, the language can be remarkably similar.” [7]

Barker finds these patterns across religious and secular contexts in radically different times and places.

It is possible that social media would have helped the victims of all of these historical periods. The “Arab Spring” of 2010 and 2011 is often framed as an organized resistance to oppressive regimes coordinated through social media. Facebook and Twitter were used in Egypt and Tunisia to organize demonstrations and protests [123]. Michel Foucault was always concerned to stress that wherever there is oppression there is also resistance [54]. In *Weapons of the Weak*, the anthropologist James Scott argues that while subalterns may perform submission in public there are always hidden forms of resistance expressed in everyday activities like gossip, jokes, and satires [119]. Had social media existed during periods of crowd power and demonization, there would certainly have been scope for technologically enabled resistance.

But many commentators and academics have argued that social media has fragmented the information landscape; algorithmic filter bubbles make it much more likely that we will see opinions that we already agree with [105]. Seargent and Tagg’s two year Facebook study points out that it is not just algorithmic filter bubbles that lead to polarization but also the strategies of users seeking to minimize conflict within their diverse networks [121]. Online echo chambers and polarization are complex phenomenon with multiple contributing factors including “micro-level behavior of individuals collectively causing a macro-level phenomena” as well as external factors in “the system that governs the interaction between individuals” [109]. A recent study of attitudes to climate change found that, overall, discussions on social media occur within polarizing echo chambers [67]. There is also evidence that far right groups are actively and effectively manipulating social media algorithms to achieve polarization through “hashjacking” i.e.,—using someone else’s hashtag to promote another agenda [39].

It has long been understood that the ease of using e-mail extensions encourages mass mailouts and spam [16]; with no additional cost to themselves an e-mail writer can contact thousands of people as easily as they contact one. The affordances of social media magnify this old problem by many times: without even filling out an address bar a Twitter user can double tap a message across their entire network and on to any number of other networks. The numbers involved in exponential rises are difficult for the mind to conceive and even the simple act of doubling can have boggling effects.

Ray Kurzweil explains the year-on-year growth in computing power with a fable. An Emperor wants to reward the inventor of chess for coming up with such a beautiful game and says he can have whatever he asks for. All the inventor wants is one grain of rice for the first square on a chess board, followed by two on the second, four on the third, eight on the fourth, doubling in this way till the sixty-fourth square. This seems like a modest request so the Emperor agrees until an advisor points out that the world does not contain enough rice to fulfill it. The analogy is useful for thinking about the viral nature of social media. The chess board below Figure 1 shows the results of a simple doubling of tweets with each user re-tweeting to just one more Twitter account:

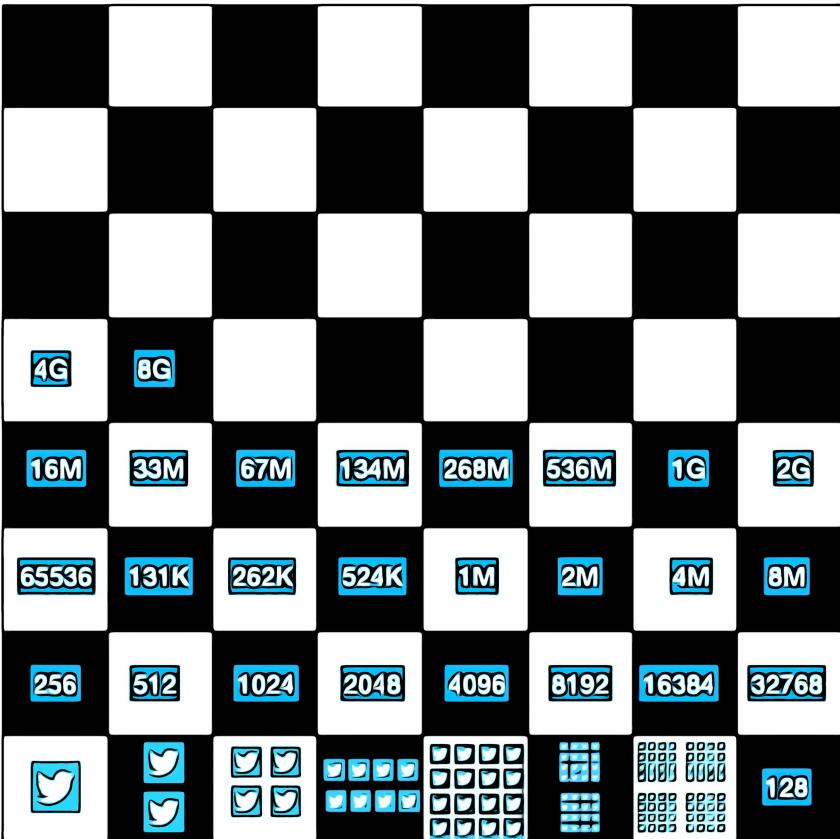


Fig. 1. Exponential Tweets based on [149].

By square 30, the number exceeds current estimates of active Twitter accounts (330 million) five squares later, the number exceeds current estimates for human beings on the planet (7.8 billion). Staggering as these numbers are they do not represent anything like the potential scale of retweeting because they only double at each square. Most Twitter users have hundreds of followers and some have many thousands or millions. For this reason, many researchers characterize the spread of disinformation in scale free social networks as “viral”. A 2011 study of rumor propagation on Twitter-like websites found increased “efficiency, unpredictability, and a tendency to start the rumor again” [87]. In 2018 Vosoughi et al. investigated how true and false news stories were diffused through Twitter between 2006 and 2017 using a dataset of 126,000 stories tweeted by three to four and half million people. The stories were classified as true or false based on six independent fact checking organizations. The findings are alarming:

“Falsehood diffused significantly farther, faster, deeper, and more broadly than the truth in all categories of information, and the effects were more pronounced for false political news than for false news about terrorism, natural disasters, science, urban legends, or financial information.” [143]

They found that bots and humans spread real news at about the same rate while humans greatly accelerated the distributions of fake news— perhaps because falsehoods are novel and so more interesting to humans (ibid).

Network based distribution also feeds information bubbles that reinforce existing ideological positions. Confirmation bias works to help us notice evidence which confirms our existing ideas and exclude that which does not [111]. Multiple studies demonstrate that people are very adept at discounting evidence and arguments that contradict their beliefs, especially if those beliefs are central to their identity [62]. In order to discount new information, we adopt a number of strategies: discounting the source, selectively avoiding new information and improvising counter arguments (ibid).

The following sections of this article imagine what historical periods of division, demonization, and crowd power might have looked like if social media had existed. The periods include religious and secular societies, capitalist and communist forms of government; their dates range from the middle ages to the latter half of the twentieth century and they are located in both the global “East” and “West”.

3 THE EUROPEAN WITCH HUNTS

The US town of Salem is perhaps the best-known site of witch-hunting but the phenomenon also occurred in England, Scotland and throughout Europe from the fourteen hundreds to the seventeen hundreds. Michael Cawood Green’s novel *The Ghosting of Anne Armstrong* draws on court documents from the North East of England to tell the story of an illiterate fourteen-year-old girl who made multiple accusations against her neighbors between January and May of 1673. Before magistrates in Newcastle upon Tyne, Anne Armstrong accused her neighbor, Ann Baites, of dancing with the devil and taking the form of animals. A judge in the novel asks for the record to be read back by the Clerk of the Peace:

“And the informant further saith that the said Ann Baites hath several times danced with the devil at the places aforesaid, calling him, sometimes, her protector, and, other sometimes, her blessed savior.

And the informant further saith that the said Anne Armstrong hath seen the said Ann Baites several times at the places aforesaid riding upon wooden dishes and eggshells, both in the Riding House and in the close adjoining.

And the informant further saith that the said Ann had been several times in the shape of a cat and a hare, and in the shape of a greyhound and a bee, letting the devil (who she calls her protector) see how many several shapes or likeness she could turn herself into—and further this informant saith not.” (58 p. 42-43)

Celtic witches were said to take the forms of hares that suckled on cows causing them to become “dry”, Barker points out that accusations of witchcraft often arose during times of bad harvests, sickness, and death [11]. Although witch hunts have been characterized as the persecution of women, Barker points out that men were also accused of being witches as in the woodcut in Figure 2.

The logic of the witch trial was that guilt could be proved by either confession or denial and Barker argues that they were tolerated by governments as long as they suited other ends, Witch



Fig. 2. The Devil re-baptizing a male witch. From Francesco Maria Grazzo Compendium Maleficarum 1610 [58].



Fig. 3. The tweeting of Anne Armstrong.

hunts were suppressed in Scotland in the sixteenth century when they threatened the rule of law itself (*ibid*). However, Barker also points out that sometimes governments found a witch hunt useful. Henry VIII accused his second wife Anne Boleyn of witchcraft, and he was far from the last tyrant to employ such demonization as a means to an end.

3.1 The Tweeting of Anne Armstrong

In the 1600s, the vast majority of the population of England were illiterate, so the idea of a witch hunt on Twitter is anachronistic on many levels. Figure 3 pictures an exchange of tweets by Anne Armstrong and Matthew Hopkins, the witch finder general during the English Civil war who is believed to be responsible for around 300 executions [147].

In *So You've Been Publicly Shamed* Jon Ronson describes numerous Twitter shamings as “social media witch hunts”. But he places this in the larger historical context of a decline in public shaming. In the Massachusetts Historical Society archive, he finds the story of Abigail Gilpin sentenced to

be whipped for adultery. Abigail asks that she be given her punishment early “before people are stirring” to spare her children the shame of their Mother’s “unfortunate failings” [113]. Ronson argues that such public shaming declined not just because it was considered too brutal but also because people were enjoying it too much. He cites a sermon by Rev Nathan Strong asking his congregation to show restraint at executions:

“Do not go to that place of horror with elevated spirits, and gay hearts, for death is there! The power of government, displayed in its most awful form is there... The person who can go and look on death merely to gratify an idle humor is destitute both of humanity and piety.” [113]

Ronson’s account of Twitter shaming makes clear the “elevated spirits” and “gay hearts with which people currently “call out” wrong doers [112]. Before getting on a flight to South Africa Justine Sacco sent a now infamous tweet to 170 followers saying “Going to Africa. Hope I do not get Aids. Just kidding. I’m white!”. It was condemned as racist and retweeted by many including a Gawker journalist with 15,000 followers. By the time Sacco’s plane landed she was the number one trending topic with tweets like:

“We are about to watch this Justine Sacco bitch get fired, in real time, before she even knows she’s being fired”, and “Everyone go report this [c*nt] @justinesacco”, and so on, for a total of 100,000 tweets.” [114]

There were people waiting at the airport hoping to photograph the moment when she turned her phone back on and realized her life was over [112].

Sacco explained that it was a bad joke, claiming she was satirizing racism in the manner of racist characters like Eric Cartman on *South Park* but this made little, if any, difference to her Twitter accusers (*ibid*). Ronson follows Sacco’s story further than most journalists showing that she not only lost her job but was also subjected to death threats. Having argued that Sacco’s punishment was disproportionate Ronson was then shamed himself:

“An opinion was beginning to form, and feed off itself, that I had written an attack on social justice, a defense of white privilege. In coming out against online shaming I was silencing marginalized voices—because online shaming is the only recourse of the marginalized.” [114]

Once an accusation is made and retweeted, it can reach very large numbers of people who have little to no motive to fact check and strong motivations to retweet for “likes”.

“Likes” and comments offer tribal validation for those who shared the content, and provide variable rewards that motivate them to continue posting.” [51]

It has long been understood that intermittent rewards are more effective incentives than predictable ones: flag notifications of desired or trivial events in social media have been incredibly successful in creating compelling interactions [51] one recent study estimates that we tap or swipe our phones more than two and a half thousand times a day [76].

It could be argued that Ronson’s references to the “Sacco witch hunt” (*ibid*) are over stated but social media activity can result in very literal mob violence. Kyle Quinn, an assistant professor of Biomedical Engineering was falsely accused of being a man photographed marching as a Nazi at Charlottesville. Quinn was actually at home with his wife but his University received calls demanding that he be dismissed, his home address was tweeted and he and his family had to go into hiding [12]. A recent Guardian article described a series of killings carried out in India following false information spread on Whatsapp. A mob of nearly one thousand people killed a

man and critically injured three others because they believed they were child kidnappers [60]. Such murderous flashmobs can form so quickly around videos forwarded without context that the authorities have shut down internet access in an attempt to calm situations (*ibid*).

Figure 4 sketches video and image shares based on the 2015 film *The Witch* and the 1996 film of the *Crucible*. Although the technologies driving social media are new, the practice of seeking hidden enemies within a given community is very old. If social media had existed at the time of the European witch hunts, it would certainly have provided users with access to new information. But it would have done that within existing information bubbles enabling very large numbers of people to confirm existing prejudices. It would also have provided a mechanism for forming mobs with far greater speed and efficiency.

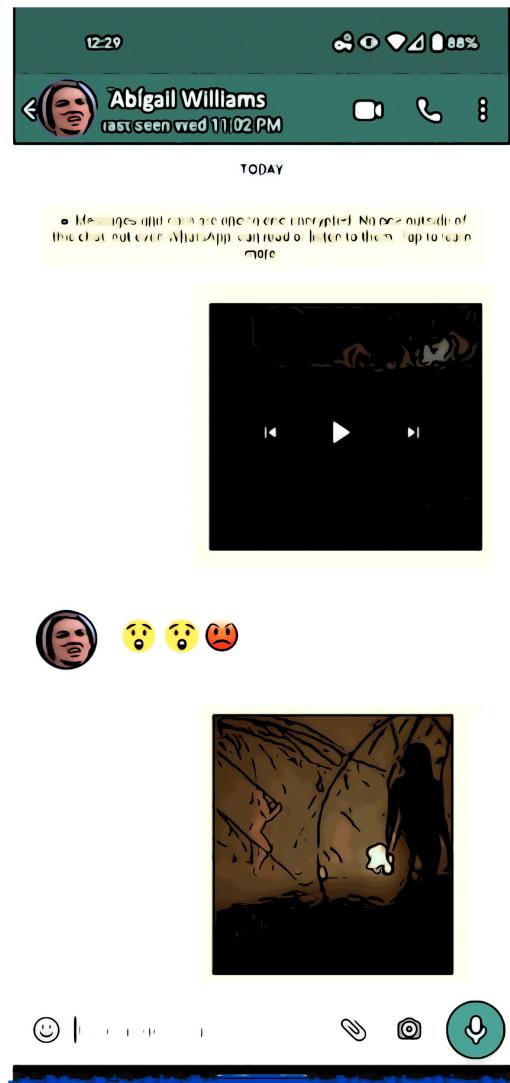


Fig. 4. Whatsapp witch finding.

4 THE SOVIET PURGES

Stalin's show trials are also commonly referred to as witch hunts and scholars have demonstrated that this is not simply a cliché. A recent article in the *Journal of Totalitarian Movements and Political Religions* demonstrates that the Soviet Terror "conforms in most important ways to the pattern of witch-hunting established in early modern Europe and worldwide" [5]. The official title of these purges was "repression" and its targets were "counter revolutionaries" and more generally "enemies of the people". In the opening pages of "*The Gulag Archipelago*" Alexander Solzhenitsyn records the experience of arrest:

"Arrest! Need it be said that it is a breaking point in your life, a bolt of lightning which has scored a direct hit on you? That it is an unassimilable spiritual earthquake not every person can cope with, as a result of which people often slip into insanity?

The Universe has as many different centers as there are living beings in it. Each of us is a center of the Universe, and that Universe is shattered when they hiss at you: "*You are under arrest.*"

If you are arrested, can anything else remain unshattered by this cataclysm?

But the darkened mind is incapable of embracing these displacements in our universe, and both the most sophisticated and the veriest simpleton among us, drawing on all life's experience, can gasp out only: Me? What for?" [129 p. 3]

The answer to this question might be the same for victims of the Soviet purges as the European witch trials: because you have aroused the envy of a neighbor because someone wants something that you have.

"While the prisoner was still in a state of shock and torment and totally beside himself, they tried to get from him very quickly as many irreparably damaging items of evidence as possible and to implicate with him as many totally innocent persons as possible. Some defendants became so depressed in these circumstances that they even asked not to have the deposition read to them. They could not stand hearing them. They asked merely to be allowed to sign them, just to sign and get it over with. Only after all this was over would the prisoner be released from solitary into a large cell, where, in belated desperation, he would discover and count over his mistakes one by one." [129 p. 58]

Zizek notes that the role of confession in Stalin's show trials was crucial:

"by confessing their guilt, by assuming responsibility for the problems and failures of the Soviet system, the accused did a great service to the party, maintaining its' purity – the troubles of daily life were not the Party's responsibility." [160 p. 348]

Just as witch-hunters blamed bad harvests on the activities of their victims, so "counter-revolutionaries" could be scapegoated for the failings of Soviet communism.

4.1 Trotsky on Instagram

The relationship between truth and politics has always been precarious and Hannah Arendt argued that we are increasingly confronted with very basic dilemmas about what happened when:

"if we now think of factual truths—of such modest verities as the role during the Russian Revolution of a man by the name of Trotsky, who appears in none of

the Soviet Russian history books—we at once become aware of how much more vulnerable they are than all the kinds of rational truth taken together.” [4]

A photo-book called *The Commissar Vanishes* by David King shows how Stalin doctored photographs to remove various people from the historical record. In a 1919 photograph recording celebrations of the first year anniversary of the October Revolution, Lenin stands with a crowd that includes a very recognizable Leon Trotsky. Trotsky was one of the first of Stalin’s opponents to be declared an enemy of the revolution and when the photograph was re-published in 1967 Trotsky had vanished from the image [75].

The imaginary Instagram shots in Figure 5 shows Lenin addressing Red Army soldiers in 1920 with Leon Trotsky and Lev Borisovich Kamenev standing at the right of the podium. The second shot features a version of the photograph doctored for Stalin (*ibid*). Today of course anybody can doctor a photograph in minutes using apps like Pixomatic—the app used to add a young Stalin standing right next to Lenin to the third version below.

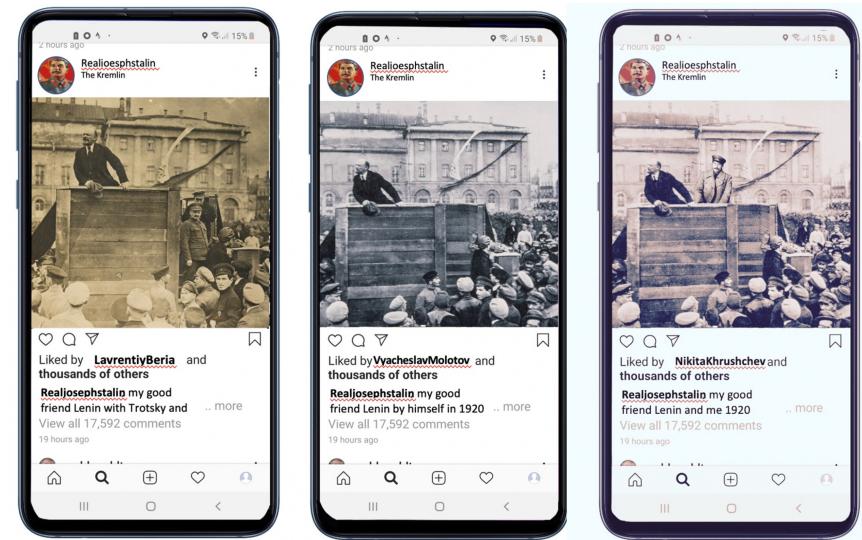


Fig. 5. Pixomatic Lenin. Photograph by G. P. Goldshtain/Tate [75].

The Pixomatic Lenin figure in Figure 5 imagines the Instagram posts of the “realjosephstalin” showing different versions of the same event. It is liked first by Beria (who was in line to succeed Stalin upon his death) then Molotov, another member of Stalin’s tumultuous inner circle who became next in line for the succession when Beria was removed) and finally, Khrushchev who ultimately took over (*ibid*).

The traces of Stalin’s purges in *The Commissar Vanishes* demonstrate that historical fact is, in Arendt’s term, “infinitely fragile” [4]. Doctoring photographs is nothing new, but the ease with which this can now be done is unprecedented. King notes that Stalin had to employ highly skilled artists, literally painting over photographs to achieve previous disappearances. Now anyone with a smartphone can do this kind of work in moments. Not only can anyone do this now, they can distribute their images across scale free networks to achieve exponential, viral publication. This has created a situation where the truth status of any photograph can be called into question. Recently a viral photograph showed Donald Trump’s hair being blow back to reveal a very clear orange tan line around his face, Trump tweeted:

“More Fake News. this was photoshopped, obviously, but the wind was strong and the hair looks good? Anything to demean!” (@realdonaldtrump Feb. 8 2020)

Whether or not Trump uses fake tan is a trivial issue. What is serious here though is the emergence of new forms of deniability. These technologies present propaganda opportunities beyond the wildest dreams of twentieth century tyrants.

Solzhenitsyn’s account of the Soviet gulags insists on the centrality of ideology in the atrocities of totalitarianism. He points out that Shakespearean and Dickensian villains stopped at a dozen or so corpses. Personal enmity alone is not enough to explain the body counts of the twentieth century:

“Ideology—that is what gives evildoing its long-sought justification and gives the evildoer the necessary steadfastness and determination. That is the social theory which helps to make his acts seem good instead of bad in his own and others’ eyes, so that he won’t hear reproaches and curses but will receive praise and honors [...] Thanks to ideology the twentieth century was fated to experience evildoing on a scale calculated in the millions. This cannot be denied, nor passed over, nor suppressed.” ([129](#). pp. 77–78)

The Slovenian philosopher Slavoj Zizek considers the gulf between stated political aims and actual outcomes in terms of Hegelian distrust:

“The French Revolution wanted universal freedom and climaxed in terror, Communism wanted global emancipation and gave birth to Stalinist terror ... Hegel’s lesson is thus a new version of Big Brother’s famous slogan from Orwell’s 1984 “freedom is slavery”: when we try to enforce freedom directly, the result is slavery.” (*ibid*)

But denunciation, demonization and crowd power are not solely the domain of theocratic or totalitarian regimes. The following section provides an example of the same historical patterns from within a democratic and capitalist society.

5 McCarthyism

Senator Joseph McCarthy’s hunt for communist spies in the United States was also characterized by his contemporaries in terms of a witch hunt [[11](#)]. Arthur Miller’s 1953 play *The Crucible* is set during the Salem Witch Trials but it was widely interpreted as a response to McCarthyism. The medieval witch hunts spanned some three hundred years. The Soviet purges continued for thirty years, the Cultural Revolution in China lasted a decade. The period of “McCarthyism” in the United States endured for just four years, but had lasting effects on the culture. Citizens who had committed no crime could be summoned to a court, questioned about their political views and asked to incriminate others. Those who refused to co-operate risked losing their jobs and even jail.

The first use of the phrase “reds under the beds” has been traced to the nineteen twenties when a journalist reported that a Republican nominee for vice president was “spreading the belief that under every bed is a Red” [[154](#)]. During the McCarthy era, the phrase “reds under the bed” entered common parlance as an idiom suggesting communist enemies hiding everywhere (*ibid*). In 1950 McCarthy made a speech claiming to have a list in his hand of 205 people working in the State Department known to be members of the communist party. Hollywood studios

created lists of suspected communists denying employment to hundreds of writers and producers. In 1953 the federal government dismissed 2,200 people deemed to be “security risks”. Barker notes:

“Demonization justifies extreme measures, and sets up barriers to criticism, so that opposition or questioning is itself a mark of guilt.” [11]

Those that spoke against McCarthy immediately became suspects themselves. Although there are differences between secular and religious witch hunts, there are also common patterns: the identification of hidden enemies, guilt by accusation, proof by confession or denial, criticism of the process as proof of collusion, elimination as solution and viral escalation (*ibid*).

The Golden Bough, a classic of anthropology notes that “the scapegoat” is a symbol that takes many forms including human beings. The scapegoat represents the collective sins of a community and is ritually slaughtered; there are numerous examples spanning widely different historical epochs and social formations [55]. Scapegoating has occurred in theocratic and atheist societies. It has occurred in both totalitarian states and democracies. What might McCarthyism have looked like if the actors at the time had access to the technology of today?

5.1 McCarthy Memes

The most iconic images of Senator Joe McCarthy show him brandishing lists of suspected communist sympathizers in various organizations. It is easy to imagine him gaining access to many other kinds of data:

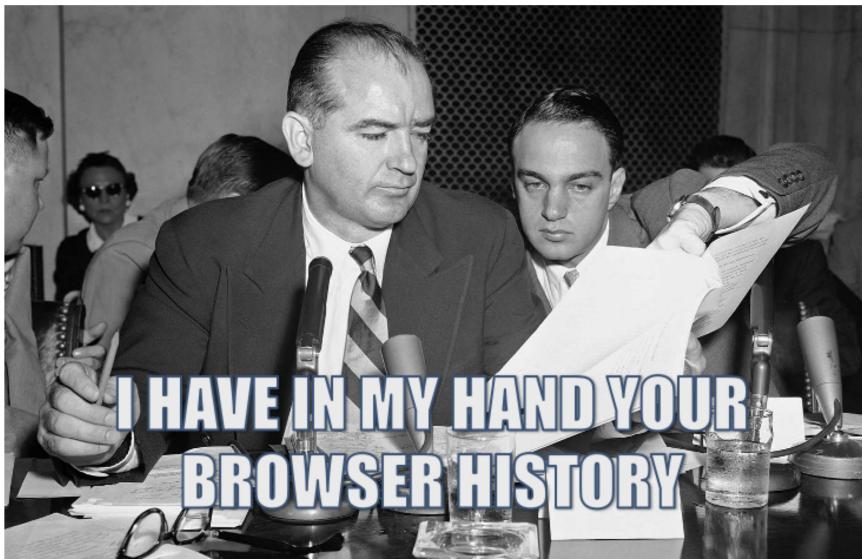


Fig. 6. McCarthy's new list.

Edward Snowden's revelations made it clear that the American **National Security Agency (NSA)** had access to an extraordinary amount of data including browser history, e-mail, and laptop webcams [126]. The extent to which the NSA still spies on US citizens is debatable but there is a huge amount of private data which is made public voluntarily. Cardinal Richelieu is reputed to have said:



Fig. 7. McCarthy's Twitter archives.

“If you give me six lines written by the hand of the most honest of men, I will find something in them which will hang him”. As quoted in *The Cyclopaedia of Practical Quotations* (1896) by Jehiel Kéeler Hoyt, p. 763

Ironically it is unclear whether he actually said this or not. But he is the undisputed author of *Testament Politique*, which contains lines such as “Deception is the Knowledge of Kings”. The use of “out of context” quotation has long been practiced by unscrupulous journalists. Shortly before his death the British philosopher Roger Scruton was accused of being racist and subsequently pilloried on social media. Reflecting on this experience he noted:

“words may be taken out of context, even doctored to mean the opposite of what you said — as happened recently to me in an interview given to the *New Statesman*—but this will not affect the verdict, since there is no objective trial, no “case for the defense”, no due process. You are accused by the mob, examined by the mob and condemned by the mob, and if you have brought this on yourself, then you have only yourself to blame. For the mob is by nature innocent: it washes its own conscience in a flow of collective indignation, and by joining it you make yourself safe.” [120]

If six lines could hang an honest man, how many tweets would be necessary? A current day McCarthy would not require friends to inform on one another, they could simply examine publicly available friends list on Facebook.

There are of course, ways in which media can be used to combat demonization. Unlike the Soviet and Chinese purges, McCarthyism ended not with the death of a leader, but a TV show. McCarthy alleged there were communists in the US army and the McCarthy-Army hearings were broadcast live on national television. Joseph Welch was acting as special counsel and his firm, Hale and Dorr employed a young attorney named Eddie Fisher. While at Harvard, this young man had been a member of the National Lawyer Group, which had been associated with the communist party. In pre-trial meetings McCarthy had agreed not to mention this but during the trial, the Senator lost his

temper and pointed out that Hale and Dorr employed Fisher despite his communist associations. Welch's response was emotional:

"Little did I dream you could be so reckless! And so cruel as to do an injury to that lad! It is true he is with Hale and Dorr. It is true that he will continue to be with Hale and Dorr. It is, I regret to say, equally true that I fear he will always bear a scar, needlessly inflicted by you." [106]

McCarthy ignores the rebuke carrying on with his condemnation of Fisher until Welch makes this devastating intervention:

"Let us not assassinate this lad further Senator, you've done enough! Have you no sense of decency sir? At long last, have you left, no sense of decency?" [ibid]

Television is a visual medium and McCarthy's look of momentary shame remains powerful television. In the fifties, TV commanded huge audiences and live broadcasts such as this could become history making events. It is easy to imagine that social media would have distributed gifs of this moment, or images like the one in Figure 8:

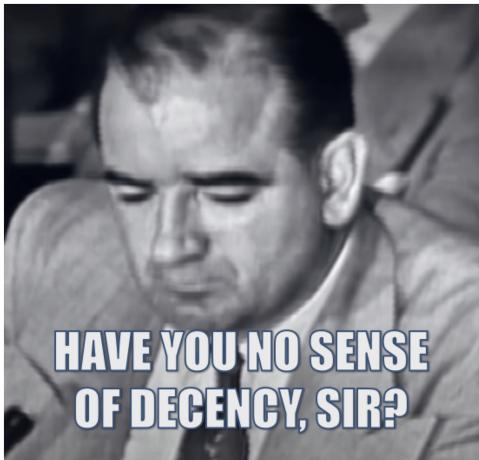


Fig. 8. McCarthy meme.

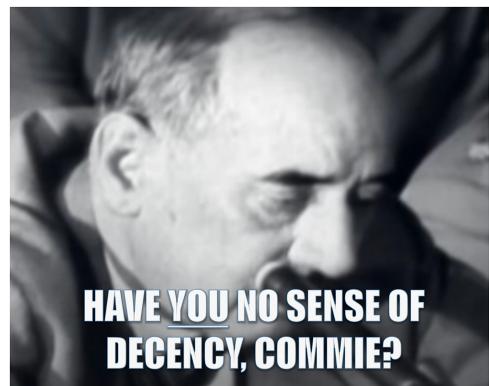


Fig. 9. Welch counter meme.

Twitter and Facebook would certainly ensure that the incident would be shared but those in some information bubbles might miss it altogether, or see only rival interpretations:

Figure 9 shows an image of Welch taken from the trial with the question he directed at McCarthy turned back against him with an added accusation of communism. It is certainly possible that social media could have been used to oppose and defy McCarthyism but, equally likely that McCarthy and his supporters would have taken full advantage of a medium, which favors soundbites over complex context.

Social media is so ephemeral that its most successful formats insist on arbitrarily short formats (280-character limits on Twitter, 6 second videos Vines and sixty second Tik Tok videos). Susan Sontag points out that understanding involves time. A photograph of an organization does not add to an understanding of how it works because:

"functioning takes place in time, and must be explained in time. Only that which narrates can make us understand. The limit of photographic knowledge of the

world is that, while it can goad conscience, it can, finally, never be ethical or political knowledge.” [130 p. 27]

The television footage of the encounter between Welch and McCarthy played out in time, one moment following another. Social media memes like the ones above are frozen moments taken out of context. The McCarthy era was the shortest-lived period of denunciation and demonization considered in this article. It might have lasted much longer if the media covering it had been as fragmented as ours.

The twentieth-century media theorist Marshall McLuhan coined the phrase “global village” before the internet existed. McLuhan argued that mediums were far more significant than any particular content conveyed by that medium. For McLuhan the invention of writing and then the Gutenberg printing press involved simplification and loss. For five hundred years “Gutenberg minds” came to expect linear rational thought, presented in a form that was easy to digest and skim. McLuhan argued that the oral presentation of ideas through dialogue, hesitation, and digression was much closer to human thought than the polished texts that came to dominate Western culture. He saw the rise of television and new media as a return to earlier forms, coining the phrase “global village” to indicate the end of monocultural forms. But he pointed out that “the global village absolutely ensures maximal disagreement on all points” [93]. For McLuhan, the center would not hold:

“Culture becomes organized like an electronic circuit: each point in the net as central as the next. Electronic man loses touch with the concept of a ruling center as well as the social restraints based on interconnection. Hierarchies constantly dissolve and reform.” [95]

McLuhan later substituted the term global village for “global theatre” where “all men become actors and there are few spectators. The population of the world is both the cast and content of this new theater” [94]. In the global theatre of social media, McCarthy’s shaming could also be seen as his moment of triumph depending on the echo chamber where it was discussed. The television audiences of the 1950s experienced McCarthy’s shaming in the context of shared values, hence Welch’s appeal to “decency” and emotive uses of terms like “the lad”. On social media, the event would be experienced not as it unfolded in time but as asynchronous fragments. Nor would it be interpreted within a framework of shared values but from inside different filter bubbles. The shared televisual moment of McCarthy having gone too far would be less likely to occur in social media and if it did there would be numerous other “centers” where it would be endlessly re-presented and re-contextualized.

The following section is a reflection on the Cultural Revolution in China. It is given slightly more space than the other periods partly because it is closer in time to our own historical moment and also because it was so intensely concerned with media.

6 THE CULTURAL REVOLUTION

Mao Tse Tung ruled China as Chairman of the Communist party from 1949 until his death in 1976. His image dominated communist party propaganda across the country. In paintings and posters his face beamed over idyllic scenes of emancipated workers laboring happily in fields producing bumper crops [137]. At the level of rhetoric Chairman Mao was anti-racist and anti-colonialist urging his followers to -

“call on the workers, peasants, and revolutionary intellectuals of all countries and all who are willing to fight against U.S. imperialism to take action and extend strong support to the struggle of the Black people in the United States!” [140]

One of his most famous slogans emphasized gender equality “women hold up half the sky” [42]. The Cultural Revolution was driven by the notion that it was not enough to create a new society, it was also necessary to create new human subjects to live in it:

“The ‘socialist new person’ (shehui zhuyi xinren), or, in Lenin’s formulation from the early 1920s, ‘new Soviet person,’ was projected as the ideal figure who would create and emerge from the revolutionary remolding of human life and labor after the exploitative systems of capitalism were defeated: selfless, collective-minded, educated, seeking for equality, and so on.” [131 p. 358]

At a time when he seemed to be losing control of the party, Mao urged the people to seek out “capitalist roaders” and the “ghosts and demons” who secretly wished to restore China to capitalism. The “cultural revolution” focused on art, literature and education, aiming to eradicate those who would undermine the revolution from within. For Mao’s supporters, this was part of a noble struggle to produce a new kind of person fit to live in the new society; for his critics, it was a ploy to consolidate his power and purge enemies or rivals within the party [e.g., 28, 33, 42].

For some, Mao was, and remains, a cultural hero. His image dominated Chinese socialist art and also became iconic in Western Pop Art. Andy Warhol, for example, made 199 silkscreen paintings of the chairman’s face. But photographic accounts of the cultural revolution present a less romantic record of the period.

Red-Color News Soldier is a book of photographs by Li Zhensheng which provides a harrowing visual history of the Cultural Revolution. Many of the photographs show “struggle sessions”: men and women stand on podiums or chairs with their heads bowed; behind them are officials, red flags and posters of Mao, before them are large crowds. Some victims wear placards declaring their offences, some wear long dunces caps, some are being forced to their knees. In the picture “Wang Yilun, criticized by the Red Guard at The University of Industry” we see a man standing on a platform with his head bowed, he wears a placard, which says “counter revolutionary revisionist element” [156 p.92]. A guard stands by with his hands on his hips while a crowd seated before them raise their fists in the air. Li Zhensheng had been ordered to photograph only the positive aspects of the cultural revolution and he preserved photographs like this by hiding them under his floorboards during the “red storm” [156]. Zhensheng kept the negatives safe at great personal risk and published them some forty years later (*ibid*).

Although such images retain their power, seeing is not necessarily believing. The scale of the violence is commonly denied in “grey literature” like blogs (e.g., 42) and vlogs [8, 117]. But the vast majority of historians agree that atrocities were committed at a speed and scale that is difficult to comprehend [28, 33, 35, 42, 62, 81, 137, 139, 153]. An official review by the Chinese Communist party itself declared that the Cultural revolution had brought “catastrophe to the Party, the state and the whole people” [43].

Frank Dikötter, a historian working in the University of Hong Kong, was granted access to many previously unavailable archive documents to write his three-volume account of China under Mao. The final part of *The People’s Trilogy* deals with the Cultural Revolution from 1966 to 1976. Dikötter estimates that during this period one in fifty people were denounced, amounting to as many as 16 million in a population of 800 million. The text draws on many eye-witness accounts. Some of these are from, now elderly, former members of the Red Guard, others by surviving victims. Accounts are also drawn from bystanders [42]. The atrocities that Dikötter records, like those in the next paragraph, can be hard to read.

The first victim of the Cultural Revolution was the vice principal of a girl’s school. The students spat in her face and filled her mouth with soil. Then they beat her to death and dumped her body in a garbage cart [42]. At another school, a principal was made to stand while Red Guards poured

boiling water over him (*ibid*). In one elementary school teachers were forced to swallow nails and excrement (*ibid*).

Dikkoter is dismissed as a “revisionist” in grey literature: bloggers dispute the authenticity of the documents in the archive and also accuse him of misinterpreting the documents [e.g., 8]. But many atrocities are also recorded by eyewitnesses in their autobiographies. *Wild Swans* by Jung Chang tells the life stories of three generations of Chinese women: a grandmother, a concubine to a warlord; a Mother, a communist revolutionary and a daughter, Jung Chang herself, a student during the Cultural Revolution. Jung Chang describes her own teachers being humiliated and beaten by their pupils. She relates how her Mother returned from a “struggle session” with the Red Guard having been forced to kneel in broken glass. And she herself witnessed a young member of the red guard torturing a woman while he quoted Mao’s slogans [32].

The Three Body Problem is a best-selling science fiction novel by Cixin Liu and, as previously noted, it was the inspiration for this article. The book is worth reflecting on at some length because its central theme is epistemology and this is central to all of the periods considered so far. The novel opens after a period of some seventeen hundred “struggle sessions” where suspected counter revolutionaries were questioned, tortured and sometimes beaten to death. The narrator points out that many intellectuals committed suicide rather than face struggle sessions. Some of China’s most famous writers killed themselves at this time - historians, critics, geophysicists, poets, and novelists [86]. The novel details a particular “struggle session” where a Physics Professor is made to wear a dunce’s hat and iron sign during an interrogation held before crowds of students and faculty. His students accuse him of teaching reactionary ideas like Einstein’s Theory of Relativity. The Professor points out that relativity is foundational in modern Physics and argues that no academic survey course could leave it out. The students call him a liar and denounce Einstein as a bourgeois authority figure. The Professor’s wife then stands up to “criticize and expose” him saying he had once “taken her in” with his reactionary views but now, thanks to the revolutionary youth, she was awake and alert. The Professor refuses to repent and he is beaten to death.

The book progresses from this terrible past to a future when humanity makes contact with the planet Trisolaris. The orbit of this planet’s sun is unpredictable, rising at a distance that sustains life for several generations, then abruptly appearing as a giant in the sky, so close that it boils the oceans and scorches all life from the planet. Physicists in the book are tormented by the idea of a radically unstable universe where nothing is known and nothing can be known.

This theme mirrors the opening scenes dealing with the Cultural Revolution. During this period, all truth was suspended and open to revision: the most respected party comrades of today might, tomorrow, be enemies of the people.

Dikotter’s account of Mao’s dictatorship emphasizes the crucial role of fictions, which organized official knowledge: within the party there were “capitalist roaders” comrades who secretly wished to betray the revolution and take the capitalist road [42]. Like the witches of the middle ages and the reds of fifties America, capitalist roaders were hiding in plain sight. Xing Lu’s “Rhetoric of the Chinese Cultural Revolution” is a personal history which recounts the persecution of the author’s father:

“When Father begged them to stop torturing him, one of the Rebels said to him,
“Torturing you is a revolutionary act. You have no rights to make such a request.
You are our class enemy and under our control” Another Rebel added, “People like
you should be eliminated from the earth; you are all monsters.” [89 p. 15]

The Sapir–Whorf hypothesis suggests that changing the way we speak changes the way we act; the weak form of this hypothesis is that language influences action, the strong form is that it determines it. Xing Li takes both positions to argue that the language and thought of the cultural

revolution influenced one another in a cyclic form (*ibid* p. 30). Barker's model of demonization also blurs the line between language and action—to make an accusation, to denounce an enemy as a demon, is not just a speech act but a form of action [11].

6.1 #MAOTHOUGHT

For Mao, all literature and art belonged to one social class or another and served explicit political ends. Dikötter quotes one of Mao's sarcastic aphorisms to illustrate:

“Writing novels is popular these days, is not it? The use of novels for anti-party activity is a great invention.” [42].

The sayings of Chairman Mao collected in the *Little Red Book* were published in their billions and children memorized passages at school. Transistor radios were sold at discount prices to spread “Mao Tse Tung Thought”. In 1974 there were 4.8 million loudspeakers, roughly one per household [42]. These loudspeakers were used in schools, factories, and offices to create what one visitor called “a ceaseless inferno of sound” [*ibid*].

Many of Mao's aphorisms have great economy of expression and a poetic quality, for example, “in waking a tiger use a long stick” or “learn from the masses, then teach them” or “to read too many books is harmful”. The following would have met the Twitter character limit and been eminently retweetable:

“Those who insult the masses should be liquidated by the masses.” [42]

Figure 10 suggests how the mechanics of a site like Twitter would amplify the voices of preferred party members through “who to follow” links to Madam Mao, Zhou Enlai, and Lin Bau. Madam Mao was the Chairman's wife and a key figure in the Cultural Revolution. Many of the remarks she made in speeches at the time would also have been very retweetable:



Fig. 10. #MaoThought.

“When bad people get beaten by good people they deserve it. When good people beat good people it is a misunderstanding that should be cleared up”

This is a quote from a speech she made during the Cultural revolution [42], it would have had to be broken up into chunks of 140 or 280 characters but it would have been no less effective for that.

Twitter elevates particular individuals but Facebook provides a platform for groups.

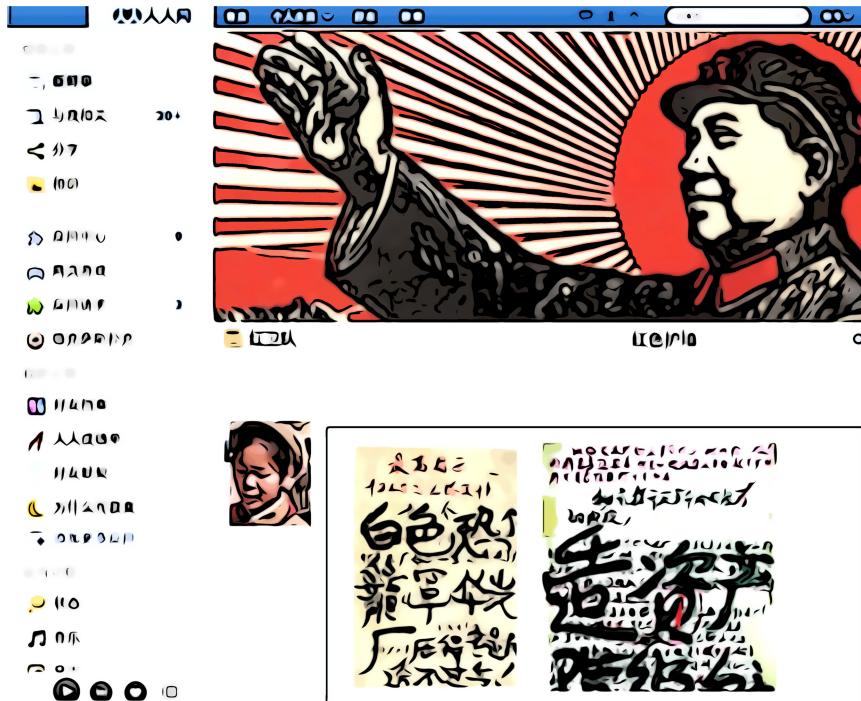


Fig. 11. Red guard group page.

Figure 11 imagines a Red Guard Group where a member has posted two photographs of “Dazibao”—Big Character Posters. The image on the left is translated as

“Fire at anti-Party anti-Socialist “Vulture” Zhan—who has sneaked into the Party.” [62]

One Beijing resident described the city as being submerged in “a sea of paper” and Mao encouraged this in his praise of “Dazibao” [42]. The “poster wars” created terror, one of the first ordinary people to fall victim was Chen Zhigao who swallowed cyanide after a child glued a poster to his front door denouncing him [42].

Xiaofei Tian, a Professor of Chinese Literature considers Dazibao unique, as words displayed in public, because: “they are almost without exception vilifying and angry” he points out that they derive their power not just from the “venomous content” but also the visual spectacle [139]. They would have covered virtual walls as well as real ones. A recent study of Facebook users called *I regretted the minute I pressed share* identifies a range of reasons for impulsive shares including wishing to be perceived in a favorable way and being in a “hot” emotional state [145]. During the Cultural Revolution an impulsive share could have resulted in somebody’s death.

Facebook walls would also have provided spaces for debate, for example:

- What shall we rename the street
- Five Generations Under One Roof

- *What about – Destroy the old!*
- *What about - The Whiff of gunpowder!*

These name change suggestions are recorded in Jung Chang's "Wild Swans" [28]. Such discussions would also have played out on Twitter hashtags and it is likely that the rage fueling them would have made for viral popularity. Fan et al. have found that anger is shared far faster and wider than other emotions like joy or sadness [52].

6.2 Struggle Session Selfies

One of the most powerful scenes in *The Three Body Problem* occurs in the novel's opening pages which describe a battle fought by student Red Guards in 1967. During the battle, a 15-year-old girl dreams of the better world she is building:

"She waved the battle banner as though brandishing her burning youth, trusting that the enemy would be burnt to ashes in the revolutionary flames, imagining that an ideal world would be born tomorrow from the ardor and zeal coursing through her body... She was intoxicated by her brilliant crimson dream until a bullet pierced her chest." [86: 4–5]

Her body is tossed over a metal gate and impaled on a spike, the red guards use it for target practice until half of her head is shot off and "only a single beautiful eye remained to stare at the blue sky of 1967".

Figure 12 imagines a selfie being taken during the kinds of struggle session photographed by Li Zhengsheng [156]. It represents the kind of selfie that might have been taken by young people thinking that they are "creating a better tomorrow" like the fifteen-year-old in Cixin Liu's novel. The faces of the girls taking the selfie are defiant and determined but not cruel.



Fig. 12. Struggle session selfie based on [156 p. 93].

This image is based on a photograph by Li Zhengsheng showing provincial secretary Wang Yilun “criticized by red guards” (*ibid*). The Red Guards posing for the selfie have of course been added to the composition as an anachronistic fiction. Such a selfie would have been an expression of revolutionary fervor and dedication to the cause. The Cultural Revolution was deeply concerned with representation in propaganda, art, and reportage. Figure 13 shows someone taking a photograph of a struggle session using a smartphone:



Fig. 13. Smartphone struggle session, based on [156, p. 111].

Framing the image of the guard in a cell phone emphasizes the spectacular nature of the act. There is a carnivalesque element of upturning existing hierarchies in the identification of hidden ideological enemies. Zizek points out that translators of Lacan use the French word *jouissance* rather than the English word enjoyment to indicate an excessive traumatic character to certain forms of enjoyment:

“to enjoy is not a matter of following one’s spontaneous tendencies; it is rather something we do as a kind of weird and twisted ethical duty.” [157]

Zizek draws on Lacan’s readings of Kant and Sade to understand this kind of enjoyment as a political factor in totalitarian regimes:

“It is this radical objectivization—instrumentalization of his own subjective position which confers upon the Stalinist, beyond the deceptive appearance of a cynical detachment, his unshakeable conviction of only being the instrument of historical necessity.” [158 p. 235]

The photograph that Figure 13 is based on is captioned:

“Accused of bearing a resemblance to Mao, Heilongjiang province Governor Li Fanwu’s hair is brutally shaved and torn by zealous young Red Guards in Red Guard Square.”

The humiliation took place amidst cries of “Shave his hair. Shave it into a Ghost’s head” [156, p. 110]. The person cutting the hair has the grim expression of someone doing an unpleasant but

necessary job. But the expression of the Red Guard in the frame of the phone is more ambivalent, suggesting perhaps “a point at which Duty itself is marked by a stain of (surplus-) enjoyment” [158 p. 239].

6.3 Resistance

Satire often thrives at times of great social change and it is sometimes employed as a form of opposition or dissent. Social media might well have been used to channel satirical Mao memes such as the fictional one in Figure 14.

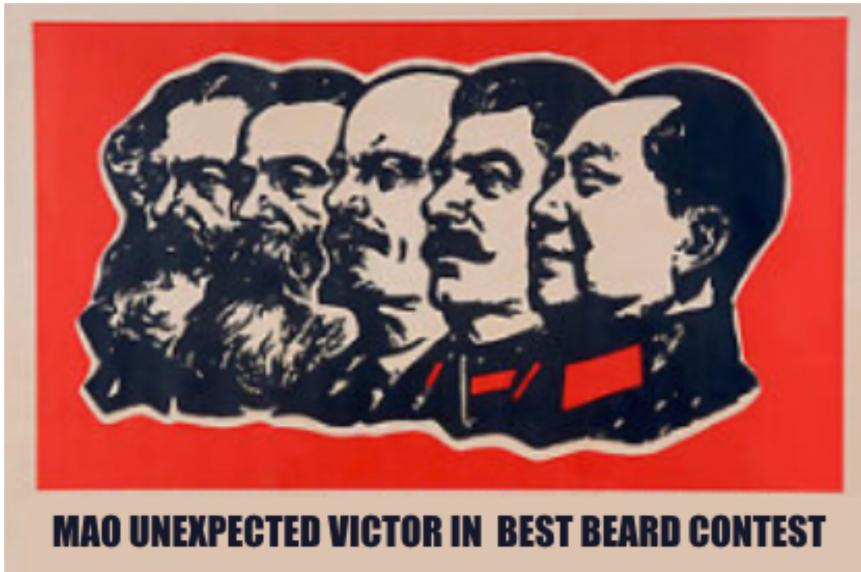


Fig. 14. MaoMeme.

However, this kind of humor is also seen as a pressure valve that may actually help maintain authoritarian regimes—the satire booms in the US and the UK in the 1960s and 1980s were shown to have little to no political effect [108]. When the British comedian Peter Cook opened a satire club in London during the nineteen sixties, he remarked that he wanted to capture some of the spirit of the Berlin cabarets that had done so much to prevent the rise of Hitler [36].

But it is also possible that social media would have facilitated more direct and effective forms of resistance. Dikotter records many forms of oppositional action during the Cultural Revolution. Over the counter, bookshops sold the work of Marx, Lenin, Stalin, and Mao but under the counter there were black market copies of forbidden texts [42]. There was a thriving black market in transistor radios and semi-conductors which the authorities could not stamp out. There were underground clubs that staged forbidden plays and music. Underground churches also flourished in private homes and Dikotter records incidents when Christians would shout “I do not believe in Mao Tse Tung. I believe in God” [ibid]. Big character “Dazibao” posters were sometimes used to mock pompous party officials, and to express anger at corruption and abuses of power [139].

It is conceivable that hacker groups like 4chan and Anonymous might have been channels of resistance outside the purview of the state. But these groups are dominated by young people and this was the demographic charged by Mao with carrying out the Cultural Revolution. Journalists

urged the young to destroy the “four olds” - old customs, old ideas, old culture, and old habits [32, 33, 42]. It is possible then that some young people may have used 4chan for resistance but equally (and perhaps more likely) that they would have used it for denunciation and persecution. These groups are currently dominated by the alt right and it has been argued that their ironic memes helped bring Trump to power [15].

Politics is not the primary interest of most 4chan users, pornography and games loom much larger on the boards (*ibid*). But eroticism was also a feature of resistance during the Cultural revolution. One of the forbidden texts purchased under the counter was *The Heart of A Maiden*, an erotic novel [42]. Yu Hua also recalls seeing a Dazibao cartoon of a couple having sex.

“Sandwiched between revolutionary slogans and frequent quotations of Chairman Mao were exquisite little passages that told the story of a pair of fornicators in our small town.” [80]

This appropriation of media for eroticism resonates strongly with our own era. In *The Net Delusion* Eugeny Morozov counters utopian accounts of digital citizenship by pointing out that while the internet certainly offers the masses new ways of engaging in activism, what they generally do with this freedom is share jokes, cat videos, and pornography [90 p. 75].

Social media platforms with identifiable users would have been still less likely to be used as “weapons of the weak”, they would more likely be devices of domination. Though some forms of information technology could be used to resist, social media, as it is currently configured, would be more likely to amplify and intensify the use of power by the dominant group.

Contemporary scholars have identified new forms of “orientalism” where China is either “othered” as a brutal and totalitarian superpower to be feared as an enemy or seen as an alternative to Western capitalism driven by technological and economic advances. This kind of “techno-orientalism” has been seen to inform much popular speculative fiction: a recent collection of Media Studies essays explores why the future cities of movies like *Bladerunner* (1982) and *Cloud Atlas* (2012) look like Tokyo or Shanghai. Such representations both express and assuage western anxiety about the rise of China and the “Tiger economies” [105, 145]. But even the briefest consideration of European witch hunting, Stalinist purges and McCarthyism demonstrate that the cultural revolution is far from a uniquely Chinese phenomenon. The context of demonization in other countries and cultures makes it very clear that the phenomena discussed in this article are far from unique to any particular time or place.

7 DISCUSSION

Perhaps all these anachronistic fictions have shown is that social media would have served the same functions as other propaganda outlets like radios, loudspeakers, and article posters [56]. During the Arab Spring Malcolm Gladwell countered the “social media revolution” argument by pointing out that there were revolutions before Facebook, the internet, or phones. Gladwell speculates that today our focus would be on the medium, not the message: “Whoa, did you see what Mao just tweeted?” [56]. Arguably then, the same propaganda would simply have been disseminated by different means. Denunciation and demonization have occurred across radically different epochs and cultures—religious and secular, ancient and modern, communist and capitalist. It could be inferred that this is simply a perennial aspect of human behavior which has nothing to do with technology. Things would have been neither worse nor better if social media had existed during such times. But a consideration of historical patterns of demonization read against the properties of social media suggest amplification, as in the diagram below in Figure 15:

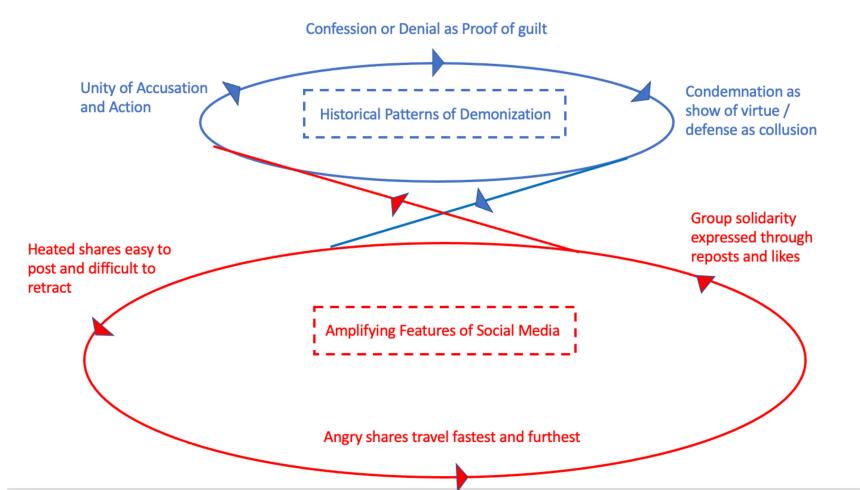


Fig. 15. Vicious circles: historical patterns of demonization and amplifying features of social media.

This kind of vicious circle described in Figure 15 could be described as a positive feedback loop:

“Positive feedback occurs when the response of a system to an initial deviation of the system acts to reinforce the change in the direction of the deviation.” [41, 7]

Audio feedback loops occur when a signal from a microphone is picked up by a speaker and amplified again and again in an increasingly loud and overwhelming cycle; similarly, visual feedback loops occur when a camera is pointed at a monitor showing its own signal, producing an infinity effect of the kind used to create the Dr Who title sequence in the seventies; feedback loops also occur in social systems causing phenomena like bank runs and viral videos [150].

Positive feedback is perpetuated by reaction, it is broken by action. The distinction between reaction and action is central to Hannah Arendt’s discussion of forgiveness. For Arendt the “discoverer” of forgiveness was Jesus of Nazareth and she argued that the fact that this discovery was made in a religious context should not make us take it any the less seriously in a “strictly secular” sense. She points out -

“Forgiving [...] is the only reaction which does not merely re-act but acts anew and unexpectedly, unconditioned by the act which provoked it and therefore freeing from its consequences both the one who forgives and the one who is forgiven.” [1]

Arendt cites Kant’s notion of “radical evil” as that which can be neither punished nor forgiven and notes that even those who live through the rare public outbursts of this kind of evil know very little about it (*ibid*). It might be claimed that social media is a neutral tool that can neither exacerbate or curtail the evil actions of individuals or groups. But this kind of argument ignores most social and psychological theories of evil.

7.1 Social Psychology Theories of Evil

Forty years ago, Scott M. Peck observed that there was almost no work in Psychology on the question of evil. Since then, there has been a great deal of work in Social Psychology and there are now a number of competing theories. Situational psychologists draw on work such as the Milgram experiments and the Stanford Prison experiments to show the impact of particular situations and roles on behavior. Social categorization theory focuses on biased thinking about others based

on group membership [98]. Studies of genocide have identified social psychological factors like “social identity, leadership, conformity and group norms” which help shed light on the actions of instigators, perpetrators, bystanders and rescuers (*ibid*). Researchers have also documented the ways we can integrate our own deceitfulness with the need for pride in ourselves and a sense of moral superiority (*ibid*). The themes of pride and deceit echo foundational work by Peck.

Peck, a practicing psychologist and psycho-therapist based his work on existing disorders categorized in the American **Diagnostic and Statistical Manual of Mental Disorders (DSM)**. He argued that evil could be considered in terms of existing personality disorders but added four distinguishing characteristics. These were: scapegoating behavior, intolerance of criticism, pronounced concern with public image and intellectual deviousness [106]. Peck argues that central to evil is a strong tendency to locate wickedness, of whatever variety, as exclusively outside ourselves and within others:

“The evil of this world is committed by the spiritual fat cats, by the Pharisees of our own day, the self-righteous who think they are without sin because they are unwilling to suffer the discomfort of significant self-examination.” [106 p. 129]

For Peck, evil is closely related to the phenomenon of the scapegoat:

“A predominant characteristic of the behavior that I call evil is scapegoating. Because in their hearts they consider themselves above reproach, they must lash out at anyone who does reproach them. They sacrifice others to preserve their self-image of perfection.” [106 pp. 72-73]

This can also take shape as group narcissism, which can form within organizations but can also form around attitudes. Criticism of an idea can feel like a direct attack on the group which shares that idea. Peck references Huxley’s critique of group fanaticism:

“Partisan loyalty is socially disastrous; but for individuals, it can be richly rewarding [...] because they do these things for the sake of a group which is, by definition, good and even sacred, they can admire themselves and loath their neighbors, they can seek power and money, can enjoy the pleasures of aggression and cruelty, not merely without feeling guilty, but with a positive glow of conscious virtue. Loyalty to their group transforms these pleasant vices into acts of heroism. Partisans are aware of themselves, not as sinners or criminals, but as altruists and idealists. And with certain qualifications this is, in fact, what they are. The only trouble is that their altruism is merely egotism at one remove and that the ideal, for which they are ready in many cases to lay down their lives, is nothing but the rationalization of corporate interests and party passions.” [66]

Huxley was writing about eighteenth century conflict between the Monks of Loudon and that city’s secular clergy but the analysis applies equally well to many other historical periods including those discussed in this article.

Theologians and philosophers have long been aware that our vices often masquerade as virtues. During World War II, the British writer and philosopher C.S. Lewis wrote a short piece addressing young Anglicans who were urging “national repentance” for Britain’s contribution to World War One. Though he did not dispute the wrongs done by British statesmen of the time he warns that such criticism encourages us to:

“turn from the bitter task of repenting our own sins to the congenial one of bewailing—but, first, of denouncing the conduct of others.” [80]

The enjoyment that we take in denunciation is also considered at length in the literature of recovery from addiction. The 12 steps of *Alcoholics Anonymous* have been adapted to treat a wide range of substance and behavioral addictions, including narcotics, over eating, and gambling [73]. One of the canonical texts of AA literature makes this observation:

“In a perverse way, we can actually take satisfaction from the fact that many people annoy us, for it brings a comfortable feeling of superiority. Gossip barbed with our anger, a polite form of murder by character assassination, has its satisfactions for us, too. Here, we are not trying to help those we criticize; we are trying to proclaim our own righteousness.” [1 p. 67]

There is now a substantial body of work on social media use characterized by “addictive like behavior and/or reduced self regulation” [136]. Twelve step recovery programs describe addiction in terms of the mind, body and spirit. Recovery involves turning away from what Lewis would call the “congenial” task of denunciation towards the “bitter” work of self-examination.

Peck speculates that technology can also play a role in distancing ourselves from the harm we do. During the wars of the twentieth century, it was possible to think of planes, tanks, and bombs doing the damage rather than individual or collective decision making:

“Several years of placing all our gadgetry between us and our victims had the effect of insulating our conscience.” [ibid p. 215]

Ronson notes that the victims of Twitter public shamings are forgotten soon after the event, with their digital persecutors assuming they are “probably fine” afterwards, and taking no personal responsibility if they are not, because— all they did was hit a retweet button [112].

Peck ends his book *People of the Lie* with a chapter of warnings around the development of a psychology of evil:

“As has been noted, it is characteristic of those who are evil to judge others as evil. Unable to acknowledge their own imperfection, they must explain away their flaws by blaming others. And if necessary, they will even destroy others in the name of righteousness. How often we have it: the martyrdom of the saints, the Inquisition, the Holocaust, MyLai! Often enough to know that whenever we judge another evil, we may ourselves be committing evil. Even atheists and agnostics believe in Christ’s words: “Judge not, that ye be not judged.” [106]

Scott frames evil as a type of mental illness and suggests that the role of any future psychology of evil should come from a place of love that tries to help those that suffer rather than simply condemn. The urge to condemn is ancient and cross cultural. Whether we are hunting out witches, communists, or capitalist roaders, we increase the evil in the world if all we do is condemn others.

Dietrich Bonhoeffer, a German theologian and pastor who resisted the Nazis, argued that stupidity was more dangerous than malice. In a letter written from prison he argued that evil always caused its perpetrators unease while stupidity resulted in complete self-satisfaction. He saw stupidity as a moral failing rather than an intellectual one, noting that many well educated and clever people can be made stupid by circumstances in ways that others are not.

“Upon closer observation, it becomes apparent that every strong upsurge of power in the public sphere, be it of a political or of a religious nature, infects a large part of humankind with stupidity. It would even seem that this is virtually a sociological-psychological law. The power of the one needs the stupidity of the other. The process at work here is not that particular human capacities, for

instance, the intellect, suddenly atrophy or fail. Instead, it seems that under the overwhelming impact of rising power, humans are deprived of their inner independence, and, more or less consciously, give up establishing an autonomous position toward the emerging circumstances. The fact that the stupid person is often stubborn must not blind us to the fact that he is not independent. In conversation with him, one virtually feels that one is dealing not at all with a person, but with slogans, catchwords and the like that have taken possession of him. He is under a spell, blinded, misused, and abused in his very being. Having thus become a mindless tool, the stupid person will also be capable of any evil and at the same time incapable of seeing that it is evil.” [22]

For Bonhoeffer, reason and instruction are powerless over stupidity, facts that do not conform to pre-judgment “need not be believed” (*ibid*). For Bonhoeffer combatting stupidity was not a question of education but rather of submission to the will of God. Bonhoeffer was accused of conspiring to kill Hitler and hanged in a concentration camp in 1945 just weeks before liberation. Eric Kurlander’s recent book *Hitler’s Monsters* details how perceived enemies were described as “demons, devils, vampires, mummies, and other supernatural tropes” [78].

The logic of demonization demands a hidden enemy, which is irredeemably alien and evil. In times of mass denunciations, accusation triggers a catch 22 logic where the victim’s guilt can be proved equally well by denial or confession. Defending the accused can be taken as a signal of complicity, collusion, or guilt. Denunciation and condemnation are enjoyable. Outrage travels faster online than any other emotion; retweeting is as easy as double tapping a screen while fact checking requires effort; liking and retweeting provides tribal validation: this then is a perfect socio-technical storm.

In *The Gulag Archipelago*, Solzhenitsyn takes pains to point out that he is not simply reporting on the corruption within a particular regime when he records the horrors of the Soviet gulags. For Solzhenitsyn, the atrocities of the Gulag were not particular misdeeds to be condemned but rather a potential within us all. Although it may be comforting to condemn the worst of history as particular to a time, place, or people, it is historically illiterate.

The logic of hidden enemies living amongst us is a recurring theme of show trials and massacres. What then would anachronistic fictions depicting other eras look like? What if new arrivals at the Nazi death camps had been stripped not only of valuables like jewelry but also smartphones? Could communication technologies have been smuggled in somehow? Today holocaust deniers dismiss eyewitness accounts and every other kind of evidence. If drone footage were also available, would it have made any difference? It is possible that social media would have publicized the horrors of the Nazi regime but also possible that the data would have been dismissed in a world of “alternate facts”. As Bonhoeffer saw—reason and data are seldom enough to combat the evils of human stupidity.

7.2 The uses of Anachronism

The point of this kind of speculation is not to find retrospective solutions to historical conflict. It is rather to examine current technologies through the lens of different historical periods. Very often design fiction extrapolates from a current technological trend to speculate about what future iterations of coming devices might look like. But the social and political space that technology will be used in seldom gets much attention. Science fiction often exaggerates existing trends to picture far flung dystopias. But as Zizek and others remark, dystopian sci fi is can be strangely comforting, resulting in a nostalgia for the present—things are not that bad yet after all [161]. Perhaps more disconcerting is a consideration of how new and emerging technologies might have been used in previous eras.

At any rate such exercises can sometimes raise interesting questions. What would Henry VIII's dissolution of the monasteries have looked like if church wealth had been held in cryptocurrencies? Would the smartphone meta data of Philby, Burgess, and Maclean have alerted the British intelligence service to the Cambridge spy ring? What kind of conspiracy theories would have been shared on Twitter in 1666 to explain the great fire of London? What advice would have been trending in 1345 about avoiding the black death?

These kinds of questions can also make very clear the colossal advantages that current technology now brings. Indeed, much contemporary fiction is set in the past so that plot points can hinge on an inability to communicate in ways that would not be plausible today. In Thomas Hardy's novel *Tess of the D'Urbervilles*, a letter is posted under a door and lies undiscovered beneath a mat with the result that two characters are never reconciled. Such a plot is almost inconceivable in an age of constant and relentless communication technology. It is also difficult to imagine, a catastrophe like the sinking of Titanic with current global positioning systems and navigation technology. An anachronistic fiction generator, randomly pairing significant historical events with twenty-first century technology might produce some provocative juxtapositions.

Bell and Dourish point out that visions of new technologies are always written in the proximate future sense, technologies are "emerging" phones are "becoming" and we are "entering" this or that kind of period [14]. This indicates a teleological viewpoint which posits a final end point that never actually arrives, it is always continually receding, like the horizon, as we approach it. This kind of teleology implies an ethical justification for whatever is happening at any given moment where the final goal is always indefinitely postponed. Perhaps our guesses at the future would be better informed if we relied not on teleology but rather history.

7.3 Research Fiction and Fictional Researchers

This article began with Mark Twain's Connecticut Yankee killing a whole army of medieval knights with gatling guns. Social media has become the gatling gun of character assassination. If the historical patterns identified in the literature apply, then the author of this article may be attacked for providing support for hidden enemies of one sort or another. Studies have shown that social media does not currently support nuanced argument very well [24]. Perhaps, for this reason, one of the most common and effective strategies of debate on social media is the *ad hominem* attack. In such an attack, the author of this article would be criticized because they do, or do not, belong to this or that demographic group; or because they do, or do not, subscribe to this or that ideology.

For these reasons, this article has been written under the pseudonym, Kien Mensonge. Mensonge is a character in a Malcolm Bradbury novel about a French deconstructionist so insistent on ideas like Roland Barthes' "death of the author" that it is not clear if he actually exists or not:

"This is the position he has chosen to make clear, or as clear as he can in the circumstances of him not being there. So, as he was to declare in an unsigned essay, we take to be by him, or by some other anonymous person speaking in his name: "You must understand that the fact of my existence would negate what my text *as text* is saying." [25 p. 24]

Bradbury's book is a satire on the excesses of post structuralism, but it is also a campus comedy on the absurdities of academic life in the twentieth century.

Kien is the name another fictional academic from a different era as depicted by Elias Canetti in the novel *Auto Da Fe*. Peter Kien is a reclusive scholar who publishes occasional papers on Philology and Sinology. He lives in an apartment which contains the largest private library in Vienna and he guards it jealously. This misanthropic bibliophile commands authors to step out of their volumes to debate with him:

“In the lofty halls of his library, he paced up and down and called on Confucius. He came towards him from the opposite wall, calm and self-possessed – it is easy to be self-possessed when you have been dead for centuries. With long strides Kien went to meet him. He forgot to make any obeisance. His excitement contrasted strangely with the bearing of the Chinese sage.” [30 p. 40-41)

Kien defends his opinion against his favorite authors until, at last, he silences them (ibid p.39). These imaginary dialogues echo Socrates’ admonition that written words seem to speak yet never answer back. Kien barricades himself against the world with books but pays a terrible price. The novel was published in German as *Die Blendung* (the blinding) but in the English translation, the title is “auto da fe” the “act of faith” required as penance by the Spanish Inquisition [44]. The most extreme form of *auto da fe* was death by burning and at the end of the novel Kien’s library is engulfed in flames that also consume him. The inquisition is, of course, another historical period of denunciation and demonization that conforms to the historical patterns discussed.

The combination of Kien and Mensonge is a mix of the tragic and the comic. This also seems apt in a discussion of social media like Twitter. In *Slaughterhouse Five* Kurt Vonnegut uses birdsong as a recurring motif following tragedy:

“Everything is supposed to be very quiet after a massacre, and it always is, except for the birds. And what do the birds say? All there is to say about a massacre, things like ‘Poo-tee-weet?’” [143 p. 14]

There is a lightness and innocence to twenty-first century tweeting but there is also a remote and other worldly indifference. Although the tragi-comic register may seem frivolous the form fits the content of social media. In HCI, there has been a spate of research fiction including: fictional abstracts [19], fictional conference papers [82], and fictional conferences [77]. It seems appropriate and prudent for this article to add a fictional author.

8 CONCLUSION

HCI has a long history of engaging with Psychology and Sociology to better understand users. As the field begins to address billions of users in widely differing geo-political contexts, it must also engage with History. Design fiction is now a well-established practice for speculating about the direction of future technologies based on current trends. The anachronistic fictions here explore already existing technologies in different social and political contexts. The article focused on four historical periods characterized by patterns of denunciation and demonization: the unity of action and accusation; proof of guilt by confession or denial; condemnation of others as a public show of virtue; and criticism of the process as a sign of collusion with hidden enemies.

These historical patterns informed anachronistic fictions imagining how present-day technology might have been used in those eras. This was informed by findings from research on social media: posts made in a “hot” emotional state are often deeply regretted but cannot easily be retracted; anger and indignation travel faster and further than any other kind of social media content; tribal or group identity is expressed through likes and retweets; there can be enjoyment or “jouissance” in publicly shaming individuals who have transgressed against a particular set of values. The exercise suggests that historical patterns of demonization are likely to be amplified by the known properties of social media in a positive feedback loop.

The article has argued that had contemporary technology existed during previous eras of denunciation and demonization, it may well have enabled some limited resistance but it would also have escalated and intensified persecution. Techno-teleology posits an ideal end point that is always ultimately postponed. Historical perspectives suggest that HCI should take account of humanity’s worst acts and not just its best intentions.

Modernism posits technological development as a good, in and of itself, but HCI is becoming more and more aware that we cannot assume the results of technological development will be benign. A recent blog post in the ACM's future of computing series argued that HCI views its work through "rose colored glasses" [62]. The authors and co-signatories suggest a change in the peer review process to require that authors address the possible downsides of their innovations. This article has argued that a historically informed HCI would be better placed to do that. Greta Thunberg is not a scientist but insists on the simple question: why are we not listening to scientists? HCI researchers who are not historians may also ask—why do we pay so little attention to History?

REFERENCES

- [1] Alcoholics Anonymous World Service Inc. *Twelve Steps and Twelve Traditions*. AA World Services, Inc. Kindle Edition.
- [2] Ian A. Arawjo. 2020. To write code: The cultural fabrication of programming notation and practice. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (2020).
- [3] Hannah Arendt. 1958. *The Human Condition*. zArendt, Hannah. University of Chicago Press, 195.
- [4] Hanna Arendt. 1967. Truth and Politics. Retrieved from <https://idandelau.files.wordpress.com/2014/12/arendt-truth-and-politics.pdf> Originally published in the New Yorker.
- [5] Sean Armstrong. 2010. Stalin's Witch-Hunt: Magical thinking in the great terror. *Totalitarian Movements and Political Religions* 10, 3-4 (2010), 221–240.
- [6] The Atlantic. 2010. The Filter Bubble. Retrieved from <https://www.theatlantic.com/daily-dish/archive/2010/10/the-filter-bubble/181427/>.
- [7] J. L. Austin. 1962. *How to Do Things with Words*, Oxford: Clarendon Press.
- [8] Joseph Ball. Critique on Frank Dikotter's Mao's Great Famine: The History of China's Most Devastating Catastrophe, 1958–62'. Retrieved from <https://redantliberationarmy.wordpress.com/2011/04/13/joseph-ball-critique-on-frank-dikotters-maos-great-famine-the-history-of-china-E2%80%99s-most-devastating-catastrophe-1958-62/>.
- [9] Shaowen Bardzell. 2018. Utopias of participation: feminism, design and the futures. *ACM Transactions on Computer-Human Interaction (TOCHI)* 25, 1 (2018), 1–24.
- [10] Rodney Barker. 2007. *Making Enemies*. Springer.
- [11] Rodney Barker. 2008. Demonisation and witch hunts in religion and politics. *Gresham College*. Retrieved from <https://www.gresham.ac.uk/lectures-and-events/demonisation-and-witch-hunts-in-religion-and-politics>. Accessed January 23, 2021.
- [12] BBC. 2017. Professor Wrongly Labelled as Racist in Charlottesville. Retrieved from <https://www.bbc.co.uk/news/world-us-canada-40935419>. Accessed March 17, 2023.
- [13] BBC. 2018. How Watssapp Helped Turn an Indian Village Into A lynch Mob. Retrieved from <https://www.bbc.com/news/world-asia-india-44856910>. Accessed March 17, 2023.
- [14] Genevieve Bell and Paul Dourish. 2007. Yesterday's tomorrows: Notes on ubiquitous computing's. Personal and Ubiquitous Computing (2006) DOI : [10.1007/s00779-013-0678-7](https://doi.org/10.1007/s00779-013-0678-7)
- [15] Dale Beran. 2017. How the "Isolated Man Boys" of 4chan turned a meme into the President of the United States. Quartz Feb 17.
- [16] H. Berghel. 1997. Email, the good, the bad and the ugly. *Communications of the ACM* 40, 4 (1997), 11–15.
- [17] Julian Bleecker. 2009. Design fiction: A short essay on design, science, fact and fiction. Retrieved from http://drbfw5wfjlxon.cloudfront.net/writing/DesignFiction_WebEdition.pdf.
- [18] Mark Blythe, Peter Wright, and Andrew Monk. 2004. Little brother: Could and should wearable computing technologies be applied to reducing older people's fear of crime? *Personal Ubiquitous Computing* 8, 6 (2004), 402–415.
- [19] Mark Blythe. 2014. Research through design fiction: Narrative in real and imaginary abstracts. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI'14)*. ACM, New York, NY, 703–712.
- [20] Mark Blythe, Jamie Steane, Jenny Roe, and Caroline Oliver. 2015. Solutionism, the game: Design fictions for positive aging. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI'15)*. Association for Computing Machinery, New York, NY, 3849–3858. <https://doi.org/10.1145/2702123.2702491>
- [21] Mark Blythe and Enrique Encinas. 2018. Research fiction and thought experiments in design. *Foundations and Trends® in Human-Computer Interaction* 12, 1 (2018), 1–105. <http://dx.doi.org/10.1561/1100000070>
- [22] Dietrich Bonhoeffer. from 'After Ten Years' in Letters and Papers from Prison (Dietrich Bonhoeffer Works/English, vol. 8.
- [23] Christopher Booker. *The Seven Basic Plots*. Kindle Edition.

- [24] Gwen Bouvier. 2020. Racist call-outs and cancel culture on Twitter: The limitations of the platform's ability to define issues of social justice. *Discourse, Context & Media.* 38, (December 2020). <https://www.sciencedirect.com/science/article/abs/pii/S2211695820300647>. Accessed March 17, 2023.
- [25] Malcolm Bradbury. 1993. *Mensonge*. Penguin Books, London.
- [26] Barry Brown, Suzanne Bodker, and Kristina Hook. 2017. Does HCI scale? Hacking and the relevance of HCI. *Interactions* 24, 5 (2017), 28–33.
- [27] James Robert Brown and Yiftach Fehige. 2017. Thought Experiments. *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), Edward N. Zalta (Ed.). Retrieved from <https://plato.stanford.edu/archives/sum2017/entries/thought-experiment/>.
- [28] Carol Cadwalladr and Graham Harrison. 2018. *The Cambridge Analytica Files*. The Guardian Mar 17 2018.
- [29] Elias Canetti. 1962. *Crowds and Power*. Golancz.
- [30] Elias Canetti. 1946. *Auto Da Fe*. Jonathan Cape.
- [31] J. M. Carroll. 2000. Five reasons for scenario-based design. *Interact Comput.* 13 (2000), 43–60.
- [32] Jung Chang. *Wild Swans: Three Daughters of China*. William Collins.
- [33] Jung Chang and Jon Halliday Mao. *The Unknown Story*. Vintage Books.
- [34] Timothy Cheek. 1997. *Propaganda and Culture in Mao's China: Deng Tuo and the Intelligentsia*. Clarendon Press Oxford. <https://www.amazon.co.uk/Propaganda-Culture-Maos-China-Intelligentsia/dp/0198290667>.
- [35] Communist Party of China. 1987. Resolution on certain questions in the history of our party since the founding of the People's Republic of China. June 27 1981. Retrieved from <https://www.marxists.org/subject/china/documents/cpc/history/01.htm>.
- [36] Peter Cook. 2003. *Tragically I Was An Only Twin: The Complete Peter Cook*. Arrow Books 2003.
- [37] Alan Cooper. 1999. *The Inmates Are Running The Asylum: Why High Tech Products Drive Us Crazy and How to Restore The Sanity*. Pearson Education.
- [38] N. Dahlbick, A. Jonsson, and L. Ahrenberg. 1993. Wizard of Oz studies—why and how. *Proceedings of the ACM International Workshop on Intelligent User Interfaces*.
- [39] Phillipa Darius and Fabian Stephany. 2019. "Hashjacking" the debate: Polarisation strategies of Germany's far right on Twitter. In: I. Weber (Eds). *Social Informatics*. SocInfo 2019. Lecture Notes in Computer Science, vol 11864. Springer.
- [40] E. A. Davenport. 1983. Literature as thought experiment (On Aiding and Abetting the Muse). *Philosophy of the Social SciencesPacific Philosophical Quarterly* 13, 3 (1983), 279–306.
- [41] Donald L. DeAngelis, Wilfred M. Post, and Curtis C. Travis. 1986. *Positive Feedback in Natural Systems*. Springer Verlag.
- [42] Frank Dikkotter. 2016. *The Cultural Revolution. Kindle Edition*. Bloomsbury Publishing.
- [43] Carl DiSalvo. 2014. The need for design history in HCI. *Interactions Magazine* 21, 6 (2014), 20–21.
- [44] William Collins Donahue. 2020. *The End of Modernism: Elias Canetti's Auto da fe*. UNC Studies in the Germanic Language and Literature No. 124.
- [45] Tony Dunne and Fiona Raby. 2013. *Speculative Everything: Design, Fiction and Social Dreaming*. MIT Press.
- [46] Terry Eagleton. 1986. *Against the Grain*. Verso Books.
- [47] Enrique Encinas, Abigail Durrant, Robb Mitchell, and Mark Blythe. 2020. Metaprobes, metaphysical workshops and sketchy philosophy. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI'20)*, 1–13. <https://doi.org/10.1145/3313831.3376453>
- [48] Nathan Ensmenger. 2010. *The Computer Boys Takeover: Computers, Programmers and the Politics of Technical Expertise*. MIT Press.
- [49] Virginia Eubanks. 2018. *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. St Martin's Press.
- [50] Evening Standard (2020) Donald Trump Claims Unflattering Picture was Photoshopped to "Deman Him". Retrieved from <https://www.standard.co.uk/news/world/donald-trump-photoshop-twitter-a4357511.html>.
- [51] Nir Eyal. 2014. *Hooked: How to Build Habit Forming Products*. Kindle edition.
- [52] Rui Fan, Jichang Zhao, Yan Chen, and Ke Xu. 2013. Anger is more influential than joy: Sentiment correlation in Weibo. *PLoS One* 9, 10 (2013), e110184, 2014.
- [53] Nial Ferguson, (Ed). 1997. *Virtual History and Counterfactuals*. Kindle edition.
- [54] Michel Foucault. 1991. *The Foucault Reader: An Introduction to Foucault's Thought*. Ed Paul Rabinow. Penguin.
- [55] James G. Frazer. 1981. *The Golden Bough: The Roots of Religion and Folklore*. Gramercy Books.
- [56] Malcolm Gladwell. 2011. Does Egypt Need Twitter? *The New Yorker*. Retrieved from <https://www.newyorker.com/news/news-desk/does-egypt-need-twitter>.
- [57] Stephen Fry. 1996. *Making History*. Hutchinson.
- [58] Francesco Maria Grazzo. 2011. *Compendium Maleficarum [Compendium of the Witches]*. Montague Summers (Ed.). Martino Fine Books.

- [59] Michael Cawood Green. 2019. *The Ghosting of Anne Armstrong*. Goldsmiths Press.
- [60] The Guardian online. 2018. Indian State Cuts Internet After Lynchings Over Online Rumours. Retrieved from <https://www.theguardian.com/world/2018/jun/29/indian-state-cuts-internet-after-lynchings-over-online-rumours>. Accessed March 17, 2023.
- [61] Jonathan Haidt and Tobias Rose-Stockwell. 2019. The dark psychology of social networks: Why it feels like everything is going haywire. *The Atlantic* December 2019 issue.
- [62] Brent Hecht, Lauren Wilcox, Jeffrey Bingham, Johannes Schoning, Ehsan Hoque, Jason Ernst, Yonatan Bisk, Luigi De Russis, Lana Yarosh, Bushra Anjum, Danish Contractor, Cathy Wu. 2018. It's time to do something: Mitigating the negative impacts of computing through a change to the peer review process. First published on the ACM Future of Computing Academy blog on March 29, 2018. [arXiv:2112.09544](https://arxiv.org/abs/2112.09544) Accessed March 17 2023.
- [63] G.W.F Hegel Preface to the Philosophy of Right. Kindle edition.
- [64] Marie Hicks. 2018. *Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing*. MIT Press.
- [65] Demose Ho. 2017. Exhibiting the Cultural Revolution, Part 1: Reading “Big-Character Posters” Part One. *Medium*. Retrieved from <https://medium.com/fairbank-center/exhibiting-the-cultural-revolution-part-1-reading-big-character-posters-d3edd7bb0104>.
- [66] Aldous Huxley. 1952. *The Devils of Loudon*. Kindle edition.
- [67] H. T. P. Williams, J. R. McMurray, T. Kurz and F. Hugo Lambert. 2015. Network analysis reveals open forums and echo chambers in social media discussions of climate change. *Global Environmental Change* 32 (2015), 126–138. <https://doi.org/10.1016/j.gloenvcha.2015.03.006>
- [68] The Independent. 2018. Man Sparks Outrage by Taking Selfie at Scene of Train Accident Italy. 5 June 2018. Retrieved from <https://www.independent.co.uk/news/world/europe/man-selfie-train-accident-italy-piacenza-canadian-tourist-giorgi-lambri-a8384786.html>. Accessed March 17, 2023.
- [69] Lily Irani, Janet Vertesi, Paul Dourish, Kavita Philip, and Rebecca E. Grinter. 2010. Post-colonial computing: A lens on design and development. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*.
- [70] Tony Jackson. 2009. *The Technology of the Novel: Writing and Narrative in British Fiction*. The John Hopkins University Press.
- [71] Carl Jung. 1990. *The Archetypes and the Collective Unconscious*. Routledge.
- [72] Jonas Kaplan, Sarah Gimbel, and Sam Harris. 2016. Neural correlates of maintaining one’s political beliefs in the face of counterevidence. *Scientific Reports* 6, 1 (2016), 39589.
- [73] J. F. Kelly, K. Humphreys, and M. Ferri. 2020. Alcoholics Anonymous and other 12-step programs for alcohol use disorder. *Cochrane Database of Systematic Reviews* 3 (2020), CD012880. DOI: [10.1002/14651858.CD012880.pub2](https://doi.org/10.1002/14651858.CD012880.pub2)
- [74] Vera Kholovskaya and Phoebe Sengers. 2019. Data rhetoric and uneasy alliances: Data advocacy in US labor history. In *Proceedings of the 2019 on Designing Interactive Systems Conference (DIS’19)*, Association for Computing Machinery, New York, NY, 1391–1403. <https://doi.org/10.1145/3322276.3323691>
- [75] David King. 2014. *The Commissar Vanishes*. Tate Publishing.
- [76] Kings University Online. 2017. *Cell Phone Addiction: The Statistics of Gadget Dependency*. Bristol, TN.
- [77] Ben Kirman. 2018. Playful research fiction: A fictional conference. In *Funology 2*. Blythe and Monk (Eds.). Springer.
- [78] Eric Kurlander. 2017. *Hitler’s Monsters: A Supernatural History of the Third Reich*. Yale University Press.
- [79] D. Leavitt. 2006. *The Man Who Knew Too Much: Alan Turing and the Invention of the Computer*. Phoenix.
- [80] C. S. Lewis God in the Dock: Essays on Theology and Ethics Wm. B. Erdmans Publishing Co.
- [81] Ji Li. 2017. Exhibiting the Cultural Revolution Part 3, Dazibao Exhibitionism. *Medium*. <https://medium.com/fairbank-center/exhibiting-the-cultural-revolution-part-3-dazibao-exhibitionism-3855a62a8bc6>.
- [82] Joseph Lindley and Paul Coulton. 2015-01-01. Back to the Future: 10 years of design fiction. *Proceedings of the 2015 British HCI Conference. British HCI’15*. New York, NY, ACM, 210–211.
- [83] Joseph Lindley and Paul Coulton. 2016. Peer review and design fiction: “Great Scott! The quotes are redacted”. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA’16)*. ACM, New York, NY, 583–595.
- [84] C. Linehan, B. Kirman, M. Blythe, S. Reeves, R. Wakkary, A. Desjardins, and J. Tanenbaum. 2014. Alternate endings: Using fiction to explore design futures. In *Proceedings of the Extended Abstracts on Human Factors in Computing Systems (CHI EA’14)*.
- [85] Silvia Lindtner, Shaowen Bardzell, and Jeffrey Bardzell. 2016. Reconstituting the utopian vision of making: HCI after technosolutionism. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*.
- [86] Cixin Liu. 2014. *The Three Body Problem*. Translated by Ken Liu. China Educational Publications.
- [87] D. Liu and X. Chen. 2011. Rumor propagation in online social networks like twitter – a simulation study. In *Proceedings of the 2011 Third International Conference on Multimedia Information Networking and Security*. 278–282.

- [88] Ada Lovelace and Luigi Menabrea. 1842. Sketch of the Analytical Engine Invented by Charles Babbage Esq. *Scientific Memoirs Richard Taylor*.
- [89] Xing Lu. 2004. Rhetoric of the chinese cultural Revolution: The impact on chinese thought, culture and communication. *University of South Carolina*.
- [90] Xian Ma, Emily Sun, and MOr Naaman. 2017. What happens in happen: The warranting powers of location history in online dating. *CSCW* 2017.
- [91] Paul Mason. 2018. Why marx is more relevant than ever in the age of automation. *New Statesman*. Retrieved from <https://www.newstatesman.com/culture/2018/05/why-marx-more-relevant-ever-age-automation>.
- [92] Ian McEwan. 2019. *Machines Like Me*. Kindle Edition.
- [93] Marshall McLuhan. 1967. *Hot & Cool*. New York: The New American Library Inc.
- [94] Marshall McLuhan, B. Nevitt, and Harcourt Brace Jovanovich. 1972. *Take Today: The Executive as Dropout*.
- [95] Marshall McLuhan and B. Powers. 1989. *The Global Village: Transformations in World Life and Media in the 21st Century*. Oxford University Press.
- [96] Eden Medina. 2014. *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile*. MIT Press.
- [97] Arthur Miller. 1953. *The Crucible*. Penguin Classics.
- [98] G. Miller. 2016. *The Social Psychology of Good and Evil*. The Guilford Press.
- [99] Alex Milton. 2003. Filmic design – a Hitchcockian design strategy. In *Proceedings of the European Academy of Design Conference. 28-30 April*. Barcelona.
- [100] MIT Technology Review. 2015. Why Self-Driving Cars Must Be Programmed To Kill. Oct. 22 2015. Retrieved from <https://www.technologyreview.com/s/542626/why-self-driving-cars-must-be-programmed-to-kill/>. Accessed January 23, 2021.
- [101] Eugeny Morozov. 2012. *The Net Delusion: How Not to Liberate*. The World. Penguin.
- [102] Gina Neff and Dawn Nafus. 2016. *Self Tracking*. MIT Press.
- [103] Robert Nozik. 1974. *Anarchy, State and Utopia*. Basic Books.
- [104] The Observer. 2019. How Internet Mob Justice Can Easily Destroy Innocent Lives. Retrieved from <https://observer.com/2019/05/internet-mob-justice-innocent-lives/>.
- [105] Eli Pariser. 2011. *The Filter Bubble: What the Internet Is Hiding from You*. Penguin Press, 2011.
- [106] PBS American Experience. 2020. Have You No Decency? Retrieved from <https://www.youtube.com/watch?v=sVUyYzzv6VI>.
- [107] M. Scott. *Peck Children of the Lie*. Century Hutchinson.
- [108] Robert Phiddian. 2017. Have they no shame? Observations on the effects of satire. *Satire and Politics 2017 Springer*. 251–263.
- [109] H. A. Prasetya and T. A. Murata. 2020. Model of opinion and propagation structure polarization in social media. *Computational Social Networks* 7, 2 (2020).
- [110] Stephen Purpura, Victoria Schwanda, Kaiton Williams, William Stubler, and Phoebe Sengers. 2011. Fit4life: The design of a persuasive technology promoting healthy behavior and ideal weight. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, New York, NY, 423–432.
- [111] Philip Quinlan and Ben Dyson. *Cognitive Psychology*. Pearson Education Ltd.
- [112] David S. Roh, Betsy Huang, and Greta A. Nui. 2015. Techno-Orientalism: Imagining Asia in Speculative Fiction, History and Media, Rutgers University Press.
- [113] Jon Ronson. 2015. *So You've Been Publicly Shamed*. Kindle Edition.
- [114] Jon Ronson. 2015. How The Onine Hatemob Set Its Sights on Me. *The Guardian*. Retrieved from <https://www.theguardian.com/media/2015/dec/20/social-media-twitter-online-shame>.
- [115] Daniella Rosner. 2018. *Critical Fabulations: Reworking the Methods and Margins of Design*. MIT Press.
- [116] Edward Said. 1995. *Orientalism*. Penguin Books.
- [117] The Saker. 2018. When Chinese Trash Saved the World: Western Lies About the Cultural Revolution. 2018. Retrieved from <https://thesaker.is/when-chinese-trash-saved-the-world-western-lies-about-the-cultural-revolution/>.
- [118] George Santayana. 1905. *The Life of Reason: Reason in Common Sense*. Project Gutenberg. Retrieved from <https://www.gutenberg.org/files/15000/15000-h/15000-h.htm>.
- [119] James Scott. 1987. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. Yale University.
- [120] Roger Scruton. 2019. *How Identity Politics Drove the World Mad*. Review for Unherd, 17 Sept. 19.
- [121] Philip Seargent and Caroline Tagg. 2019. Social media and the future of open debate: A user-oriented approach to Facebook's filter bubble conundrum. *Discourse, Context & Media* 27 (2019), 41–48. <https://doi.org/10.1016/j.dcm.2018.03.005>
- [122] Hans Sebald. 1989. Nazi Ideology Redefining Deviants: Witches, Himmler's witch trial survey, and the case for the bishopric of bamber. *Deviant Behaviour* 10, 3 (1989), 253–270.

- [123] Phoebe Sengers. 2010. The ideology of modernism in HCI. *CHI 2010 Workshop on Critical Dialogue: Interaction, Experience, Theory.* (2010). <https://www.cl.cam.ac.uk/events/experiencingcriticaltheory/Sengers-IdeologyModernism.pdf>. Accessed March 17, 2023.
- [124] Victor Shklovsky. 1917. Art as Technique. In *Russian Formalist Criticism: Four Essays, 1965*. trans. Lee T. Lemon and Marion J. Reis. University of Nebraska Press.
- [125] Christo Sims. 2017. *Disruptive Fixation: School Reform and the Pitfalls of Techno-Idealism*. Princeton Studies in Technology.
- [126] Edward Snowden. 2019. *Permanent Record*. Macmillan.
- [127] Robert Soden, Michael Skirpan, Casey Fiesler, Zahra Ashktorab, Eric S. Baumer, Mark Blythe, and Jasmine Jones. CHI4EVIL: Creative speculation on the negative impacts of HCI research. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*.
- [128] Robert Soden and David Ribes. 2019. Fostering historical research in CSCW and HCI. In *Proceedings of the Conference Companion Publication of the 2019 on Computer Supported Cooperative Work and Social Computing*, 517–522.
- [129] Alexander Solzhenitsyn The Gulag Archipelago 1918–58 An Experiment in Literary Investigation. Translated by Thomas P. Whitney and Harry Wilets. Abridged by Edward E. Ericson. Harvill.
- [130] Susan Sontag. 1973. *On Photography*. Rosetta Books 2005.
- [131] Christian Sorace, Ivan Franceschini, and Nicholas Loubere (Eds). 2019. *Afterlives of Chinese Communism: Political Concepts from Mao to Xi*. Australian National University Press. Retrieved from https://www.academia.edu/39708253/Afterlives_of_Chinese_Communism.
- [132] Megan Finn and Morgan Ames. 2017. Information determinism: The consequences of the faith in information. *The Information Society* 33, 1 (2017), 13–22. DOI : 10.1080/01972243.2016.1248613
- [133] Ekaterina Stepanova. 2011. The role of information communication technologies in the “Arab Spring”. PONARS Eurasia Policy Memo, 1–6. https://www.researchgate.net/publication/291025561_The_role_of_information_communication_technologies_in_the_arab_spring/citation/download.
- [134] Bruce Sterling. 2005. *Shaping Things*. MIT Press. Cambridge Massachusetts.
- [135] Bruce Sterling. 2009. Design fictions. *Interactions*. 16, 3 (2009), 20–24.
- [136] Yalin Sun and Yan Zhang. 2021. A review of theories and models applied in studies of social media addiction and implications for future research. *Addictive Behaviors*. 114 (2021).
- [137] Taschen. 2008. Chinese Propaganda Posters. Taschen 25th Anniversary edition.
- [138] The Telegraph. Facebook Live Streaming of US Police Shooting of Black Man Leads to Ethical and Legal Questions. 8.6.2016. Retrieved from <https://www.telegraph.co.uk/technology/2016/07/07/facebook-live-streaming-of-us-police-shooting-of-black-man-leads/>. Accessed March 17, 2023.
- [139] Xiaofei Tian. 2017. Exhibiting the Cultural Revolution, Part 2: The Visual Spectacle of “Dazibao”. Retrieved from <https://medium.com/fairbank-center/exhibiting-the-cultural-revolution-part-2-the-visual-spectacle-of-dazibao-7a61d5ba684b>. Accessed March 17, 2023.
- [140] Mao Tse-Tung. 1968. A New Storm Against Imperialism. Selected Works of Mao Tse-Tung. Retrieved from https://www.marxists.org/reference/archive/mao/selected-works/volume-9/mswv9_80.htm.
- [141] Fred Turner. 2010. *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism*. University of Chicago Press.
- [142] Mark Twain. *Complete Works of Mark Twain Delphi Classics*. Kindle Edition.
- [143] Kurt Vonnegut. 1993. *Slaughterhouse Five or The Children’s Crusade, a Duty Dance with Death*. Vintage.
- [144] Soroush Vosoughi, Deb Roy, and Sinan Aral. 2018. Science 09 Mar 2018: The spread of true and false news online. *Science* 359, 6380 (09 Mar. 2018), 1146–1151.
- [145] Yang Wang, Gregory Norcie, Saranga Komanduri, Alessandro Acquisiti, Pedro Leon, and Lorrie Cranor. 2011. I regretted the minute I pressed share: A qualitative study of regrets on facebook. In *Proceedings of the Symposium on Usable Privacy and Security (SOUPS) 2011*, July 20–22, 2011.
- [146] Wikipedia: Chen Yonggui. Retrieved from https://en.wikipedia.org/wiki/Chen_Yonggui. Accessed March 17, 2023.
- [147] Wikipedia: Matthew Hopkins. Retrieved from https://en.wikipedia.org/wiki/Matthew_Hopkins. Accessed March 17, 2023.
- [148] Wikipedia: Post Truth Politics. Retrieved from https://en.wikipedia.org/wiki/Post-truth_politics. Accessed March 17, 2023.
- [149] Wikipedia: Wheat and Chessboard Problem. Retrieved from https://en.wikipedia.org/wiki/Wheat_and_chessboard_problem. Accessed March 17, 2023.
- [150] Wikipedia: Positive Feedback. Retrieved from https://en.wikipedia.org/wiki/Positive_feedback. Accessed March 17, 2023.
- [151] Wikiquote: Cardinal Richelieu. Retrieved from https://en.wikiquote.org/wiki/Cardinal_Richelieu. Accessed March 17, 2023.

- [152] Oscar Wilde. 1891. *The Soul of Man Under Socialism*. Project Gutenberg. <http://www.gutenberg.org/files/1017/1017-h/1017-h.htm>.
- [153] Heather Suzanne Woods. 2018. Asking more of siri and alexa: Feminine persona in service of surveillance capitalism. *Critical Studies in Media Communication* 35, 4 (2018), 334–349.
- [154] Wordhistories.net. Meaning and Origin of “Reds under the Bed”. Accessed July 2020. Retrieved from <https://wordhistories.net/2018/01/25/reds-under-bed/>.
- [155] Fan Yang. 2016. Fiscal orientalism: China panic, the indebted citizen, and the spectacle of national debt. *Journal of Asian American Studies* 19, 3 (2016), 375–396.
- [156] Li Zhensheng Red-Color News Soldier: A Chinese Photographer’s Odyssey Through the Cultural Revolution by Li Zhensheng.
- [157] Slavoj Žižek. 2006. *How to Read Lacan*. Granta Books.
- [158] Slavoj Žižek. 2008. *For They Know Not What They Do: Enjoyment as Political Factor*. Verso.
- [159] Slavoj Žižek. 2011. *On Practice and Contradiction (Revolutions Series): Slavoj Zizek presents Mao*. Kindle edition.
- [160] Slavoj Žižek. 2014. *Absolute Recoil: Towards a New Foundation of Dialectical Materialism*. Verso London.
- [161] Slavoj Žižek. 2020. *Hegel in a Wired Brain*. Kindle edition.
- [162] Shoshana Zuboff. 2019. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Kindle edition.

Received 24 January 2020; revised 30 January 2022; accepted 6 February 2022