Social Media and the Banality of (Online) Crowds

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The recent tumult over the abuses of social media suggests that this is a good time to revisit crowd science.

What does our recent experience with social media say about the intelligence of crowds? The central thesis of James Surowiecki's 2004 best-selling book, *The Wisdom of Crowds*,[1] held that "under the right circumstances, groups are remarkably intelligent, and are even smarter than the smartest people in them." I shall argue that if his thesis holds, it does so only under very limited conditions. In fact, I will flip his thesis on its head and ask under what circumstances the opposite would obtain: where crowds are demonstrably less "intelligent" than the smartest people in them—or perhaps when crowds are less intelligent than anyone in them. I then contrast our recent experience with social media with that of Wikipedia. I will claim that experience with the latter is more supportive of Surowiecki's thesis than the former, although neither may be considered a validation.

I begin with the caveat that, while I appreciate some of Surowiecki's observations, I have reservations about his general thesis regarding the value of crowds and groups. I confess a general suspicion of the value of group identification and cohesion as it so commonly leads to social dominance, intergroup conflict, and societal discord. So, by nature, I'm reluctant to assign any inherent value to group settings, and I am inclined to attach any positive properties that might accrue to coincidence and hidden variables. That said, Surowiecki's analysis does have something more important to offer than his main thesis. This arises in his discussion of the criteria that inhibit crowds' collective judgments. There is considerable insight to be gained, particularly with respect to the darker sides of social media.

Surowiecki claimed that collective intelligence might bear on three categories of problems: those that deal with 1) cognition, 2) coordination, and 3) cooperation. He also lists three necessary conditions for crowds to be wise: 1) diversity, 2) independence, and 3) a particular kind of decentralization. My argument is twofold. First, while social media may help address problem categories 2) and 3), it is highly questionable whether social media has much to offer in terms of problem category 1). Second, in the case

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of social media, necessary condition 1) rarely obtains, and condition 2) is frequently absent. Thus, it is only to the extent that Surowiecki is allowed to cherry-pick his crowds that he will be able to identify confirming instances of his claim.

CROWD SCIENCE

So what is a crowd? We begin by repurposing a theory on social organization from economics and the social sciences called *convergence theory*,[2] which holds that over time groups will converge toward "conditions of similarity"—that is, differences will diminish. I don't want to carry this point too far, but I do want to emphasize that the idea of convergence as a driver of uniformity seems to be useful in characterizing social media. Crowds are, in this sense, collections of like-minded individuals coming together as one or a reasonable approximation thereof. Of course, there are many subtleties involved: crowds attracted to crime scenes and spectacles may be like-minded only in the sense of a nonintellectual, morbid curiosity, whereas crowds at Ku Klux Klan meetings may be ideologically bound together by varieties of ethnocentrism. However, these distinctions are best left to social scientists to understand and will not affect our overview of the relationship between crowds and social media.

It is important to recognize that the darker sides of crowds have been observed for more than a century. Elias Canetti observes that open crowds have a natural urge for growth and want to grow indefinitely, in his 1960 book, *Crowds and Power*.[3] But, "one of the striking traits of the inner life of a crowd is the feeling of being persecuted, a peculiar angry sensitiveness and irritability directed against those it has once and forever nominated as enemies." Canetti suggests that we view crowds as besieged cities, attracting more partisans from the countryside and bonding them together through a feeling of being persecuted. An external attack only serves to strengthen a crowd, so the ultimate destruction of a crowd will likely result from internal panic or disorder. Thus, in his view, crowds don't naturally become smarter. They become more partisan and defensive. This idea is in clear contrast to the main thesis in *The Wisdom of Crowds*.

Let's look at crowds from Canetti's perspective. Canetti identifies four fundamental qualities of crowds: the insatiable desire to grow, absolute and unquestionable equality between members, the perceived density and indivisibility of members, and a shared, unattained goal. These qualities do not describe either an intellectual bond or purposeful reflection.

The appropriateness of Canetti's observations to a study of present online crowds like social media should not be overlooked. Although his book was written in 1960, it remains relevant today. It should be mentioned that Canetti's work fits into a tradition of critical crowd analysis that spans more than a century and is inconsistent with *The Wisdom of Crowds*. Similarly, sociologist Gustave Le Bon's characterization of the psychology of crowds emphasized the irresponsibility, herd mentality, irrationality, and impulsivity characteristic of "inferior forms of evolution...," which allows them to be "easily led into the worst excesses."[4] Le Bon argues that crowds are not influenced by reason, and what limited reflection they do sustain is of a "very inferior order." Le Bon and Canetti hold views antithetical to those in *The Wisdom of Crowds*, but for different reasons.

In response to Le Bon, Surowiecki claims:

> "Gustave Le Bon had things exactly backward. If you put together a big enough and diverse enough group of people and ask them to 'make decisions affecting matters of general interest,' that group's decisions will, over time, be 'intellectually [superior] to the isolated individual,' no matter how smart or well-informed he is."[1]

While my inclinations are to side with Canetti and Le Bon, Surowiecki should not be ignored. But we must recognize that his confidence in crowds is measured through, and hinges on, a major caveat: the necessary conditions for wise crowds being both diverse and independent. I shall claim that these necessary conditions are absent in many, if not most, online crowds, and, for that reason, the Canetti and Le Bon analyses of crowds seem to be a better fit for social media than Surowiecki's.

NAIVE CROWD PSYCHOLOGY

I admit to the bias that my life experience suggests that it is nearly impossible to overestimate the credulity of crowds in general, whether they are religious, political, or sports crowds, investment clubs, scout troops, concert goers, mobs, riots, protests, panics, and so on. All crowds share at least one common feature: a common focus. As a result, they are self-influencing and self-reinforcing. But these are not the only debilitating features of crowds. Crowds are far worse when they are populated through self-selection. Crowds tend to behave antimagnetically—opposites are not attracted to one another because of this singularity of focus. If I may stretch the metaphor a bit more, as crowds grow, so does the "ideological bond" that connects the members, which in turn further discourages diversity. Over time, crowds become herds/hives/swarms—whatever label one chooses to use. Think about this in terms of identifiable crowds

within your sphere of observation. How welcoming are polygamous cults to ideologically monogamous potential recruits? How many Antifa signboards do you see at Stop the Steal rallies? Are arena seats randomly distributed to fans of opposing teams? Although there may be exceptions, self-selection works against the very variety and diversity that Surowiecki claims are necessary for wisdom to arise. Singularity of focus and self-selection seem to me to provide sufficient grounds for general distrust of the wisdom of any crowd.

Furthermore, crowds seem to face any challenge to their singular focus with reservation, if not outright rejection. My experience suggests that this feature is accountable for crowd willingness to accept disinformation, fake news, unsupported claims, conspiracies promoted by crowd influencers, and the like. In this way, as Canetti and Le Bon observed, crowd mentality inevitably tends toward herd mentality—especially as the membership grows and matures, and the foci narrow and/or multiply.

But I am not willing to discard Surowiecki's claims altogether. I concede that some crowds can exhibit sagacity, but only when the membership is carefully controlled. The primary villain is self-selection. Absent vetting, crowds will be most attractive to those who have illiberal, intolerant, and narrow-minded attitudes regarding the ideological polestars of the group. That is, if the crowd self-identifies with a particular cause, it is to be expected that measured reflection on fundamental principles will be unacceptable to the group. Convergence theory suggests that such a herd instinct is an inevitable feature of focused, mature crowds. So, while I'm willing to admit that some crowds can make good choices as Surowiecki suggests, his objection to Le Bon was overzealous. Even larger and more diverse crowds are capable of making larger and more diverse mistakes. I will call the thesis that crowds naturally decay into herds *naive crowd psychology*.

Of course, Surowiecki's caveat allows an effective—though circular—escape from our intuitive and naive crowd psychology. He makes his most plausible argument against this in his chapter on the value of diversity. The problem with his argument lies in its circularity. Suppose that one may legitimately describe a position taken by a certain crowd as mistaken, incorrect, or unjustified, but that the preceding necessary conditions 2) and 3) were satisfied. The caveat that the crowd was insufficiently diverse could always be used to explain the error. The problem is that the diversity caveat does not allow a nonvacuous alternative; that is, there is no way to falsify it. We don't have to go full-tilt Karl Popper here with a carte blanche endorsement of the falsifiability principle, but rather content ourselves with the fact that Surowiecki's three conditions aren't testable. They're definitional. This is reminiscent of the elephant bane gambit I described some years back,[5] whereby the use of chemical repellant could be used to explain the absence of pachyderms on Antarctica. If elephants are never found on the Ross Ice Shelf, it could be claimed that the elephant bane worked; else, not enough was used. It isn't difficult to find examples of the elephant bane rhetorical tactic in the media—especially in online resources that deal with religion, politics, and vexing social issues.

THE "HIVE" MENTALITY

Jaron Lanier likens the use of the term "wisdom" in the context of crowds to Adam Smith's "invisible hand" in the context of market exchange.[6] His point is provocative. In both of these cases, the attribution has a spoofy and gratuitous character. In the spirit of Bob Dylan, we might say that there seems to be something happening here, but we don't know what it is. The question arises as to whether wisdom and invisible hands are appropriate descriptors in these contexts. Tendencies to impart human qualities to nonhuman and, in many cases, imaginary objects have accompanied the entire human experience, so use in this context should not be surprising. These tendencies are so common that social scientists have given them names, such as anthropomorphism, apotheosis, and euhemerism. The use of this phenomenon to rationalize mythology and religion has been documented for millennia. It is even a staple in fables, fairy tales, animated media, video games, and emojis, for that matter. But one question always remains: Do such uses actually add any explanatory value?

Lanier suggests that crowd wisdom might be a corollary to the Delphi method of forecasting.[7,8] But that seems only partially right. The Delphi method relies on a structured panel of experts, not the collective wisdom of relatively random crowds. Surowiecki is clear about the difference between crowds and panels of experts: "Even if most of the people within a group are not especially well-informed or rational, it can still reach a collectively wise decision."[1] I'm unwilling to concede the congruence between crowds and the Delphi method that Lanier sees.

But Lanier's overall skepticism about crowds seems reasonable. He circumscribes the limits of crowds this way: "The collective is good at solving problems which demand results that can be evaluated by uncontroversial performance parameters, but bad when taste and judgment matter," while admitting that "Collectives can be just as stupid as any individual, and in important cases, stupider."[6] He then offers a set of conditions where crowds and collective assessment may be superior to the assessment of an individual: 1) when the crowd isn't defining its own question, 2) when the question leads to a simple result (for example, Y/N or a numeric value), and 3) when the information sources behind the assessment are appropriately filtered. "Break any one of those conditions and the collective becomes unreliable or worse." Once again, caveats rear their ugly heads, and we're back to the

elephant bane gambit. What criteria do we apply to ensure that our information sources have been appropriately filtered? The problem is, in general, that we have no better insights into whether these caveats are satisfied than we have of whether the opining of a crowd/collective/herd/hive is reliable in the first place.

In Lanier's terms, crowds exhibit their worst behavior when they take on a "hive" mentality: "a hive mind is a cruel idiot when it runs on autopilot."[6] All too frequently, what we see in current social media is unreflective partisan tribe/crowd/herd/hive outbursts and subcerebral emanations from ill-suited, unprepared, and undisciplined minds. QAnon is a perfect example of the "cruel idiocy" of a hive mind,[9] although the same would apply to other online resources—Breitbart, Newsmax, InfoWars, and the One America News Network come to mind. It is with social media outlets that the hive mind achieves maximal effect, and for this reason should be of greater concern to society.[10]

IS WIKIPEDIA A COUNTEREXAMPLE?

About 10 years ago, I wrote in *Computer* that since not all crowd members are equally well-informed, trustworthy, or reliable, you can't rely on a crowd to filter out nonsense. As I put it then, "Crowds, like landfills, may produce treasures, but the yield rate isn't encouraging."[11] As an illustration of the problem, I drew attention to an edit skirmish that took place in January 2013. I documented that, according to the first sentence in the Wikipedia article about him, the characterization of then Secretary of Defense Chuck Hagel went from "an American politician who was a United States Senator" to "an American politician, anti-Semite and proterrorist who was a United States Senator" and back again in the span of a few hours. In this case, the combative contributor qua tribalist wasn't trying to bury the lede, but rather bury Hagel's reputation.

This is a glaring example of the edit war problem that wikis face when contributors try to inject self-serving, malicious, defamatory disinformation (also known as nonsense) into a record or narrative in furtherance of their nonreality-based world view. To be sure, submissions are routinely reviewed by wiki volunteers and overseen by in-house editors who also check them for appropriateness. In the case of the Hagel edit skirmish, the disinformation was so blatant that it was caught quickly. But subtleties are not so easily spotted, and nuanced suggestions may go unnoticed. In the case of Wikipedia, the editing oversight issue is significant.[12] While Wikipedia articles may fray around the edges and would not meet the peer-review standards of scholarly publications, in general Wikipedia works well enough to be useful so long as 1) the topics are not controversial, 2) the issues are not nuanced, and 3) not much rests on the accuracy of the content; that is, the topic is relatively unimportant. Despite these advantages, it is potentially toxic to serious scholarship and for that reason is largely avoided.

As with social media, controversial wiki topics attract tribalists and partisans of every stripe. Armed with disinformation, they seek to manipulate a public narrative. When it comes to social media, their weapons of choice include *sockpuppeting* (pseudonymous manipulation of online resources to simultaneously distance themselves from a position or action and give the appearance of objectivity), *catfishing* (the use of fictional identities to target online victims), and *gaslighting* (pseudonymous manipulation to produce victim self-doubt and distress). These techniques rely on anonymity, obfuscation, and trickery to avoid criticism and backlash directed back at the sources. To paraphrase Jaron Lanier, this veil of anonymity amounts to an online cultural denial-of-service attack on users. An "invisible social vandalism" results.[13]

The reality is that these tactics are as difficult to detect[14] as the underlying personality disorders behind them,[15] thus providing an insurmountable challenge for media or news-oriented online platforms who report on them. In just this way, wiki and social media platforms are also challenged to recognize, register, and respond to subtlety and nuance, which makes the problem of detecting half-truths, vagaries, and misinformation as difficult as detecting falsehoods, lies, and disinformation. Any intellective product of an anonymous crowd will be more difficult to unravel than that of an identifiable individual. As I suggested in my earlier article, the inability to achieve consistent, reliable vetting through peer review by knowledge domain experts was the reason that Tony Ralston and I abandoned our wiki, the ACM Timeline of Computing, in the late 1990s.[11] Finally, Wikipedia consumers are not trying to replicate scientific experimental results or conduct scholarly research based on primary sources and ground truth data. They are looking for an entry-level expedient overview where imprecision and inexactitude are acceptable. Wikis can have utility as long as we don't place much confidence in them.

From my experience, Wikipedia excels at the mundane: dates, quantities, names, and places—information that is incontestable and uncontroversial. If there is information that is beyond dispute, there is a good probability Wikipedia's presentation will be reasonable. But just one step beyond the incontestable, credibility quickly wanes. This is not to say that credibility vanishes altogether, but it suffers considerably. Even though Wikipedia has added sophistication to the editorial process and seems to have eliminated the pendulous swings of the edit wars, one must remain mindful of its limitations.

THE BANALITY OF (ONLINE) CROWDS

So the core question should not be whether or to what extent crowds of any stripe are wise. That's a category

mistake. Rather, we should ask whether they will be naturally drawn to the dark side. Our recent experience with social media, especially when it comes to issues of politics, religion, and antisocial behavior, demonstrates the enormous potential of online crowds for banality. While Wikipedia shows that online crowds can be reliable sources of information in some situations, the same can't be said for QAnon and 4chan. There is ample evidence that online crowds can have a far darker, antisocial character. They can be untrustworthy,[9] abusive,[13,16,17] and easily manipulated,[18,19] for example. We might go so far as to say that Wikipedia reveals crowds at their best; social media, at their worst.

So what we're left with is a general suspicion of online crowds in terms of reliability, tempered by the observation that sometimes, and under controlled circumstances, crowds can have utility. We are forced, however, to recognize that the value of social media crowds can be inferred from their collective behavior. While our experience with online crowds and social media does not completely undermine Surowiecki's confidence—remember the all-important caveats that he built into *The Wisdom of Crowds*—it does suggest that there was much more to be gained from a careful study of Le Bon, Canetti, and Lanier than Surowiecki.

While a formal study of the interrelationships between social media and crowds would involve a social science research effort, a useful informal approximation may be obtained by listening to AM talk radio; the call-in crowds share similar motives with online crowds. From my experience, both sources seem to display comparable levels of fervor, focus, resentment, alienation, and hostility. While not a scholarly study, listening to AM radio is a window into the darker sides of crowds. But unlike social media crowds, AM radio presents "crowdspeaking" to all who care to listen without the filter of self-selection. But in both cases, crowds will continue to morph into antisocial packs, herds, hives, tribes, mobs, and so on. With AM radio, however, at least this can be monitored.

If online crowds encouraged unrestricted membership, diversity of opinion, and unrectified information flows, they would take on a less acrid character.

We note also that there is an important distinction to be made between crowd organizers and leaders on the one hand and crowd members and followers on the other. Our focus on the collective wisdom of crowds enables us to ignore this distinction without diminishing its importance. We observe that while the desire to exercise power by leading a crowd may be qualitatively different than the desire to exercise power as an individual, both cases may share a common pathology. More refined analysis is best left to the social sciences.

It is also appropriate to question whether the credit given to online crowds to support social movements is justified. The evidence supporting the efficacy of the so-called *Twitter revolutions* is sketchy at best and may be totally overblown.[20,21] Finally, we emphasize again that self-selection and singularity of focus are the most corrosive aspects of crowds. If online crowds encouraged unrestricted membership, diversity of opinion, and unrectified information flows, they would take on a less acrid character. But then they wouldn't serve the ultrapartisan, nonreality-based communities as well.

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