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Crowdsourcing “Knowledge”

Troll Armies and the Attack on Science & History

By: Anurag Mehra

The brazen articulation of weird ideas is now a mass phenomenon. These ideas reveal an ignorance of elementary science & history, yet have wide traction & lethal consequences. Why has 'fake news' taken deep root? Can we do anything to reverse this moment?

Absurdities, untruths and assorted nonsense now compete with validated knowledge to provide the building blocks of bizarre world views. These fictions are manufactured by minds infected by deep prejudices, working consciously to deceive. The post-truth ethos, created and nurtured by digital technologies, has made it possible for people to hold on to what they believe to be the truth, without any regard to the scholarly consensus.

Much of this is the creation of armies of omniscient digital warriors. The generals of these armies fabricate events, narratives, and conspiracy theories. They are ably guided by vested political interests for whom these untruths provide the foundational beliefs for political and cultural mobilisation. The foot soldiers that spread and enforce these untruths lurk in every corner of the virtual world waiting to hurl abuses at and threaten anything and anybody that does not fit their world view. Their ‘intellectuals’ spew nonsense with great profundity, projecting it as great wisdom. Fake news, false narratives, historical falsifications, and pseudoscience are rapidly poisoning public spaces.

|| ‘I will make a claim but you find the proof and if you don’t I will abuse you.’

The brazen articulation of weird ideas is no longer confined to leaders but is a mass phenomenon now. The constant repetition and circulation of these imaginary stories across media like WhatsApp, Facebook, and Twitter elevates them to the status of accepted common sense.

Pseudoscience, Uninformed, Illogical Beliefs: Expertise Not Needed

A sampling of the pseudoscientific narratives popular on the internet reveals a curious inversion of claim and proof: ‘I will make a claim but you find the proof and if you don’t I will abuse you.’ Expertise is not needed, making everyone an omniscient expert.

Consider the theory of [Evolution](#). [Here are a bunch of verbatim](#) comments from a news item on [a parliamentarian questioning Darwin's theory](#). :

“... Indian liberals and dumb idiots do not understand that Darwin's has never been proven so it could be challenged. ... Humans walked along with dinosaurs but the mainstream science ridicules the ideas and ignores evidences. Check this out on YouTube.” “Darwins theory is wrong. No need to teach Darwins imaginations that can be poked holes in to with ease. Vedas should be introduced to curriculum. Jai hind.” “He is right in a way, read alternate theory which is gaining popularity with emerging proofs, its not always right when it comes from white man, grow up and read latest theories before judging a brown man.”

These comments, and even “[scientific sounding](#)” arguments, reveal an utter ignorance of Evolution, genetic mutations, the time scales over which evolution occurs, the history of evolution theory and the current scientific understanding. It is some vague, popular notion of evolution to which these comments are addressed, from positions coloured by false information, references to religious texts including the Vedas and the Bible, and an inferiority complex. Of course there is also a reference to YouTube videos, which serve as the ultimate reference marker for the “truth”!

In the Indian context, a common claim is that modern science concepts were known to the ancients. In January 2019, Nobel laureate Venkatraman Ramakrishnan [ridiculed certain pseudoscience claims](#) made at the Indian Science Congress. These comments on his interview are illustrative:

To simply junk away the many wondrous aspects stated in the ancient Indian texts is not a scientific approach to start with, as there is no place for an arrogant and non-curious stuck up mind in science. ... A scientific mind would ideally want to consider this to be a source of ideas and want to research on the same, and appreciate that all researches cannot only be done through the standard known means. ... Ancient Indian Science was an interesting mix of both approaches I.e. subjective + subtle and objective + gross. There was no conflict between both. ... being a Nobel laureate is really a shame to know you did not understand Indian culture in Vedas/Puranas are not mere mythology & Imagination are facts & our culture is the most scientific culture humanity has ever seen. Western science is only 400 yrs old Venki & you are challenging a scientific culture more than 10000 years on records.

Support for claims relating to the [wondrous power of cows](#) is also ubiquitous.

150 Years ago, People could have laughed on those who thought of flying. Now, Rest is history. Our science is not so developed that it can fight with Hindu Vedic science.. Whatever world is witnessing was already present before Kalyuga. So wait for that day when scientist will prove 'yes Cow contributes oxygen'. 10 gms of Desi cow ghee used in fire sacrifice produces one ton of oxygen. When cow ghee is burned with rice it produces Ethylene oxide, propylene oxide, ethylene oxide and formaldehyde, which give immunity against bacteria, which are used in operation theatre. Propylene oxide induces rain. Desi Cow ghee has immense power to protect human body from the ill effect of radioactive waves thus can save the environment from atomic radiation.

Yet again we note that these comments reveal a complete ignorance of elementary science. Ten grams of something cannot ever produce one ton of anything. The sentiment that Vedic science is beyond the comprehension of western science continues to infuse the tone and tenor of these remarks. These sentiments are cultivated predominantly through [social media](#).

A recent [study in Nature](#) demonstrated how climate change disinformation over new media was crowding out professional mainstream sources. For instance, a [video](#) from Sky News suggesting that climate change fears are misplaced and that the activists who are demanding action to reverse global warming are just alarmist had over 171,000 views (Feb 28, 2020). In contrast, a much older [video](#) from the respected medical journal *The Lancet*, on the danger that climate change poses to health, has had only about 5,500 views (Feb 28, 2020).

The comments on this video illustrate climate change denial and claim climate change itself to be a “[leftist](#)” conspiracy:

“The same day Greta Thunberg spoke in the UN THE OFFICIALS GOT A LETTER SIGNED BY 500 SCIENTISTS STATING THERE IS NO CLIMATE CRISIS! They refused to read it out!!!” “Sanity has left the room. They are insulting everyone's intelligence. Chaos and disruption is all they stand for. It's the same Agenda pushing political left!!”

This is an empirical demonstration of how false narratives have much greater traction. The sheer scale of such a conspiracy by “[corrupt global elites](#)”, which would involve coordination among hundreds of thousands of politicians, academics and climate experts, should indicate the absurdity of this conspiracy theory. Yet, it finds significant traction.

Such omniscience can create acute dangers. [Patients claiming to know more than their doctors](#) have contributed to growing antibiotic resistance. [Measles outbreaks](#) are driven by anti-vaccine nonsense, which seems to have a [synergistic relationship with right wing populism](#). What better example than [Trump's tweets about vaccines](#)?

Falsification of History: Scholarship Not Needed

Many well-accepted historical writings are challenged not by scholarly arguments but by a general poisoning of the ethos. Historians are labelled as anti-national, pseudo-intellectuals, or ‘commies’. Such name-calling is enough to discredit them and their work in a significant section of the public mind. These have the effect of creating a false equivalence between scholarly work and ill-informed narratives promoted by critics who read little history.

Consider the case of [Romila Thapar](#), a leading historian of ancient India. A one-minute excerpt from an [interview that she gave in 2010](#) went viral recently, gathering much abuse. Trolls took exception to her statement that there could have been a Buddhist influence on the way [Yudhishtira's](#) character is described in the Shanti Parva of the Mahabharata. The trolls were oblivious to the evidence that parts of the *Mahabharata* were composed in the post-Ashokan period, and that the Mauryan emperor's ideal of renunciation might have

been a model for the development of Yudhishtira's character in the epic.

|| What makes people so confident and self-righteous about things they have no knowledge of?

Thapar is a favourite target for trolls, especially in the context of the denial of Aryan migration into India. Even though the evidence overwhelmingly [suggests otherwise](#), there is continued support for the idea of an autochthonous Aryan civilization. A [discussion](#) on Thapar – if one can call one on [Quora](#) that – mixes cherry-picked facts with prejudice, a dislike for historical methods, and name-calling. Most of the hate comes from a claim that she does not generate national pride, is a leftist, has an “agenda”, and that her studies are ideologically biased — as opposed to these critics who have an “unadulterated” view of history.

Another serious case is that of the vilification of India's first Prime Minister, Jawaharlal Nehru. Nehru is blamed for being solely responsible for everything that was and is wrong with the country. Here is a verbatim sample “answer” from [Quora](#), about what Nehru did:

? He destroyed India completely due to his Foolish approach & thoughts. ? He destroyed Ancient Indian History by false propaganda of Muslim History !!! ? He destroyed India's Progress due to his narrow penny wise & pound foolish, with his narrow vision of 5-Yr infrastructure development Policy !!! ? He destroyed INDIA by bifurcating/truncating J&K original State into three - PoK, India's remaining J&K & Aksai China that was GIFTED to China, by Pakistan. ? He was the most foolish PM ever, INDIA HAD, who was the main Culprit to Loose UNSC - Permanent Seat, to have lost land of Baluchistan, Sindh, Kashmir Region(35% area), Lost Land to China - Tibet & Parts of Ladhak (Aksai Chin) & others bordering HP,UK, AP States !!!

None of these charges can be sustained based on the material available in historical archives. People who believe this have neither studied any history nor do they appreciate the fact that decisions are taken in a certain context and flow of events. They little realise that [Nehruvian planning](#) is what made India stand apart from nations in the neighbourhood and gave us our industrial capacity as well as robust educational and research institutions. Yet these digital warriors — trolls — continue to nurture and disseminate these “popular” narratives, unmindful of any attempt to become informed.

A second track of attacks on Nehru takes aim at his personal life. A [compendium of such weird beliefs](#) is cause for mirth and memes but also for concern that so much fiction is taken seriously by many as fact. The comments on the article itself are revealing:

“We know that Nehru died of syphilis... . In fact, Nehru was a corrupt and filthy character who was purposely affixed Chacha because of his list for girls whom he would grope closely. He was responsible for Kashmir issue and India Pakistan division. A traitor and disgrace”
“This can be true because nobody will dare to publish a scandalous news about India's first Prime Minister. But one thing is certain that Nehru's grandfather is a Muslim and he changed his name to save himself from the Muslim invasion. This is according to what has been known through web.” “... This is not the 20th century where we believe everything told to us about the Gandhi family and Nehru. We have the Internet, better communication systems among ourselves, better way of knowing things. It doesn't take much of research to conclude that Nehru was a cunning charlatan. I actually meant another word starting with cu. Don't try subliminal messaging through your article to show that Nehru was some kinda God”

Note again the great faith in the web and the internet as repositories of truth and knowledge.

To this set of “critics”, this [video](#), with over seven and a half million views, and full of diatribe and utter nonsense about Nehru, is a profound tutorial, but these scholarly videos by the renowned filmmaker Shyam Benegal (1, 2, 3, 4; each video has roughly 2500 views) are just propaganda created by “corrupt elites”.

The Ecology of Omniscience

What makes people so confident and self-righteous about things they have no knowledge of? What drives them to dismiss the efforts of the lifetime's work of professionals and opine on matters on which they may have spent merely a few moments? Why is it that while seeking reference points to define the truth there is no realisation that perhaps they do not know enough and they need to learn more?

What is it that makes them think that verified, validated knowledge is a gigantic conspiracy spawned by institutions run by corrupt elites? Why does it not seem absurd to them that hundreds and thousands of institutions and individuals would need to collaborate to execute these conspiracies?

It is as if some civilizational lock has been removed and any gobbledygook that emerges becomes common sense that then postures as a challenge to existing knowledge. Four broad factors, operating in tandem, have created this contemporary moment.

1. TOOLS: Drowning in a sea of digital misinformation

A technologically aided storm of fake news, doctored images and videos, alternate histories, and false narratives is sweeping fast and persistently into vast sections of the population. This is [driven by populist politics](#). Copious amounts of misinformation are fabricated by “digital warriors” in [IT cells of political outfits](#), in [war rooms of political leaders](#), at partisan think tanks, and by assorted “voluntary” [ideologically driven groups](#). Examples of such narratives include “[immigrants take away our jobs](#)”, “[there has been no development in India for the last 70 years](#)”, “so and so politician is [foolish](#), or [evil](#), or [divine](#)”. Even [worse stuff](#) comes from the leaders.

At the simplest level, fake news serves to sow seeds of doubt about the authenticity of real news.

|| The profit-driven business models of the companies that own social media and search engines that dominate the internet, permit almost anything to be uploaded, propagated, and accessed.

Some of this fake material is produced so well that it requires awareness, healthy scepticism, and an effort to not be fooled by it. New technologies such as [deepfakes](#) are driving this production towards a higher level of perfection. These techniques exploit the instinctive belief of people in the higher level of truth in a picture or a video as compared to in text. The recent elections in Delhi saw the first case of a deepfake audio where a political speech was translated into another language not by dubbing but by [lip-synced audio using deepfake software](#). The day is not far when [deepfakes will become potent vehicles for rewriting history](#).

The profit-driven business models of the companies that own social media and search engines that dominate the internet, permit almost anything to be uploaded, propagated, and accessed. Their [ambiguous pushback](#) against fake news is [inadequate](#) in stemming the flow of untruths. Their algorithms, designed to feed consumers of media more of the same, become a [reinforcing mechanism](#). Despite being patently fake, the ubiquity and persistence of these stimuli have normalised them for a vast section of people. For those who use the internet and social media as their primary sources of information, these become a repository of truth, notwithstanding how bizarre the content. The spread of fake information is ultimately being facilitated by an accessing device owned by the largest number of people – the mobile phone. Loaded with cheap data this becomes an inexpensive gateway to the internet comprising search engines and social media and messaging apps which are used to voraciously consume and propagate misinformation.

2. IGNORANCE: Lack of critical skills

Poorly developed critical skills in people leads to a poor ability to differentiate between seemingly real fiction and actually real facts. This is why [satire is interpreted by many as being literally true](#) (Poe’s Law) and even beliefs like the “[Earth is flat](#)” or that the “[moon landings never happened](#)” continue to influence people’s minds. The reasons for the lack of analytical rumination are many: lack of access to an education, exposure to a rote-based education system, the unceasing flow of distractions in the form of entertainment, social media addiction, and online shopping. Now we can add to this list jingoist frenzy wherein nationalism is itself consumed like a dose of daily tonic, by the hunt for anti-nationals, “patriotic” sloganeering and expressing self-righteous indignation about the threats posed by “others”. This is how people “experience” a [politics of “spectacular” majoritarianism](#).

|| Experimentation, gathering data, and validation of hypotheses, the foundations of the scientific method, are granted lower status than belief, which alone becomes proof of truth.

Then, of course, there is this belief that “[if it is on the internet \(or social media\) it must be true](#)”. The ubiquity of the internet and social media also generates the illusion of a mythic nature of the media. The internet and social media are a constant presence in everyday life. In countries like India and Brazil, the Facebook-owned messenger app WhatsApp is the biggest “education provider” — famously known as “[WhatsApp University](#)”. This learning happens through rapid propagation of false information and entirely concocted narratives through message forwarded to large groups of people. The amount of [nonsense that floats on this medium is mind boggling](#), and lots of it is consumed “naturally” leaving consumers feeling profoundly “enlightened”. The worldviews that emerge from

such an education are incredibly stupid and fantastical; yet, they thrive and harden inside the minds of millions of people. The consequences can be lethal.

A consequence of the inability to think critically is the formation of bizarre notions of what constitutes evidence and scientific reasoning. Experimentation, gathering data, and validation of hypotheses, the very foundations of the scientific method, are granted lower status than belief, which alone becomes proof of truth. This is reinforced when a belief is collective and the distinction between myth and history is blurred. A parallel mechanism is that of ignoring inconvenient facts and evidence that disturb an existing world view. Confirmation bias and cognitive dissonance become barriers to the development of evidence-based rationality. This can have profound effects on social attitudes, such as people finding racism more acceptable.

In the context of socio-political issues, the lack of critical analytical abilities results in social sensibilities that have a poor regard for due process or fundamental rights. This leads to widely held opinions such as “criminals” have no right to legal due process, honor killings are a way of “delivering justice”, dissent and critique are “anti-national”, members of some communities are “born criminals”, or that institutions are an “obstacle to decisiveness”, among others. What escapes the holders of such worldviews is that universal legal rights, the freedom to dissent, and the checks and balances provided by institutional processes, all of which they despise, are also meant to protect them were they to ever face the tyranny of the state or the fury of lynch mobs.

3. CONTEXT: Vicious incivility and social anger

Most forms of common digital communications, like those on Twitter and Facebook, promote a stunted form of conversation, which is short and dry, and occurs in tiny bursts of attention. This format is not suitable for serious debate and narratives that need nuance, rational reasoning, or detailed descriptions.

Anything longer than a slogan is ‘too much trouble’ to comprehend for a large number of people who use these media. Therefore, these platforms are suitable for quick and convenient injection of populist rhetoric into public spaces, and the further propagation of false information by troll armies in support of a cause. The nature of this communication media promotes un-criticality and replaces civility and logic with rage and self-righteousness.

Groups seeking greater political power and economic benefits, or wanting to hold on to existing privileges, project the causes of all that is wrong with society on to ‘others’...

For trolls and devotees of these authoritarian world views, the outpouring of vicious attacks, abuse, and threats leads to a liberation of sorts: the ability to openly say whatever they think is right and to do whatever is necessary to enforce that righteousness, even through acts of violence. The promise of such freedom swells the armies of soldiers in service of supreme leaders.

What is feeding this rage and righteousness is discontent, arising from poverty, unemployment, economic inequality, social breakdown, and the hardships of daily life. Historically, these issues were expressed through trade unions, human rights organisations, and political mobilisations (with demands relating to wages, taxes, employment, subsidies, etc.) These discontents are now understood and articulated through cultural or identity-based themes.

Groups seeking greater political power and economic benefits, or wanting to hold on to existing privileges, project the causes of all that is wrong with society on to ‘others’, who are variously lower castes, immigrants, people from other religions and communities, or even women.

[T]he notion of an all-encompassing elite that spans liberals and leftists simply creates a pejorative label that can be conveniently affixed onto any inconvenient person or group...

This is a marketplace of false narratives—wild, fantastical, bizarre, conspiratorial. It is remarkable that so many amongst the exploited, oppressed, and underprivileged groups fall for these narratives and are mobilised for causes antithetical to themselves. Unemployed white workers are taken in by versions of white nationalism which is hostile to labour, and dalits and tribals are seduced by an exclusivist nationalist discourse that subordinates them. Their rage is not targeted at crony capitalists or political leaders, but at the ‘others’. The targets of the ensuing mob violence are ordinary folk: immigrants accused of taking away jobs, outsiders suspected of kidnapping children, people seen as being unduly appeased with social and financial benefits, or just those who are perceived as different.

Flowing alongside is a narrative of an **undifferentiated corrupt elite which controls institutions of democracy**, including unions, courts, and parts of the bureaucracy and the media. These institutions are touted to be a **hindrance to development** and as **great obstacles** in the path to national greatness. While some elites are certainly responsible for the great inequities that we see today, the notion of an all-encompassing elite that spans liberals and leftists simply creates a pejorative label that can be conveniently affixed onto any inconvenient person or group. In this blame game, human rights crusaders are ‘urban naxals’, rather than people fighting to uphold the law and due process.

4. FALLBACK: Conservatism replaces modernity

A shift to a right-wing, identitarian idiom in political discourse has led to a rejection of modernity, secular ideas, and individual rights as enshrined by the ideas of the **Enlightenment**. It has widened social fissures located in the differences of caste, community, race, and gender. The very values that the modernity project was supposed to overcome are back in full force. There is a resurgence of ideas such as that a **woman’s place is at home**, social status depends on caste, that a nation belongs to the majority community, or that the **superior white race is destined to rule**.

|| The crowning glory of this cultural conservatism is the need to be led and rescued by a supreme leader much like the petty patriarchs at home and in the community.

Cultural symbols and religious rituals have become important. Proponents of the old order are considered obstacles to the establishment of glorious nations and are vilified as anti-national, ‘libtards’, or ‘feminazis’. There is an accompanying narrative of the persistent suppression of the traditional by liberals. This results in diversity activists held responsible for ‘**white genocide**’, rights activists working for the marginalised accused of being casteist, and **affirmative action explained as unfair** and anti-merit.

Traditional norms that focus on the primacy of the community over the individual provide a natural ecosystem that gives licence to enforce what is perceived to be right. Honour killings and lynching become about setting things right, as does telling others **what they can eat or wear**.

The crowning glory of this cultural conservatism is the need to be led and rescued by a supreme leader much like the petty patriarchs at home and in the community.

What can be done

Detection of misinformation is an uphill task because, even if **automated** it is outpaced by the generation of false news. Falling hardware and software costs and rising computing prowess have made the technology **mainstream**. Political and ideological battles create incentives for the production of false news. There is an **inevitable** upsurge of misinformation **ahead of elections**.

The ultimate hard question is, of course: how does digital media get regulated? The big tech corporations that own and run search engines and social media and messaging platforms claim they are just hosting platforms or passive carriers of what users upload themselves. The firms claim they have a limited role in regulating content. Fake, novel, and bizarre content drives up user traffic and revenue of these companies, reducing incentives for any self-regulation. Even though **Facebook has mechanisms for checking false news** and **Twitter has decided to flag dubious information**, it does not seem to stem the deluge of false information that continues to swamp these platforms.

|| Beyond an immediate scaling up of measures to combat fake news technologically, we need to broaden digital literacy so that people have a better capacity to distinguish fact from fiction.

Oversight by the state or its agencies is also a significant threat to freedom of expression and thus to the democratic process. Especially, given the nature of contemporary populist-authoritarian regimes, granting such control to government agencies would be fatal because they would allow only pro-regime material and censor or ban everything else. Any kind of genuine regulations would be detrimental to the propaganda interests of the right-wing political outfits who have taken charge of the organs of the state and happily use all digital platforms to spawn fake narratives. The way to go would be to demand the establishment of autonomous regulatory bodies, equidistant from the markets and the state, on the lines of European data oversight bodies.

Beyond an immediate scaling up of measures to combat fake news technologically, we need to broaden digital literacy so that people have a better capacity to **distinguish fact from fiction**. This has to begin at school. The lack of critical thinking can only be addressed

by an education that fosters such thinking. Purely vocational, skill- or profession-oriented education without adequate exposure to science and the humanities including [history](#), arts, and literature cannot produce individuals with critical awareness. Reforming education is easier proposed than done and further stymied when [history is being rewritten](#) for political and ideological gains.

|| An important component of a right wing ethos is the obfuscation of the reasons for social fissures and a substitution of these by conspiracy theories and muscular nationalisms.

The root cause—social anger—can be doused only by eliminating the reasons for discontent. This is hard and revolutionary. The institutions of democracy that moderate and negotiate conflicting claims are decaying and are under siege from a populist assault. Welfare measures that soften the impact of poverty, unemployment, and inequality are often politically unwelcome because a dominant [libertarian discourse](#) labels these as the appeasement of the unproductive. The point, at least to begin with, is to rescue these institutions from right wing assaults and bring back empathy into social discourse — the poor and the disadvantaged are not leeches but victims of structural exploitation.

An important component of a right wing ethos is the obfuscation of the reasons for social fissures and a substitution of these by conspiracy theories and muscular nationalisms. There is a desperate need to bring analyses and debates which emphasise the role of [crony capitalism](#) and [dominant oligarchies](#) to the forefront, however difficult that may be in the contemporary toxic environment.

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The safeguarding of privileges by the privileged through narratives of victimhood, and the consequent attacks on the already oppressed requires serious exposing. We need relentless [counter narratives](#) and activism to expose the absurdity of a logic that suggests that the dispossessed and the oppressed are villains and should remain in their traditional chains.

What we are witnessing is the proliferation of digital stormtroopers who are harbingers of a dystopia in which constructed lies and crowdsourced “common sense” will overwhelm the real and the rational. Some of it is already here: we had a “patriot” firing at protesters and yelling “[yeh lo azaadi \(take your freedom\)](#).” There was the [Uber driver who drove his “communist, anti-national” passenger to a police station](#). He was only doing his [national duty](#) in “judging” the passenger based on his crowdsourced knowledge, and thus [saving the nation from traitors](#).

We can expect to see more [brownshirts](#) reporting to “The Ministry” about the anti-national activities of their family members, friends, and neighbours.