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'Datafication' of Existence: An Aristotlean Perspective on the Algorithmic Public Sphere

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Abstract

Two inextricably intertwined phenomena which ail the internet today are those of misinformation, and polarisation of netizens. First, the netizens' attention is secured through sensationalised, polarising content and the more the user is unwittingly imprisoned in the 'walled garden' of such content, the longer is her surveillance, and more complete is the data-mining. This datafication of existence is justified on the grounds that data enables websites to serve their users better, by customising the advertisements they receive. Such justification proves to be feeble because the netizen is not merely consumer looking for commodities to purchase, but also a citizen who seeks information, and also shares her own opinions. The internet thus is a veritable *polis,* where conflicting world-views and ideas, are to challenge each other. But processes such as filter-buble, and dark-spots serve to fragment the public sphere, and imprison the netizen in a echo chamber in which she receives only what the algorithm views will retain her attention, for the surveillance and data mining to be possible. The paper examines the adverse impact of transformation of the internet to an 'algorithmic public sphere' from an Aristotlean perspective: humans 'flourish' only when they practice their function, which is reasoning. And reasoning – both practical and intellectual – can flourish only when the polis or the state functions to ensure the 'good life' for all. But in the algorithmic public sphere, the netizen does not actualise her potentiality of reasoning, which entails aiming at the 'mean'; she is instead caught in the web of misinformation and polarising content, which renders a prisoner of her filter-bubble fuelled echo-chamber.

Keywords

Eudaimonia, flourishing, phronesis, polis, algorithmic public sphere, surveillance, datafication, misinformation, divisiveness

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'Datafication' of Existence: An Aristotlean Perspective on the Algorithmic Public Sphere

I. Aristotle, reason, the polis

 Aristotle was a champion of the telos; every action is aimed at a good, and every being develops to attain an end. In *Nicomachean Ethics,* Aristotle limns a hierarchy of ends: ends which means to other ends, and ends-in- themselves. The highest end-in-itself, according to Aristotle, is happiness or *eudaimonia.* But he recognises that there is hardly any consensus on what happiness entails; the munificence of desires makes different people associate different states of being with happiness. For some, happiness consists merely of being prosperous; for others, it entails being noble. For Aristotle, however, happiness is 'the activity of the soul in accordance with reason'. Happiness is, in other words, inextricably linked to reason. In western philosophical doxa, there are, of course, several theories of reason. For Aristotle, the teleologist, the capacity to reason is the 'function', or the 'characteristic activity' of the human species. Aristotle explains in the *Nicomachean Ethics* why he considers reason to be the 'function' of humanity. This is so because of all living organisms, humans alone have the capacity to reason. And hence, happiness or flourishing (which the Greek term *eudaimonia* is often translated to) consists of developing the capacity to reason. In *Metaphysics,* Aristotle outlines the relation between potentiality and actuality, or *dunamis* and *energeia* respectively. In doing so, he recognises that even though reasoning is the function of the human species – since this capacity is peculiar to humans – it does not mean that the potentiality will necessarily develop into an actuality in all humans. Reasoning itself is, according to Aristotle, of two kinds: intellectual reason which is acquired through learning; and practical reason or *phronesis* which is acquired through habituation. In *Nicomachean Ethics,* Aristotle argues that the capacity or the potentiality of reasoning is that which needs to be actualised since it is the 'characteristic activity' or 'function' of humans, which in turn, is the basis of the highest end or telos, happiness. In *Politics, Aristotle* delineates the requisite conditions for the potential of reasoning to be actualised. The character or nature of a *polis* or the city-state, which is the object of Aristotle's examination in the *Politics* depends upon the kind of constitution that the *polis* adopts. The best kind of constitution is one in which state exists not to further the interests of one (tyranny), or of a few (oligarchy), or of a brute majority (democracy) but to ensure the 'good life' for all its citizens. One leads the good life or one *flourishes*, according to Aristotle, when one actualises her potentiality of reasoning; or when one exercises her 'function' of reason through habituation and learning. Hence, a desirable polis is one which enables its citizens to develop and exercise their capacity or potentiality of reasoning, which is, in the Aristotlean framework, the characteristic activity or function of the human species.
In the Aristotlean schema, therefore, happiness or flourishing or *eudamonia* depends on actualisation of the potential of reasoning, which in turn, can happen only in the right kind of polis or state, the one that works to ensure good life for all its citizens. In other words, in the Aristotlean framework both happiness and the capacity to reason depend upon the kind of socio-political space one belongs to. In the *Politics,* Aristotle argues that man is a political being since he comes into being only in the *polis*. Or to put it differently, it is the *polis* which shapes man. Numerous Aristotlean philsophers, especially Alasdair MacIntyre, Martha Nussbaum, and Michael Sandel have highlighted in their works, the centrality of the role of the *polis* or the city-state, or in modern sense, the community and its socio-political values, in shaping of the individual and in maturation of her capacity for reasoning.

II. Emergence of the Internet as a new polis

Globalisation heralded the new Information Age, in which many spatio-temporal modalities of experiences of the rational being underwent massive transformations, as the internet – accessed through the world wide web – emerged as an infinite, ever-expanding repository of information, easily and cheaply accessible. There has been a steady increase in the number of people who access the internet, and also of the number of hours they spend online.[i] Social media, news website and streaming platforms hog maximum eyeballs online. According to James Bridle, our technological capability to produce and process vast quantities of information is not matched by an increase in knowledge and understanding of the world. Rather, the more the average netizen accumulates data, the more profoundly are they left 'in the dark, stumbling blindly through a world that escapes us.'[ii] While the perplexity that teases the rationality of the thinking netizen, who is overwhelmed by the avalanche of conflicting information that the internet furnishes her with, constitutes a lived experience, what is not apparent to her is her constant surveillance on the internet, and the resulting datafication of her existence. Online surveillance happens through tools such as as commerical cookies (which track all the activities of the internet user), and addictive algorithms which render data harvesting and data mining possible. This phenomenon of constant surveillance online and datafication of everything, have made distinct the glaring difference between the founding myth of the internet as a non hierarchical, horizontal, decentralised space which makes seamless, fast communication and exchange possible, and its reality as a domain of all engrossing commodification. If the phenomena of ubiquitous surveillance and all-encompassing datafication are, as postmodernism will state, a 'discursive construct', then there are conflicting constructs at work, each challenging the other. While its defendants hail it as the age of 'data capitalism', its critics such as Shoshana Zuboff, call it the era of 'surveillance capitalism'. Mayer- Schonberger states in *Reinventing Capitalism in the age of Big Data* that far from being an anathema, data harvesting is a desirable trend since data will soon replace price as a far more accurate determinant of consumer preferences. In other words, for advocates of data capitalism, price which has been until now celebrated by proponents of the free market system like Frederick Hayek as the most efficient way of capturing demand and of regulating the market, has found a more effective competitor in data which can capture minutest of preferences of the consumer by harvesting her data of her online activities, and this in turn can help companies to provide better service to the customer. For instance, if a customer buys a frying pan which costs 10 dollars, then if price is treated as the indicator of consumer demand, then all that can be known from the purchase is that the consumer is willing to buy a frying pan if its price is 10 dollars, but data on the other hand can give the retailer, the manufacturer etc ideas about the colour, weight, size preferences of the consumers about the frying pan if they collate data from the consumer's searches and reviews of the product online. Thus, data capitalism considers data harvesting to be not a manifestation of surveillance but as information which will help them improve their products and services and thereby serve the consumers better. But at this juncture**,** *the question which naturally arises is that is the netizen online only a consumer whose online activities comprise only of either shopping or window shopping, or reviewing purchased products online? In other words, does the netizen only visit online retail sites? If no, what justifies the surveillance of not just purchases but of each and every search, and comment and online activity?*
The netizen online is not merely a customer looking for commodities worth purchasing but also a social subject communicating with friends and colleagues and a political subject airing her opinions

online and looking for information about various issues besides commodities for purchase. Then what justifies the incessant, relentless mining of data of all aspects of the netizen's virtual life? Data capitalism's advocates argument about data being able to serve the consumer better falls flat here because not every aspect of every online activity of the netizen-subject such as social interaction or political exchange can help in understanding 'consumer preference' but which are datafied nonetheless. What are the consequences of 'datafication' or commodification of political opinions or social exchanges, and often the latter is of extremely personal nature. The claim that encryption of personal data and exchanges online offers protection of privacy has been challenged by the fact even though a data (of one's financial transaction on a particular website, or of an exchange) is encrypted, the meta-data (regarding time, location, name of recipient) is still harvested, and used. The datafication of the netizen's political views by tech giants has already severely damaged the public sphere. It has happened primarily through dissemination of misinformation, and through targetting netizens who become recipient and unwitting consumers of polarising contents. The two phenomena are inseparably intertwined since misinformation serves to polarise the netizens, and polarisation in turn, render netizens into more gullible consumers of misinformation and conspiracies. Immanuel Kant starts his celebrated 1784 essay, '*What is Enlightenment?*'with the observation that 'Enlightenment is the emergence of man from self incurred immaturity.' In the very next line, he helpfully describes 'immaturity' as the lack of capacity to think for oneself, without being guided by others, obviously an authority-figure. But what is conspicuous by its absence in Kant's essay – and conversely, present in Aristotle's *Politics* – is the role of structural factors in ensuring that the citizen emerges as a rational being, capable of critical thinking. The structural factors consist of the community and the state which shape the individual's world-view, her ethical stand-point, and her self-awareness. The virtual sphere, where the citizens exist and interact as netizens, is dominated by Silicon Valley giants such as Google, Facebook, and Twitter, the role of these corporations in shaping the perspectives of its users/consumers who are also netizens, is immense.

III. The entanglement of misinformation and polarisation: A business ethicist's view

Richard De George was one of the early pioneers of the discipline of business ethics; in a text written as early as 1999 when the internet was veritably still in its infancy and when social media did not exist, De George recognised the potential of the internet to serve as a means of dissemination of misinformation, and he suggested remedies, which two decades later, appear as the only viable solution to the twin problems of misinformation-propagation and polarisation. In the essay, *Business Ethics and the Information Age,* De George observes that 'the lines between information and advertising, between information and brainwashing, between information and self-interest are crucial'.[iii] Why does De George insist the difference between information and all manifestations of misinformation (whether it propaganda, or advertisement) is too vital to be sidelined? It is so because De George recognised the centrality of data for information technology companies, which are the largest repositories of data. Data is the most prized tool of marketing because through tracking consumers online, companies can determine the exact taste and predilections of the consumers. An UNI study claims that the CEO of LinkedIn has said that the vast majority of the world's data is ultimately in the hands of Big Tech: Google, Facebook, Amazon, Microsoft and Apple.[iv] Given the concentration of data – which has been variously dubbed as the new gold, and new petrol – of billions of netizens in the hands of the tech giants, their business model of selling data needs to be scrutinised. Social Networking sites such as Facebook and Twitter have been described as ' advertisement

brokers'; they sell data to advertisers who then using the data 'target' their potential customers and place ads to capture the eyeballs of the consumers. Zeyneb Tufecki observes trenchantly about the business model of these digital behemoths, which earn profits by selling data:

"And right now, the flow of the world's attention is structured, to a vast and overwhelming degree, by just a few digital platforms: Facebook, Google (which owns YouTube), and, to a lesser extent, Twitter. These companies—which love to hold themselves up as monuments of free expression—have attained a scale unlike anything the world has ever seen; they've come to dominate media distribution, and they increasingly stand in for the public sphere itself. But at their core, their business is mundane: They're ad brokers. To virtually anyone who wants to pay them, they sell the capacity to precisely target our eyeballs. They use massive surveillance of our behaviour, online and off, to generate increasingly accurate, automated predictions of what advertisements we are most susceptible to and what content will keep us clicking, tapping, and scrolling down a bottomless feed."[v]

The internet has got transformed from being a potential public sphere where exchange of marginalised, novel, and critical views was possible through a horizontally structured, decentralised space into an 'algorithmic public sphere' where algorithms generate preferences and trends. In tech parlance, Facebook and YouTube are "optimized for engagement," which their defenders will tell you means that they're just giving us what we want. But there's nothing natural or inevitable about the specific ways that Facebook and YouTube corral our attention. The patterns, by now, are well known. As Buzzfeed famously reported in November 2016, "top fake election news stories generated more total engagement on Facebook than top election stories from 19 major news outlets combined." Again, a 2020 survey by the Global Disinformation Index revealed that Google provided ad-services to 86% of websites peddling fake news about the Covid 19 pandemic.[vi] Again, various reports highlight the role of fake news spread through Facebook which mobilised violent mobs during the anti-Rohingya pogrom in Myanmar in 2017.[vii] Facebook itself recognises the role it plays in polarising netizens through misinformation; the Wall Street Journal reported in 2020 that a Facebook team found that ' "Our algorithms exploit the human brain's attraction to divisiveness," read a slide from a 2018 presentation. "If left unchecked," it warned, Facebook would feed users "more and more divisive content in an effort to gain user attention & increase time on the platform."'[viii] Yet, despite such egregious instances of misinformation and polarising contents causing grievous harm to the public sphere that the internet is, and to the society at large, incendiary fake news continue to be circulated unchecked.

According to Steven Hill, given huge number of users, no effort to curb the propagation of misinformation can be completely satisfactory.[ix] Linderman and Schiano write that if tech giants cannot or do not wish to stop catering to politically and socially polarising, misinformation-ridden contents created to serve the interests of certain groups, they can at least inform and create awareness that they do not guarantee the truthfulness of the contents. They observe: "Our point is that if the field disclaims having a stance about truth on the Internet, then let us so notify society. If, as the case seems to be, the field is grappling with the matter and is perhaps reluctant to take a stance, then society should be so informed."[x] De George too, in his 1999 essay, taking cognizance of the menace of misinformation on the internet, writes that the misinformation does not have to be pulled off the internet, but the responsibility of the search engine is to not list it at the top of search results even if it is paid by the site, and in case it is listed at the top, the reader must be made aware that the search engine was paid to list it at the top. Likewise, the ethical responsibility of the social networking sites and search engines is to let the consumer know that she is being tracked and her personal information compiled. Further, she ought to know if the company is using the information itself or selling the

personal data to another company. He observes that the former is the practice in Europe, whereas the latter is predominant in the United States. Either ways, whether the consumer is concerned about her privacy or not, she ought to know who is procuring her data and for what purpose. De George and others insist on informing the users because, in the words of De George, "important to all of them in an Information Age is ownership, and together with ownership goes power, and with it the dangers of control and manipulation. Truth leads to the concepts of enlightenment, education and the potential of freeing of individual and society. As individuals learn the truth, they are also in a position of empowerment. Politically, this makes enslavement difficult and it promotes self-rule or democracy."[xi] In the Aristotlean framework, reason as dunamis or potentiality is latent in all humans since reason is the function of the species but the virtue of reason can be nurtured and actualized only in the right kind of polis. The internet has emerged a virtual polis, in which the netizens air their beliefs and perspectives, and are in turn, are influenced by the same of others. They, however, cease to be equal partners of exchange and become mere passive consumers when tech giants contantly feed them with polarising misinformation, without at the same time, informing the users that they cannot validate the truth claims of the contents. The reason that the digital MNCs who are in the business of selling data do not do the bare minimum of intimating its users is because their business model entails data mining through incessant surveillance and then selling the data to third parties who can then, equipped with the data, target the users through methods such as filter-bubble, trolling, and dark spot, to manipulate them. Therefore, there is a two-way process at work: constant surveillance of online activities of the netizen becomes the basis of data mining and then datafication of the existence of the netizen. But before that, to ensure that the netizen is online and on a particular site for as long as possible, they are fed with 'sensationalised news and conspiracy theories', to secure their attention. Steven Hill articulates the role of misinformation in securing the users' attention, which then enables the advertisers to further target them, as follows: "Second, the platforms' extractive business model relies on hooking users by algorithmically targeting them with sensationalized news and conspiracy stories. The longer users are engaged on their websites, the more advertisements they view and the more the companies' profit. Social media companies have no skin in this game, the crazier things get on their platforms, the more they rake in revenue. It's surveillance capitalism at its worst." In other words, the attention of the netizen is secured through misinformation so that they can be turned into pliant, gullible recipient of more misinformation.

IV. Towards alternative models of structuring the internet

 According to Aristotle, virtue is inextricably linked to activity, and virtue is that activity which aims at 'hitting the mean', avoiding the extremes of excess and definciency. Expostulating the concept of virtue as mean in *Nichomachean Ethics*, Aristotle states there can be no pregiven principle for determining what virtue or the mean are; happiness (which is the highest good) is 'action of the soul in accordance with virtue', and virtue is the action that aims at 'hitting the mean', and the mean in turn, is always context dependent. If this idea of the virtue as mean is used to make sense of polarisation of the internet today, it will be clear what the problem is with phenomena such as filter bubbles and dark spots. In making the netizen subject addicted to the internet by giving her access to information which confirms and furthers her biases and prejudices, these phenomena flout the principle of the mean, which could have been attained in public space if people could freely access contradictory views and then exercise their own reasoning powers.

The 'bazaar model' of the open software movement propounded by Eric Raymond, and the 'cybersyn model' of Stafford beer which conceptualised a prototype of an internet network as a organism in which every node, and every participant is part of the body of the organism in such a way that one part cannot flourish at the cost of the other, need to be revisited in order to enable the reestablishment of the internet as a polis, and wherein reigns the principle of the mean.

[i]John Koetsier (26 September, 2020) Global online content consumption doubled in 2020. *The Forbes*. https://www.forbes.com/sites/johnkoetsier/2020/09/26/global-online-content-consumption-doubled-in-2020/?sh=730b0b762fde

[ii]James Bridle (2018) The New Dark Age, *Verso.*

[iii] Richard T. De George (1999) Business Ethics and the Information Age, *Business and Society Review*, 104:3, pp.261-278.

[iv] UNI Global Union, Future World of Work Series, Top 10 principles for workers' data privacy and protection

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[vii] Vaidhyanathan, S. (2018*) Anti Social Media: How Facebook Disconnects and Undermines Democracy*, Oxford University Press, pp. 195.
 In the article 'Hate Speech, Atrocities, and Fake News: The Crisis of Democracy in Myanmar', in *Financial Times* (2018), John Reed quotes Victoire Rio of Phandeeyar, the Yangon-based tech group that she says is working to promote "safe" internet usage. Rio observed about the situation in Myanmar, "The fact that Facebook is the internet for many digital users, combined with low levels of digital literacy, makes fake news and online hate speech particularly dangerous in Myanmar".

[viii]Jeff Horowiz, Deepa Seetharaman (26 May 2020) Facebook Executives shut down efforts to make the site less divisive. https://www.wsj.com/articles/facebook-knows-it-encourages-division-top-executives-nixed-solutions-11590507499

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