Essay

The Digital Divide: What does it mean to be information-poor?

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Abstract

Can a society based on the ownership of information resist an impulse to disparity or inequality? What does the Digital Divide entail? Through various theoretical approaches and discourses, I outline some of the major digital inequalities and disparities in our information-powered world. Borrowing from various theorists such as Castells and Schiller, as well as recent case studies and reports, I argue that current definitions of the Digital Divide focus only on information acquisition, failing to highlight the many structural issues that lead to information poverty. My research primarily focuses on gender disparity and the Digital Divide during Covid-19 to highlight issues of digital literacy, online safety, discrimination in tech culture, and more.

Keywords: Digital Divide, Information Society, Media Studies, Digitization, Information rich, Information poor

Introduction

Digitization is playing an unavoidable part in our lives, being the very vehicle of so much of our day-to-day; from our classrooms to our social lives to even the simple act of choosing which brand of milk to pick up. Our world is becoming increasingly digital; we have exhausted the age of industrialization and have now transitioned to a new type of society, an information society. Everyday information, particularly acquired through digital technologies, is viewed as a commodity (Schiller 1996) and those commodities in a capitalist society translate to power. Many media scientists and sociologists argue that in an information society, the success or failure of an individual, institution, or group of people lies in their access and ability to process information. This is best understood in terms such as “information rich” and “information poor”, generally summarised in a paradigm known as the digital divide. While many hope that digital technologies

can reimagine the world as a more equitable place, this new information society has not only preserved existing inequalities but possibly aggravated them. I will be expanding the definition of the digital divide by studying its complex disparities between genders and its widening during the pandemic.

The Information Society

Much of the language surrounding the system in which this divide exists is rooted in Manuel Castells' ideas and what he calls "the network society". He defines this society as one whose social structure is made of networks powered by information and communication technologies (Castells, 2004). Castells argues that the new economy has three fundamental qualities: global (economic activities are organised globally), networked (production and competition are formed in networks between businesses globally), and perhaps most importantly, informational (the core source of productivity growth is the exchange and processing of information). As a result, Castells expresses that such information-dependent global capitalism will only deepen existing inequalities (Lupac, 2018).

This coincides with Herbert Schiller's (1996) views of information inequality. Schiller argues that the fall of the Berlin Wall symbolised the last major threat to capitalism (Faludi, 2010). The economy began seeing a bigger shift towards privatisation and the subjection of public interest to a cost-benefit analysis, and information being of public interest quickly followed (Faludi, 2010). Additionally, Schiller argues that a privately constructed information system will always embody the fundamental qualities of a private economy; inequality will always follow the production of services and goods for profit.

Bagchi (2019) provides a study of the divide by borrowing ideas from Marx and Althusser. He argues that because there is a lack of media policy enforcement, there is ideological domination over media that is controlled by the "ruling classes" ideas. Like many theorists, Bagchi believes that the ruling class in question are both figures of power, as well as groups or individuals who uphold those structures of inequality. Technology is fundamental to industrialization and the shaping of the modern world, and all its manifestations are important in considering issues in regard to access. Similar to factories in the 18th century, modern technologies are central to industrial capitalism and are used in the distribution of authority and power (Lerman and Mohun, 2023). In the modern

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framework, this distribution can range from the distribution of access to the distribution of the ability to learn and utilise technology in a safe and fruitful environment. Arguably, industrial capitalism thrives by spreading and reinforcing ideologies that promote structural inequalities such as classism, racism or sexism that keep marginalised people at a disadvantage in the information economy. This ideological domination causes a power imbalance in who gets to spread and generate information (Bagchi, 2019).

What is the Digital Divide?

The digital divide is a term commonly used to describe the lack of access to information technology groups of people suffer from due to their race, gender, social class, culture, geography and more. While this is often discussed in either broad or nation-specific terms, it is also used to describe the difference in the flow of information between wealthier and poorer countries – this is referred to as the north/south digital divide. Data showing that digital tools and access to technology is lower amongst certain groups has created a large push to bridge this divide, while simultaneously generating discourse on the reality and extent of the divide's consequences (Mossberger, J. Tolbert and Stansbury, 2011).

My primary goal is to challenge this definition of the digital divide. My main issue lies in the focus on access to information; while we all deserve equal access to information, we need to ensure equity in our information acquisition journeys. Access to information does not just mean access to the resources or tools, but having the digital literacy needed to process that information and utilise it, as well as being within a culture that promotes equality in our information acquisition journeys. While access is undoubtedly unequal between groups and presents itself as an important factor in an information economy, it is key to question whether individuals know how to utilise digital technology well and make the most of the opportunities it offers (Mossberger, J. Tolbert and Stansbury, 2011).

Norris (2001) efficiently categorises the digital divide in three ways. Firstly, as a global divide that illustrates the disparity in information wealth between the global north and the global south. The UN has expressed that poorer countries lacking in technological investment will drift further behind economically and developmentally, while better-wired countries will advance in the global marketplace. Secondly, as a social divide that shows the disparity between info-rich and info-poor

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within a nation. Lastly, a democratic divide reveals the split between people who are actively using digital tools to mobilise in both their personal lives and the public sphere and those who do not. I outlined these different categorizations for context, but this paper will primarily focus on the social categorization of the digital divide.

The Internet is not entirely regulated, but it is controlled. Social media sites, search engines and other platforms where people seek out information are controlled by underlying power sources that own the media and control them in different ways, such as through advertisements and the generation of biased algorithms. For example, when studying bias issues within algorithms, Kenny and Silva (2018) found that historical bias and stereotypes are embedded in word choice within algorithms and that this can manifest in many ways, such as Google search results revealing racist cartoons upon searching common African American names. They can even have real-life implications, for example, with algorithms used to determine candidates' employability when being considered for a job, it was found that algorithms often discriminated against candidates with non-Anglo names (Kenny and Silva, 2018).

A Gender Divide

Let us start by looking at the digital divide in regard to gender. Male-based elitism sustains power structures that maintain countless barriers to inclusion, keeping women info-poor. Haywood (1995) looks at how prejudice is built up within cultures and reinforced in institutions, continuing cycles of marginalising girls and women from career opportunities and tools to advance both in the public and private sphere. When researching digital education in the classroom, it became apparent that boys were receiving more support and attention than their girl classmates. While in many parts of the world women and girls are at a disadvantage in their access to digital technologies, using the US as an example reveals that the issue runs deeper.

According to the National Telecommunication Administration (2000) by August 2000, girls and women were actually more likely to be internet users than boys and men. This was cause for celebration and provided a sense of hope that the divide may be shrinking. However, further research showed that girls and women were still behind in technological education and career pursuits, they were still less likely to view the internet as an opportunity for economic or personal

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gain, and less likely to use digital technologies as gateways into finding communities or hobbies (Cooper, 2006).

A research experiment conducted by Stoilescu and McDougall (2011) at a university in Ontario in 2005 used a sample of students and instructors from the School of Computer Science to study the difference in the learning experience between female and male computer science students. Through a series of interviews, observations, and document analysis, Stoilescu and McDougall found that while all students had the same access to computers, female students were far less likely to choose computer science as their major. When the researchers asked some of the male students how they think gender inequity should be addressed, many of them responded with discriminatory statements such as suggesting that women lacked the ability to work hard. Another finding was that while many of the male students had related work experience such as working in IT, none of the female students had any experience of the sort.

Additionally, male students spoke passionately about computer science pursuits and were able to form communities that made them feel supported in their activities while female students felt alienated from their male counterparts and the computer science industry (2011). This also illustrates a lack of what Jan A.G.M (2005) calls social motivational access. Social motivational access is described as a pivotal factor in tech access; having social contacts that are agents in making you aware of the uses and importance of tech use, and are an encouraging force that motivates one to access technology. This is telling of the culture around computer science but also generally surrounding digital technologies.

A range of evidence suggests that girls and women are less likely to use the internet particularly because of their early experiences in the classroom, reflecting gender differences in attitudes towards science and tech (Norris 2001). Norris argues that this is rooted in traditional gender roles where women are prescribed to domestic life while men are socialised and trained to be the hunters, the breadwinners and the head of the family. What was once control over the tribe's food, in a contemporary power structure, is having control over information (2001).

Gender proves itself a useful analytical tool in understanding culture and in this instance the relationship between culture and technology (Lerman *et al.*, 1997). That relationship is critical to understanding the social barriers that restrict marginalised genders from the tech-sphere.

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A Hostile Digital World

The traditional definition of the digital divide fails to capture the depth of inequity and its consequences socially, economically, culturally, and academically for groups that are already traditionally marginalised.

This brings me to my next point, we must expand the idea of access to demand access of a non-hostile and inclusive digital world (Gorski, 2003). Much of the language surrounding the internet presents it as a neutral space, however many of the gender disparities are replicated, if not aggravated, online. While many hoped that the internet could be used to challenge the normalisation of violence and inequality, it has instead been used to reinforce patriarchal structures and silence women online (Barker and Jurasz, 2019). While the Internet was not designed for prejudice, it was not architected to minimise it either (Suzor, Dragweicz and Harris, 2019). The internet has created a public forum where anyone can send out messages to large demographics behind a curtain of anonymity, this has created a breeding ground for violence and organised hate towards marginalised groups.

For example, during the Black Lives Matter movement, black female British MPs were victims to thousands of hateful online messages including rape and death threats. Kate Millen, director of Amnesty International said in a press release:

> Our research has revealed the shocking levels of abusive tweets hurled against women of colour in politics and public life - especially black women, who were found to be 84% more likely than white women to be mentioned in abusive or problematic tweets…These vicious attempts to silence black MPs must be met with action. Racist online abuse must be called out and properly tackled, and social media companies like Twitter must do far more to combat this extremely worrying trend so that women can feel safe to participate in public debate and politics. (Amnesty International, 2020)

In its report titled "Toxic Twitter", Amnesty International found that 78% of British women do not think they can express their opinions on Twitter without receiving online harassment or abuse as a result. This serves as an example of a different type of digital divide, one in which marginalised groups are less able to navigate online spaces in fear of their safety being compromised (2020). Technology and society are intertwined (Dijik, 2005) and evidence shows that one of the biggest

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factors stopping marginalised groups from participating in the online and tech sphere is the vulnerability to structures of violence being aggravated online.

The 1993 United Nations Declaration on the Elimination of Violence against Women defines violence as any act that results in or is intended to result in, physical, sexual, or psychological harm to women, including threats of such acts, coercion, or deprivation of liberty, whether occurring in public or private life. This manifests in the form of rape threats, stalking, slut-shaming, revenge-porn, leaking of private information, and more (Fairbairn, 2023).

Online violence, infringes on women's safety, self-determination, their ability to move freely without fear of surveillance or harassment, and denies them the ability to develop their identities and skills, putting them behind their male peers (Association for Progressive Communications, 2017). Similarly, the Council on Foreign Affairs carried out a study on the correlation between the rise of hate speech online and found that it usually coincides with the rise of violent hate crimes. This serves as good proof of the way the online realm emulates existing structures of oppression (2019).

The Divide during the Pandemic

While my study of the gender gap in the digital divide reveals to us the complexity of inequalities in tech, in recent years we have been, more than ever before, confronted by the consequences of the digital divide. The discourse around the digital divide emerged in the 1970s and had largely died down until being reignited with a major technological shift in 2020.

The Covid-19 pandemic exacerbated a lot of the existing issues within the divide. Notably, classrooms' moving online at a pace too fast to ensure that all students had the needed resources to participate raised major concerns in terms of equality in education. A report by Microsoft Surface (2020) revealed that only 2% of teachers working in disadvantaged schools in the UK believe that their students have adequate access to online learning. When looking at how UK schools addressed students' need for digital devices in order to participate in the online classroom, the report reveals that 38% of private UK primary schools were able to provide their pupils with devices that they could take home, while only 1% of state primary schools could do the same. This shows that children who had access to technology at the prime of their development stages were able to continue their education with less disruption caused by the pandemic, while children experiencing

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digital poverty were not going to be able to catch up in a world that is becoming increasingly more digital. Similarly, when looking at the digitization of the workforce, an increase in income disparity between people during the pandemic was made clear (Ingram, 2021).

The pandemic brought out another major issue that is a result of the digital divide - health education's being highly digitised. This has meant that the majority who do not have access to digital resources or skills to navigate online information are at a disadvantage when protecting and improving their health. Researchers have found that there have been increasing disparities in health in socioeconomic status over the past century and that a leading factor for this is that education and tech literacy major components of socioeconomic status. The high degree of digitalisation of health education in the past century has proven a problem for many who still do not have equal access (Shulz, Mehdipanah Roshanak and Israel, 2020). Glied and Lleras-Muney (2008) hypothesised that improvements in health technologies have actually caused further disparities across groups as many did not have the education to exploit technological advances. This disparity extends so much that research revealed individuals with better education and technological access have a higher survival rate against diseases such as cancer (Glied and Lleras-Muney, 2008). Additionally, because class and race often intersect, a study in the US showed that African American and Latin people were more likely to be at risk of covid, usually because they were less able to access and decode information that could help reduce health risks. (Shulz, Mehdipanah Roshanak, and Israel, 2020).

Conclusion

Through borrowing ideas from thinkers such as Schiller, Castells, and Marx, I have illustrated the information society as we know it, and drawn from contemporary research and case studies to show some of its consequences. Current definitions of the digital divide are too narrow and need to be expanded in order to take account of the structural issues in the flow of information that keeps so much of the population in information poverty. Additionally, I argue that we need to address digital illiteracy and the power imbalances caused by those who generate and control information to guarantee the quality of information being accessed and that everyone is given the tools to decode and utilise it.

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