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Investigating the Ethical Challenges for Autism Inclusion in the Anthropocene

Susmita Saurav

Research Scholar, University Department of English, Ranchi University, Ranchi.

Email: susmitasaurav965@gmail.com

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Abstract

The anthropocene presents an ethical predicament that has yet to be fully understood. The vast and unpredictable changes to the environment, coupled with the increasing prevalence of autism, have created new challenges and opportunities for the inclusion of autistic people in society. The Anthropocene presents significant ethical implications for them by highlighting the complex interplay between human and environmental factors. It challenges the notion of human exceptionalism and calls for more inclusive policies and ethical societal relationships. It challenges the existing assumptions and social constructs that have shaped our understanding of autism and its place in the society. With the creation of new technology, increasing financing for research, increased collaboration between autistic persons and supporters, and regulatory reforms, the ethical difficulties of autism inclusion are just starting to be addressed. But the ethical considerations of autism inclusion in the anthropocene are greatly complex, and need to be carefully weighed. There is a need for a shift in our ethical framework. Embracing neurodiversity is an ethical imperative and this requires global collaboration. By addressing environmental concerns, promoting neurodiversity, ensuring accessibility, and fostering awareness and understanding, communities can work towards creating an ethical and sustainable future for all individuals, regardless of neurodivergent conditions.

This research paper will discuss the direct impact of environmental toxins on autistic people, thereby highlighting autism diagnosis and the need for increased awareness and understanding of autism for their successful integration into the society. Secondly, this paper will reevaluate the complexity of the environment, its behavior and the lack of representation in media leading to decreased autonomy and further marginalization, necessitating careful consideration of individual needs.

Keywords: anthropocene, autism, environment, challenges, awareness.

Introduction

The Anthropocene has come down to us rather as a warning term where even humans have realized how they have impacted the earth's ecology, apparently to a point of no return. Humans have been continually engaging in ruthless climate-negative activities like mass-scale industrialization and draining the earth's natural resources. Consequently, the whole humanity is now faced with a never-ending string of unparalleled and unforeseen social, moral, ethical, and environmental predicaments.

One of the unique predicaments faced today is the rise in the number of autistic individuals around the globe and among people of varied ethnicities. 'Autism Spectrum Disorder' (ASD) is an umbrella term for the range of neurological conditions typified by problems with communication, sensory coordination, and social interaction. Sensory overload, repetitive behaviors, and an inability to understand figurative language (metaphors, irony, sarcasm, and non-verbal clues) are commonly found on the spectrum. This causes them to be treated in a lesser light, leading to social exclusion and misunderstandings on several levels. The bigger ethical issue today is the inclusion and welfare of disadvantaged groups of people, like those with autism and other disabilities. Due to the enigmatic nature of their problem, the requirements of people with autism have not always been understood or accommodated in the past. In the Anthropocene, such unresolved ignorance may cause greater difficulties for the inclusion of autistic individuals. The rapid pace at which our surroundings and culture are changing is one of the primary obstacles to the progressive development of these neurodivergent individuals.

Catching-up with the anthropocene: ethical challenges for autism

Climate change has deep significance for autistic individuals. For them, the fast-paced, complicated, and unpredictable nature of contemporary existence is proving to be excessively taxing, making it harder for them to cope and progress. Their inability to meet societal expectations often results in their marginalization and seclusion. Autistic individuals' adaptive functioning has been severely impacted in the anthropocene. The term "adaptive functioning" encompasses a range of social, pragmatic, and cognitive abilities employed by humans in daily life. The development of abnormalities in sensory processing early in life is known to have a major effect on the overall degree of adaptive functioning in people with ASD.

The existence of sensory issues is central to the autistic experience. These issues include hypersensitivity and hyposensitivity, sensory overload, and multichannel receptivity and processing issues. Overwhelming sensory input is one of the main concerns for autistic individuals navigating the anthropocene. They may find it increasingly challenging to live in this noisy, visually stimulating world due to the rapid strides in technology and urbanization. Experiencing sensory overload can happen due to continual noise from construction, transportation, and other human activities, which can severely hinder their ability to concentrate on an activity or perform daily tasks. Electronic gadget screens and bright lights can also be distracting, and increased screen time may lead to the worsening of sensory problems.

Moreover, there is pressure to live up to social norms and expectations, which is another issue that autistic people in the Anthropocene encounter. As a result, they may experience increased prejudice and further marginalization. Anthropocene society is fast-paced and competitive, which can make it difficult for them to stay caught up and integrate into society.

This may cause insurmountable levels of anxiety, low self-esteem, and feelings of loneliness in autistic individuals.

Another ethical concern that arises in the anthropocene is the effect of deteriorating environmental conditions on the health and well-being of people with autism. For instance, sensory overload brought about by noise and air pollution might result in increased instances of anxiety and behavioral problems. This may have an impact on their ability to access the natural environment and enjoy the natural world. A healthy interaction with the natural environment is crucial to the holistic development and well-being of people with autism.

Challenges for autism inclusion in the anthropocene

1. The direct impact of environmental toxins on autistic people

Autism Spectrum Disorder has been strongly associated with exposure to specific environmental pollutants, which have the potential to affect autistic people in a number of ways. People with ASD are extremely sensitive to environmental stimuli. Chemicals, perfumes, smog, and toxin exposure can exacerbate their symptoms and cause behavioral problems, sensory overload, and several other problems. Their functioning may become chaotic, thereby impacting their quality of life. According to certain studies, people with ASD are more vulnerable to the negative effects of chemicals in their environment due to specific genetic 'predisposed' abnormalities. This predisposition guides the intricate relationship between environmental factors and genetics and accounts for the progression of neurodevelopmental disorders like ASD. Pregnancy-related accidental or prolonged exposure to chemicals has been found to negatively interfere with brain development. For example, according to some research, pregnant women exposed to high concentrations of polychlorinated biphenyls, or

PCBs, were found to be far more likely to give birth to a child diagnosed with autism spectrum disorder. Ocean pollution accounts for a sizable portion of worldwide pollution. Methylmercury and PCBs are recognized as the most common ocean contaminants that adversely affect not only human health but also the health of other flora and fauna. Seafood can expose unborn children to these toxins during the pregnancy stage itself. As a consequence, children may be born with lower IQ, and an increased susceptibility towards autism, ADHD, and learning disabilities. Even in adults, methylmercury can cause increased risk of dementia and cardiovascular disease.

Currently, glyphosate is the most widely used herbicide in the Americas. Globally too, glyphosate has overtaken the agricultural sector, especially during the course of the past ten years. With the rising glyphosate contamination levels across the globe, there is a significant convergence of nations with low or declining birth rates and growing obesity issues. Surely enough, this gradual process of poisoning has long-term consequences and not immediately noticeable. Likewise, mercury, lead, and organophosphate pesticides are among the other environmental pollutants that have been intricately connected to inflammation and alterations in brain chemistry. Exposure to chemicals upsets the delicate balance of the gut microbiome. ASD symptoms that manifest in autistic individuals are found to be enrooted in this imbalance of the intestinal microbes.

Epigenetics lends credence to the idea that environmental contaminants have a profound effect on babies born in the aftermath of wars. For example, when 'Agent Orange' was being widely deployed in the Vietnam War, South Vietnam experienced significant dioxin contamination. Even after the lapse of several decades, the concentration of dioxins in the environment and in people living in the sprayed areas is still found to be very high. It was seen that pregnant women who lived close to dioxin-contaminated areas had three to four-time

higher levels of specific PCDD (polychlorinated dibenzodioxins) and PCDFs (polychlorinated dibenzofurans) in their breast milk than pregnant women who lived in uncontaminated areas. A number of past research works have deeply investigated and pointed to the potential link between neurodevelopmental abnormalities (including ASD) in the affected Vietnamese community and pregnancy-related dioxin exposure.

2. The Complexity of the Environment in Anthropocene for Autistic People

The term "environment" includes ecological, social, cultural, and physical elements that have a profound impact on a person's overall growth and well-being. 'Anthropocene' is regarded as the human-dominated epoch in which human activities have most notably exerted a substantial impact on planetary processes and ecosystems. Due to pollution, species extinction, unparalleled deforestation, habitat loss, and sweeping climatic changes, the anthropocene age has brought about hitherto unmatched levels of environmental complexity, incomparable to any point of time in the history of mankind. The twenty-first century has already witnessed such turbulent times since its onset like the September 11, 2001, terrorist attack. Closely following track were shocking instances like the 2007-08 global financial crises, the 2011 Arab Spring, and lately the COVID-19 pandemic, which shook the very roots of societies around the globe. And in the light of all these developments, globally, mental disorders continue to be the primary cause of disability.

Phases of massive industrialization followed by incessant urbanization have been also been linked to a higher incidence of autism and other mental complexities. This association has been found to be verifiable in a number of geographically and ethnically varied areas, including the US, Japan, and Denmark. Researchers in the past have also been focusing on ethnic predispositions for ASD and exploring

the prevalence of autism and mental disorders in different ethnicities around the world. But to date, there is no evidence linking an increased risk of autism to a particular ethnicity. It is becoming evident that urbanization is the real culprit and is directly associated with an increased risk of autism.

3. Inclusive Education: Challenges in the Anthropocene

So far, past researches focused on various kinds of training like occupational therapy, speech therapy, applied behavior analysis, sensory integration therapies, etc., to name a few. There are still several ongoing research activities in this direction. Noise sensitivity is frequently associated with autism, although it can happen to non-autistic people as well. A 2021 research review has revealed that 50-70% of autistic individuals had experienced sound-hypersensitivity at some or other points in their lives. This can upset and interfere with their daily activities, like driving to work in the middle of honking vehicles or sitting in a boisterous classroom. Sensory integration strategies developed so far have largely failed to address such issues. Therefore, the surroundings in which autistic people dwell and indulge in learning must be taken into serious consideration.

With incessantly carried-out urbanization processes, cities and towns are experiencing a sharp rise in population as well as urban congested areas. Moreover, there is an upsurge in noise pollution and the usage of technology. Displays, sirens, and other gadgets are a source of continual sensory stimulus. Navigating daily life has become increasingly difficult for those diagnosed with ASD and living with neurodevelopmental problems. They find themselves frequently battling with sensory issues. Their anxiety and tension levels may rise as a result of sensory overload. They may also face difficulties sorting through the deluge of information. Learning new abilities for coping-up might further become unfeasible

due to the swelling complexity of their surroundings.

4. Dearth of Proper Media Representation of the Autistic Experience

Disparaging stereotypes are reinforced when autistic people are depicted in the media either as heroic figures with superhuman skills or as helpless characters. This is an oversimplification of the experience of autism. Since autism spectrum disorders are complicated and varied, no two people with autism are found to be alike. However, autistic people are frequently portrayed in the media as one-dimensional individuals with clichéd characteristics such as the inability to convey emotions or possessing genius-level brilliance. Rather than emphasizing the positive traits and individual qualities of autistic people, the media frequently concentrates on the challenges and limits of autism. This reinforces the idea that autism is only a bad thing. This further marginalizes them and curtails their freedom of expression. It also fosters the myth that people with autism are liabilities to society rather than valuable contributors with unique abilities.

Numerous such films have been featured for the general public since the late 1960s and have portrayed fictitious characters as having symptoms and traits of autism. Between 2010 and 2023, newspapers, movies, and television shows have been the source material for the majority of research investigations in the direction of mass media studies. But social media has accounted for the least amount of research. It was found that different media types have different levels of stigmatization for the autistic experience. Newspapers, TV shows, and movies have higher levels of stigma than books and social media. Stigmatization frequently entails exaggerating the symptoms, like savantism, and thereby painting autism in a negative light. The mass media has often handled their condition in the most ridiculous and inappropriate ways imaginable. Be it Sheldon from *The Big Bang Theory*, Sam from

Atypical, or Shaun from *The Good Doctor*, the representations have been revealed to be highly eccentric and inconsistent with the autistic experience. Through these exaggerations in portrayal, non-autistic people have been time-again made to believe that autistic people always behave in an annoying and self-absorbed way. It lowers the self-esteem of autistic individuals and deprives them of their autonomy. The media often tends to communicate that having autism is all struggle and misery. This in turn promotes the idea that autistic people are objects deserving of condescending sympathy rather than human beings deserving of respect. It minimizes the unique human qualities of individuals with autism spectrum disorders and also reduces them to their experiences.

Autism and environment: the deeper connection

'Autistic Environmentalists' are becoming more and more popular nowadays. In the past few years, there have been quite an encouraging number of autistic environmentalists taking centre-stage on global forums themed on climate change. Greta Thunberg, for instance, is one of the most well-known of them, along with Chris Packham, Temple Grandin, Dara McAnulty, and more. According to Thunberg, their autism experience serves as the psychological "superpower" and "gift" that drives their fight against climate change.

Some recent studies have also hypothesized that pro-environmental attitudes, and features associated with autism may positively correlate for a number of reasons. For example, the main characteristics of autism are intolerance for both short- and long-term uncertainty, as well as resistance to change. As such, people who exhibit a high degree of autism may be really concerned about the future of the planet in light of the sweeping changes in climate. According to some studies, autistic individuals have higher levels of weather

sensitivity and pay greater attention to detail. This perhaps renders them better environmentalists and planetary thinkers. Furthermore, many autistic people have self-reported their specific interests in non-human creatures and the natural world. They tend to be drawn towards communicating with non-human animals more than humans or inanimate objects. These interests are purported to be inherently correlated with their holistic well-being.

Discussion

In order to create more inclusive and productive learning environments in schools and colleges, architects and designers need to gain a deeper understanding of the specialized needs of students with ASD. It appears that there is a big knowledge gap regarding the special needs of such students in academic field. To address this gap, there can be a few strategies for addressing autistic sensory issues like noise concerns. This means creating support systems for the promotion of a welcoming environment. A few ideas may include acoustic flooring, carpeting, and draperies like hanging curtains to attenuate echoing and reverberations; making use of light fixtures that avoid humming noises; and curbing the entry of noises into classrooms through windows or ventilation. One solution is using sound attenuation mechanisms in the ventilation ducts. Coping methods for people with autism can help by making their environment more comfortable. This is urgently needed since the anthropocene is a time of rapid change, and for anyone with autism symptoms, catching up can truly be a Sisyphean endeavor.

We also need to see more positive content created by and for autistic individuals if we hope to see an enhanced portrayal of autistic people. People with autism should be able to find good, self-affirming stories on television, in movies, and in other media. We can assist autistic persons feel more integrated in society if we succeed in improving autism representation. The importance of analyzing autism media

portrayals is evinced by the scoping reviews posed by researchers and analysts. These offer insightful information on how various media outlets might affect public perceptions and attitudes around autism. These reviews can further emphasize how important it is to include people with autism in public conversations about media representation. It is interesting to observe that recently, an increasing number of autistic people are using social media to combat the stigma associated with autism. On multiple YouTube videos, individuals claiming to be autistic discuss prejudice in society and how they believe their peers who are not autistic have inaccurate perceptions of them. Their conversations are fascinating because they are revealing new and insightful facets of themselves and starting to assume responsibility for explaining their condition.

There is still a great dearth of advanced research work in the area of inclusiveness and the integration of autistic individuals into mainstream society. The research work so far seems to run unidirectional, while the need of the hour is to get hold of the full picture through varied perspectives. Though there is still a growing body of research on special dietary regimes for autistic people and other physiological effects, there is a real dearth of research on ethical dimensions concerning autism. Research could be carried out in a number of ways, such as cross-disciplinary studies to examine the relationship between ethics, environmental science, and autism inclusion; longitudinal studies to monitor the changing needs and challenges of autistic people in the anthropocene; and cooperative projects to co-create ethical solutions with the help of advocacy organizations, special educators, autistic people, and their parents or guardians.

As a result, this study highlights the dire need for an increased inclusive approach to autism in light of environmental changes and clarifies the ethical issues that autistic people confront in the anthropocene. The results have

consequences for advocacy, policy, and the creation of moral standards in order to assist people with autism in the anthropocene.

Conclusion

In the anthropocene, social connection can be extremely difficult for those on the autism spectrum. The core mechanics of communication are undergoing a sea change with the proliferation of social media and digital communication, making it more difficult for those with autism to cope. Adverse prenatal conditions and exposure to environmental toxins may continue to interfere with normal brain development and exacerbate neurodevelopmental disorders like autism, schizophrenia, and depression. A growing body of research indicates that epigenetic mechanisms underlie these short- and long-term effects of fetal exposures on brain development and function. There is also a need for continuous study in the area of the toxicological-genetic interplay. Lastly, the media is a powerful force in molding public attitudes and views, and a dearth of proper and diverse representation in the media may result in a lack of empathy and acceptance of people with autism in communities, workplaces, schools, and other places. Therefore, it becomes imperative that the media offer a veritable forum for people with autism to express their personal narratives and experiences. To create a more realistic and genuine portrayal, media businesses must also extend their representation and involve more autistic people in their production process.

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