



THE ADAPTIVE UNCONSCIOUS AND IMPLICIT BIAS: AN INSIGHT INTO THEIR ROLES AND INFLUENCE ON HUMAN BEHAVIOUR AND DECISION-MAKING ESPECIALLY IN THE WAKE OF COVID-19 PANDEMIC

Mr. Rishabh Mishra* Mr. Satvik Dev**

*PGT Psychology, G.D. Goenka Public School, Lucknow Uttar Pradesh .

**Student (Dept. Humanities) Delhi Public School, Jankipuram, Lucknow Uttar Pradesh.

Abstract

This paper aims to conjoin the binary between the Adaptive Unconscious and the implicit biases we harbour and also to emphasize the fundamental role of these unconscious mechanisms in our behaviour we exhibit especially in the wake of some natural disaster specifically the Covid-19 pandemic in this case by drawing important portions of researches conducted and studies performed. In the first part of this paper, we have in particular described the essential features of the unconscious processes as have been pointed out by recent empirical studies and how are they different from each other as well as the conscious process of analytical decision making to facilitate a clear understanding of the phenomena. In the second part we have focused on how these processes operate in the existential realm of the human mind without any conscious thought or knowledge. Ultimately in the third part, we have drawn out convincing conclusions backed by relevant data and appropriate findings to realise and comprehend their impact on Human behaviour and Decision-making during a Pandemic especially assigning more focus on the Healthcare Sector.

Methods- Several peer reviewed articles, research papers, videos of certified courses and authorised books were identified and assessed based on precise content and quality criteria. The references of eligible papers were further examined to identify further eligible studies in order to support this piece of literature.

Keywords- Adaptive Unconscious, Implicit bias, Discriminatory Behaviour, Healthcare Disparities, Covid-19 Pandemic.

Introduction

The existence and role of the unconscious component of our mind has been a subject of interest for many decades and albeit his hypotheses on unconscious processes and their importance for human functioning certainly did revolutionize the perspectives of many budding psychologists towards this comparatively less explored realm, Freud's theories at the same time greatly hampered the mass proliferation and acceptance of more advanced and favourable ideas which in the contemporary time, seek to explain the systematic involvement of our unconscious mechanism in our behaviours in a lot more acceptable and satisfying manner. According to Freud's models (both the topographical and the structural) the unconscious which he earlier identified as a psychological representation of in born drives, is primitive, irrational and encompasses the repressed psychological content. However, over time, this point of view has changed consistently as the conceptualization of unconscious functioning in psychology has taken different paths and connotations according to the theoretical paradigm supported by each researcher. While several schools of thought since their inception in the latter half of the 20th Century like Behaviourism have minimized or entirely denied the existence of any unconscious processes, much of the contemporary psychology across various domains such as attention and encoding, memory, implicit learning, emotional appraisal, attitudes, persuasion, social perception and



judgement has come to realize and accept that a great deal of human mental functioning happens out of the direct conscious control and hence the non-conscious determinants are actually important to understand the functioning of the Human mind.

Of these several components, the system of the adaptive unconscious which draws its importance from the modern perspective of Freud's view being far too limited acts as a necessary and extensive part of our highly efficient minds today. Unlike the Freudian explanation of the Unconscious which tends to describe it as a vast storehouse of primitive urges and infantile thoughts of psychic pain i.e., as a single entity, the adaptive unconscious has evolved over time and exists as a collection of modules which significantly operate outside of our consciousness. For example, we have a non-conscious language processor that enables us to learn and use language with ease, but this mental module is relatively independent of our ability to recognise faces quickly and efficiently. This is not in any sense to deny that some thoughts are quite threatening and that people are sometimes motivated to avoid knowing them, repression is not however the most important reason why people do not have conscious access to thoughts, feelings or motives. The modern view suggests that this distinction is for the essential reason of increasing efficiency i.e., the mind as a well-designed system attempts to accomplish a great deal in parallel, by analysing and thinking about the world outside of our awareness while consciously thinking about something else. There is an array of instances to affirm this from daily lives-

1. The feature of divided attention where for example a person while driving and making an extensive use of most of his primary senses can process a conversation with his friend at the same time without distraction or fatigue.
2. The feature of automaticity of thought which clearly suggests that over centuries we have become so habitual to thinking such that it occurs outside of awareness with no conscious attention.
3. The feature of Implicit Learning using which we are able to remember a great deal of information implicitly without any effort or knowledge at all. It has also been strikingly demonstrated by Pawel Lewicki, Thomas Hill and Elizabeth Bizot.
4. The Adaptive Unconscious hence plays an important role in the non-conscious interpretation of available information, unconscious evaluation of feeling and emotions and the automatic setting of goal in specific situations when efficiency and speed is favourably required that a well thought of conscious choice.

Besides providing such distinctions based on everyday happenings or assumptions as some would argue which are unquestionably not easily measurable, researchers have also provided empirically supported evidences drawn from studies conducted in laboratories and formal settings which clearly provide us an insight into the functioning of the adaptive unconscious. Some of the significant ones are listed as follows:

- Automatic Information Processing and Social Perception: The Influence of trait Information Presented Outside of Conscious Awareness on Impression Formation (1982) .

The researchers J. Bargh and P. Pietromonaco conducted a study in which subjects were subliminally flash charged words such as hostile, insult, unkind, and the way the subliminal priming worked was that these words were flashed for only a couple 100 milliseconds. Then they were covered on the screen with series of letter X such that the subjects could not be consciously aware of the word they saw(Masking). Later the subjects were given vignettes to which they tended to respond in a way that seemed to be influenced by the particular words they were primed by. Hence,

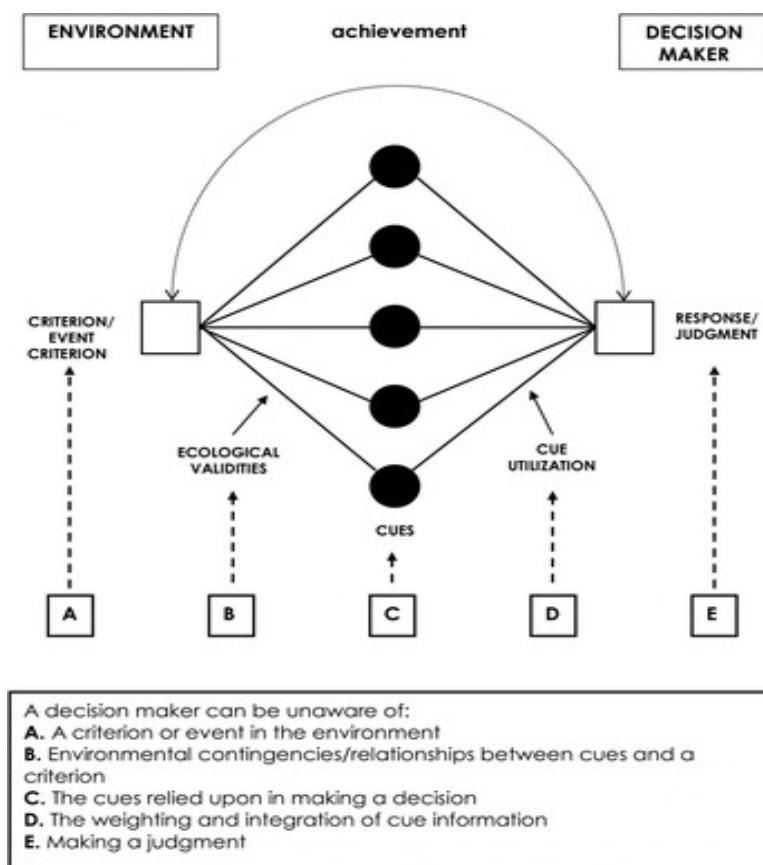


the accessibility of a category in memory was shown to influence the selection and interpretation of social information. It was concluded that social stimuli of which people are not consciously aware can influence conscious judgements. It also highlighted at the same time, the function of the adaptive unconscious in the interpretation of information.

- Emotion, Decision Making and the Orbitofrontal Cortex (2000)

This comprises of a famous experiment conducted by A. Bechara, Hanna Freud and Antonio R. Damasio in a gambling game. It proposed that individuals not only often make judgements by unconsciously assessing the severity of outcomes and the probability of occurrence but also primarily in terms of their emotional quality. Lesions of the VM prefrontal cortex which interfere with the normal processing of somatic or emotional signals do not actually affect cognitive functions. Yet people with such damage develop pathological impairments in the decision-making process as it showed seriously tended to compromise the efficiency of everyday-life decisions.

Therefore, these carefully controlled experiments have inarguably put forth the complex nature in which our mind non-consciously works and directs our decision making without us being even slightly aware of the true reason behind a selected choice of ourselves. A lens model framework has also been suggested which illustrates the possible loci of unconscious influences on decision making. It identifies Five Points labelled A-E at which an unconscious influence might be exerted on decisions.



While these astute clinical observations definitely serve as a foundation for all our present-day knowledge of this realm, they at the same time connect us to another idea comprising of the implications of the non-conscious processing for prejudice.

One of the most interesting properties of the adaptive unconscious is that it uses stereotypes to categorize and evaluate other people by attributing particular qualities to a member of a certain social group. This results in the formulation of unconscious mental prejudices which we can harbour without necessarily being blameworthy or at fault. However, this can no doubt make us biased towards them. This phenomenon is popularly known as Implicit Bias or Unconscious prejudice which as increasingly researchers have found out is fundamentally stronger and sadly more treacherous than the conscious ones because of the simple

fact that we cannot knowingly guard against them. Some key characteristics of this are as follows-



- It gets covertly influenced by a person's experiences
- It is based on learned associations between qualities and social categories
- It is not conscious and hence cannot be voluntarily removed by explicit beliefs.
- It has a major impact on a person's behaviour towards members of a particular group or community.

Due to this, a person may develop habitual tendencies of thought that are non-conscious and discriminatory at the same time which can drive a person to unknowingly elicit a behaviour that may turn out to be racist or sexist in such progressive times. A detailed experiment conducted by researchers further asserts this fact.

The researchers did an experiment in which they had African-American, White, as well as Hispanic couples look for a house for which they contacted a realtor for help with that. It was made sure that everything about the couple regarding their income, credit history, ability to pay and so forth. So overall the only real difference between them was of their racial characteristics. Finally, when the clients approached the realtor, results showed that realtor typically and characteristically tended to steer the white applicants towards higher end generally whiter communities and the Afro-American and Hispanic applicants towards less high end slightly more ghettoized and racially diverse communities instead. This actually happened when not a single couple had expressed any preference for a particular community or neighbourhood. An even more surprising or more accurately disturbing was the fact that when the realtor was specifically enquired about his evident biased behaviour eliciting racial profiling, they strenuously disapproved of it and clearly refused to take any responsibility for those actions. This brought the researchers to the conclusion that the realtor in fact sheltered certain biases within himself which he was totally unaware of and could not actually accept overtly or realise by introspection simply because such details lay out of the conscious reach of his mind.

Hence, with a range of such plausible studies, the researchers were ultimately able to propound with full conviction that while the adaptive unconscious which architecturally fosters certain processes to boost correct judgements, accurate evaluation, impression formation and goal pursuing, it does not always result in appropriate or correct decisions by the individual. In fact, the adaptive unconscious in reality gets affected by numerous things like emotional reaction, estimations, associations and experiences and is thus inclined to stereotyping and schema which can lead to detrimental inaccuracy in decision making.

In Case of Pandemic

A principal function of the Adaptive Unconscious as we already have discussed in the previous sections is to enable the Human mind to transform information and think in rational ways that enhance an organism's survival in a given situation. This type of thinking can be summed up as a quick sizing up of the world where the Human mind interprets information and decides how to act very quickly and outside the conscious view such that it ensures us the maximum benefit without negotiating on our security. However, just like any other mechanism underlying our conscious activities, the Adaptive Unconscious too while making decisions may fall prey to faulty associations and prejudiced judgments resulting in inconsistencies in one's behavior that are best explained through Implicit Biases.

Therefore, the question that finally confronts is that why should we purposefully understand and more importantly address this phenomenon when in practical terms it operates entirely out of our consciousness such that we cannot under any circumstance exert control over it?



Well, the answer to this is literally quite simple. As checking a blind spot while driving allows the driver to see things outside his/her peripheral vision and helps to prevent collisions. Similarly, learning about and addressing implicit bias allows one to see biases they might possess that are not explicit, or realized, and help to prevent blatant discrimination while promoting equality in the society at the same time.

What further prompts us to talk about and elaborate these unconscious processes of judgement and prejudices lies in the fact that it is chiefly during the times of natural hazards, in this case particularly the Covid-19 Pandemic, when the mass application of such concepts is actually conspicuous.

While intuitive thought as encouraged by the Adaptive unconscious inarguably allows one to overcome certain cognitive biases or may help deal with information overload to some extent, these strengths actually prove supportive in a handful of situations than you may imagine. Instead, this thinking at the same time is highly susceptible to factors such as stereotyping which while being adaptive to our survival in evolutionary terms (as they enable us to extrapolate information from one encounter and apply it to a broader range of situations) can prove harmful in modern day decision making.

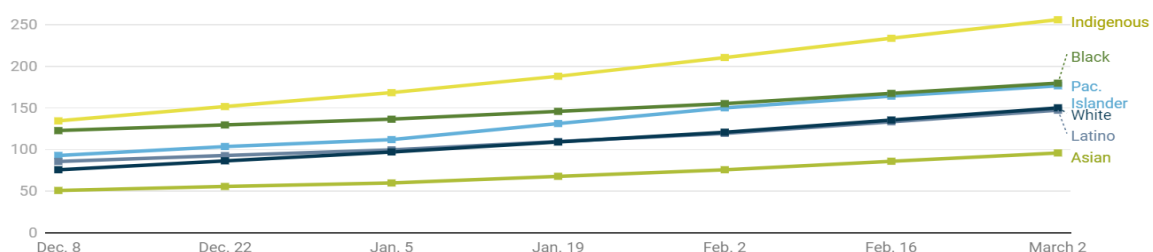
The most widely noticeable impact of it in recent times is clearly the discriminatory and xenophobic behaviour towards foreign refugees and members of the Asian community all over. While it no doubt can also be attributed to the increasing hate speech and explicit accusations being spearheaded over them by certain leaders, but as the saying goes there is no smoke without fire, the irrefutable change in the perception of people towards members of Black and Asian Community has actually stemmed from the implicit prejudiced image that partially manifests itself in the conscious sphere by holding them accountable for the onslaught of the disease which during the entire course of the proliferation has further been aggravated by exposure to certain sets of assumed 'truths' i.e. by social conditioning. The repeated association of the word 'Virus' with the word 'Foreign' and 'China' has undeniably painted a negative caricature of such people who while being identified as potential threats have been subjected to a more pronounced discriminatory behaviour at workplace and at having access to basic public facilities predominantly in healthcare centres.

Healthcare Disparities

According to a project by APM Research Lab which documented the race and ethnicity for 94% of the cumulative deaths in the United States till January 2021, 1 in 595 Indigenous Americans, 1 in 735 Black Americans and 1 in 1,000 Latino Americans had died from COVID-19, compared with 1 in 1,030 white Americans. Further stats reflect the following situation-

Indigenous, Black & Pacific Islander Americans have experienced the highest death tolls from COVID-19

Cumulative actual (crude) COVID-19 mortality rates per 100,000, by race and ethnicity, Dec. 8, 2020-March 2, 2021



Population estimates from the U.S. Census Bureau, latest American Community Survey. Five-year estimates have been used for Indigenous and Pacific Islander rates, to improve data reliability.

Source: [APM Research Lab](#) • [Get the data](#) • Created with [Datawrapper](#)



Two landmark reports by the Institute of Medicine, Crossing the Quality Chasm (2001) and Unequal Treatment (2002), have highlighted the pervasive racial and ethnic disparities in the US healthcare system. The literature shows that implicit bias based on race, gender, sexual orientation, weight, insurance and other group identification can affect providers':

- Quality of clinical encounter with the person
- Diagnostic decision making in the particular case
- Symptom management in the patient
- Treatment recommendations
- Referrals to specialty care for further diagnosis etc
- Interpersonal behaviours, such as communication, empathy and trust etc.

A widely used measure of the implicit bias in the present is Implicit Association Test (developed by A G Greenwald, D E McGhee, J L Schwartz in 1998) which along with Priming tests is applied on subjects to detect subconscious associations between mental representations of objects in memory. On the basis of the results obtained after administering the test, a number of studies convincingly reveal to us the disparities or inequities in the nature of healthcare facilities being made available to people. For example-

Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients (2007): In this study, physicians were presented a vignette of a patient, randomly assigned as Black or white, with chest pain and an electrocardiogram indicating a heart attack. As participants' IAT-measured, anti-Black implicit bias increased, it was found that the likelihood of Black patients being recommended for a therapy for coronary artery disease decreased, while the likelihood of that therapy being recommended for white patients increased.

Conclusion

Therefore, after carefully covering and examining the entire realm of this unconscious side of our active processing brains, it would be agreed upon by many that while such operations definitely confer upon us a survival advantage to size up our environment, disambiguate them, interpret them, and initiate behaviour quickly and non-consciously, they do not always facilitate the right and accurate choice or judgement. Often in its haste to produce a substantial result or to reach a balanced state, an organism under influence of the Adaptive Unconscious may not be able to actually infer the best or the most suitable interpretation of a situation that may eventually lead to an entirely undesirable outcome. As in the case of the Implicit Bias which we have extensively talked about in the later part of the paper particularly illuminating its impact in the healthcare sector, readers would concur in majority that while structural circumstances such as housing inequality, access to healthcare, limited employment opportunities and poverty may explain disproportionately higher cases in some certain communities, it is often prejudices among general people who view them as potential disease carriers exacerbated by some implicit biases unconsciously present in workers which actually make them more vulnerable to succumb to the virus. Hence the fact is that while the Virus does not discriminate, we as human beings sure do and this bias in our behaviour often manifests itself unconsciously without our knowledge. So, the objective for all should be personally aware of the existence of this unconscious bias because that itself can help to limit its impact on influencing decisions and behaviour, or would it? Our review was intended to capture questions and studies that identify the functioning of the Adaptive Unconscious and Implicit Biases that are specific to clinical contexts and thus of particular interest to clinicians.



References

1. Leonardi J, Gazzillo F, Dazzi N (2021) The adaptive unconscious in psychoanalysis, International Forum of Psychoanalysis, DOI: 10.1080/0803706X.2021.1893382
2. Wilson T. D. (2004) Strangers to Ourselves: Discovering the Adaptive Unconscious, Harvard University Press.
3. Bargh, J.A., & Pietromonaco, P. (1982). Automatic information processing and social perception: The influence of trait information presented outside of conscious awareness on impression formation. *Journal of Personality and Social Psychology*, 43(3), 437–449.
4. Bechara A, Damasio H, Damasio AR. Emotion, decision making and the orbit frontal cortex. *Cereb Cortex*. 2000 Mar;10(3):295-307. doi: 10.1093/cercor/10.3.295. PMID: 10731224.
5. Wilson TD, Dunn EW. Self-knowledge: its limits, value, and potential for improvement. *Annu Rev Psychol*. 2004;55:493-518. doi: 10.1146/annurev.psych.55.090902.141954. PMID: 14744224.
6. Cunningham GB, Wigfall LT (2020, December 8). Racism at the county level associated with increased COVID-19 cases and deaths. <https://theconversation.com/racism-at-the-county-level-associated-with-increased-covid-19-cases-and-deaths-150077>
7. Abe J. "Implicit Bias in a Pandemic: A Case of Virus Bias" Loyola Marymount University. <https://www.lmu.edu/together/news/implicit-bias-in-a-pandemic-a-case-of-virus-bias>
8. Helmstetter C, Clary B, Liao K, Sypher K, Lyons E, Kouame A (2021, March 5). THE COLOR OF CORONAVIRUS: COVID-19 DEATHS BY RACE AND ETHNICITY IN THE U.S. <https://www.apmresearchlab.org/covid/deaths-by-race>
9. Williams Z (2021, January 14). Racial Bias in Medicine: A Subconscious Barrier to COVID-19 Equity. <https://www.usnews.com/news/health-news/articles/2021-01-14/racial-bias-in-medicine-a-barrier-to-covid-health-equity>
10. Green, A. R., Carney, D. R., Pallin, D. J., Ngo, L. H., Raymond, K. L., Iezzoni, L. I., & Banaji, M. R. (2007). Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. *Journal of general internal medicine*, 22(9), 1231–1238. <https://doi.org/10.1007/s11606-007-0258-5>
11. Sinicki A (2020, January 25). The 'Adaptive Unconscious' – Is Your First Decision Your Best One? <https://www.healthguidance.org/entry/16989/1/the-adaptive-unconscious-is-your-first-decision-your-best-one.html>
12. Institute of Medicine (US) Committee on Quality of Health Care in America. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington (DC): National Academies Press (US); 2001. PMID: 25057539.
13. Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Smedley BD, Stith AY, Nelson AR, editors. Washington (DC): National Academies Press (US); 2003. PMID: 25032386.
14. Greenwald AG, McGhee DE, Schwartz JL. Measuring individual differences in implicit cognition: the implicit association test. *J Pers Soc Psychol*. 1998 Jun;74(6):1464-80. doi: 10.1037//0022-3514.74.6.1464. PMID: 9654756.
15. FitzGerald C, Hurst S. Implicit bias in healthcare professionals: a systematic review. *BMC Med Ethics*. 2017 Mar 1;18(1):19. doi: 10.1186/s12910-017-0179-8. PMID: 28249596; PMCID: PMC5333436.
16. Newell BR, Shanks DR. Unconscious influences on decision making: a critical review. *Behav Brain Sci*. 2014 Feb;37(1):1-19. doi: 10.1017/S0140525X12003214. Epub 2014 Jan 24. PMID: 24461214.