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Social context of the brain and law: Is consciousness social?

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Abstract

This article discusses how we become conscious and aware and what is the role of the brain when people are not conscious of their actions. Consciousness in the wider philosophical framework dealt with an asocial and individual framework. The understanding of consciousness also requires one's critical understanding of social context and group processes. The current race to objectify the brain is new phrenology unless viewed critically through the decolonizing lens. Law has a greater role to demystify itself from neuroscience and keep a balance considering the precedents. This article also ventures into how consciousness is constructed in a social arena and the way neuroscience can be a helpful domain in making the law reformative.

Keyword: brain, consciousness, decolonization, meaning-making, social context.

Franz Fanon indicated towards the colonization of mind in his prominent account, ‘the wretched of the earth’. There he showed how in the history of humanity, colonization played enough part in degrading the agency of the indigenous social group. From the colonial point of view, only Eurocentric approach is human rest is needed a taming. The idea was to occupy, reject and expand. This also tamed the ideology of Eugenics that lurks in people mind, even within the past colonized. Mind is dominantly analysed as a singular entity untying it from the social context. In some cultural contexts the shared understanding of mind is a conscious activity situated in a context. The mind and consciousness are also undeniably a brain activation, especially, in the domain of sciences. The movement to measure these constructs have created debates in different directions. However, we share some common understanding of any object in the external world. Our brain gets activated with the perception of those objects. Consequently, we acquire a qualitatively shared language through which associations of anything like the mind and consciousness can be understood. Geertz (1973) showed how the mind is our activity or cultural practice, which shifts its meaning in varieties of spaces, such as families, schools, courtrooms, and football grounds. Vygotsky (1978) clarified how a mind is a social object and its meaning becomes clear with different activities one engages with the various social objects along with the capable adults. Further, Gergen et al (2019) noticed that cultural spaces are not stagnant but move with time and so do the mind and consciousness. The long debate about the structure and process of consciousness was never settled. The search for the structure of consciousness by Wilhelm Wundt through introspection in different cultures only limited the reality of culture

which moves along with the person's consciousness. Franz Brentano[1] who was himself an introspectionist, described consciousness from the first-person perspective, asserted that consciousness is a unity expressed in acts and processes. He contrasted physical reductionism and assumed that the content of consciousness was a meaningless exercise and destroys the essential unity of consciousness. He noted that 'elements of consciousness, if exists, doesn't have psychological meaning' and defined psychology as a science of psychic phenomenon, expressed as acts and processes. He also placed psychology as the study of intentionality expressed in his 'immanence hypothesis'. However, his approach was a scientific and empirical way of doing philosophy and not dogmatic, defining his position as more phenomenological and later becoming the element of criticism by logical positivists and behaviourists. His approach was critically away from the theological position where something stronger and infallible exists outside the person, acting non linearly away from human understanding[2]. This infallibility of strength was also disguised as the infallibility of the church as a unique and permanent philosophy. Eric Fromm (1962) indicated how "Marx, like Freud, believed that man's consciousness is mostly 'false consciousness. He further stated that, "man believes that his thoughts are authentic and the product of his thinking activity while they are in reality determined by the objective forces which work behind his back" (p.101). These objective forces are explained to be varied, from biological (for Freud), socioeconomic and historical (to Marx), to cultural and political (see Fromm, 1962).

Brain, consciousness, and law

The brain is a biological entity and the way it is linked to a behaviour is matter of interpretation. The interpretations depend upon the social construction of knowledge. It is discussed that objectification of the brain reduces humans into mechanistic entities without much space for the consideration of dignity which makes human agent of their action. The dependence on the neuroimaging techniques shows the picture of the brain in the form of localized structure and functions (see Mobbs et al., 2007) rather than the actual state of mind. It was reported that even the judges are driven by the common sense understanding of cause as laden in the everyday understanding, not necessarily the scientific view of the cause that has retreated into the people understanding about any action (Summers, 2018). As judges are influenced by the legal precedents and the available legal categories which very much influence their intuitive structure of the mind, the scientific understanding for them is possibly anchored to the societal worldviews of social reality. Common sense is an everyday reality for people in which we engage with the concepts and categories in a taken for granted manner, whether it is legal concepts or scientific concepts. This ownership of the technical concepts gives meaning to everyday interaction and it is always continuous. New categories or subcategories are created, distributed, and mobilized through media and gradually with the daily engagement we form some understanding of popular ways of conceptualization. However, all the social and political dynamics about science and legal categorization are mostly based on these common-sense ways of category formation. As it is understood that without engaging with the public understanding it is very difficult to engage with the public and society. Thus, the anchoring point, as developed by Moscovici (2001), is the public understanding which further gives way to new social and scientific activities. There is always the danger of the emergence of fake science but the public understanding of the scientific and legal concept not necessarily portrays fake science but the assimilation and accommodation of laboratory knowledge (see also Latour, 1979) and its dynamics in a newer order for

the continuous flow in the public discourses and communication. Fake science also seems to be a mobilized form of science that shows the intentions of the progenitors who actively propagate the cause inferred out of deceptive motive. This is different from the general understanding of scientific and legal policies where other agents and institutions are involved whose task is to disseminate to the public, belonging to different classes and experiences. Though fake science, in general, is equated with pseudoscience, there seems to be a slight difference, where the former is intentionally mobilized and the latter is the result of an unintentional and superstitious way of engaging with the phenomenon under observation. For example, Hopf et al (2018) noted that:

> *'Drivers of fake science are embedded in the current science publishing system intended to disseminate evidence knowledge in which the intersection of science advancement and reputational and financial rewards for scientists and publishers incentivize gaming and, in the extreme, creation and promotion of falsified results" (p. 1).*

At the same time, local knowledge comes into picture through active engagement with the phenomenon without much respect for the established way of doing science. For example, predicting earthquakes based on signs available in the environment rather than developing scientifically reliable methods approved by the scientific community. Local understanding of any phenomenon is also a part of public knowledge. However, these are some additional knowledge that one holds that never gets its hold, at least in the implications of the scientific policies. Moreover, when it comes to legal decision making, the latent knowledge of the judges shaped by these available systems of knowledge. In the case of judging the psychology and the brain condition of any legal agent which now seems to be an enforced activity in the time of surveillance, data capacity building, and increasing reliance on computer software, public view and the public construction of the everyday reality will be limited to the idea of imposition and driving movement to follow certain steps to feed once biodata into the system. The rest of the individual and social activity seems to be well monitored by the state and the possibility arises of incapacitating one's data into the process of use and misuse. The cause can be constructed and to the capacity of the powerful, it can be made as a fact also. Whatsoever, the common sense and the public understanding of the signs and symbols give some understanding of the social phenomenon to the decision-makers helping them to construct their logic to the advantage or disadvantage of the person in question. This reliance of judge on the public or common-sense understanding was captured as

> *"Judges have expressly disclaimed any 'philosophical 'or 'scientific' notion of causation that would preclude selection between but-for causes. Instead, judges have often stated that in deciding questions of legal causation, their aim is to emulate 'ordinary everyday life and thoughts and expressions,' 'ordinary practical affairs and the views of 'the man in the street'. Accordingly, in the context of legal causation, 'common sense' appears (at least provisionally) to signpost a judicial attempt to incorporate into legal reasoning the way in which ordinary people make causal judgments outside the law" (Summers, 2018, p. 796).*

The brain is the starting point of consciousness and when it is conscious in whatever capacity, it is observed through the person's behaviour, activities, and emotions. To be conscious is a natural correspondence between the person and the

world. Any action at the observable level is a conscious act, however, human nature to look for the cause of those actions further decides whether those actions were conscious or unconscious. Many instances from the neuroscientific evidence show the unconscious brain activities as a causal factor behind the person's actions towards which the person becomes conscious. If the brain is the starting point of consciousness, then consciousness shifts as per the brain states. It happens that many events in the brain of which one is not necessary to be conscious. One is conscious of something, is a fact, whether it is a pretence, lie, manipulation or truthfulness. Whether this kind of consciousness is a matter of stimuli registered in the brain or it is something in the brain that makes any stimuli susceptible to be noticed. The brain is a noncommittal organ like a closet which is used to keep the books or any object and take it out when needed. However, this closet does not open by itself as the brain operates by itself. One can be sure that the closet is not conscious of its being opened but the person who is opening it. This idea about the closet lacking consciousness is anchored through the operator's mind. The closet does not have a brain and thus it does not have the will to be conscious. If the brain is the starting point, then the brain is the conscious entity. Logically the brain seems to be active with the variations in the environment, both internal and external, but the brain has no proof of being conscious. If it leads to consciousness, it is important to define consciousness with the help of available objects identified in the scientific convention, to conclude that the brain is consciousness. Since the brain is not conscious but the person, the whole idea about the brain leading to consciousness is a limited one and is based on the metatheory of methodological individualism which emphasizes exploring individuals to understand society. Before we plunge into the metaphysics and neuroscientific meta-theoretical understanding of consciousness to have some say about the legal domain, we must figure out how science answers the psychological questions. In the legal domain, consciousness matters because the whole agenda of culpability is based on the actions and intentions which come under the periphery of consciousness studies. So, at the initial stage, the identification of appropriate verification criteria for understanding the authenticity of consciousness matters. However, the appropriateness of any criteria somewhere, for example in psychology, demands observable proofs and operational definition. It was observed that every disciplinary stand is based on the rigorousness and originality of the method applied to test the propositions, but it is not simply the application of appropriate methodology to understand some human variable like consciousness. There is a hierarchy of methods that any institution uses in the verification of cause. The method adopted by psychologists and sociologists to understand consciousness may be different from the philosophers or maybe psychologists are more content with methods that categorize consciousness into parts. As the legal domain relies on these categories to understand consciousness, such as intentions, the empirical method has a larger say than pragmatists and functionalists like William James[3] de-categorizing it and seeing it as a constant flow. Under the later version, the ascribed categories seem to be continuous as time passes. Accordingly, the brain has also gained new experiences and insights, so the culpability. But this kind of assumption is generally mocked and rejected in law as it does not give a reason to requestion the responsibility. Though repletion of one's behaviour becomes a priori criteria for the law to punish someone as it shows the consistency of behaviour in the situation of freely willed action. Present work revisits the notion of consciousness as mind generated imagery since the mind also needs to be operationalized and understood in a consensus. This is agreed upon that the brain discourse matters but this discourse should not shun the living experiences and collected memories under the neutralizing effect of rising neuroscience. Consciousness matters when it is well defined and measured, through the brain, non-verbal cues, or whatever language can connect to it.

The actual picture of consciousness is in the eye of a conscious person, where his/her consciousness becomes active when people encounter variations in the external environment. Flanagan (1984) in his discussion of consciousness from a neural angle, suggested that sensitivity can be categorized into experiential and informational sensitivity. So, there is a possibility that one has information about the oppression of others but does not have the authentic consciousness, as it is lived. However, Chomsky (2000) doubted the hard problem of consciousness (Chalmers, 1996) as it does not have a concrete picture and whatever picture is available cannot portray the fundamental notion about consciousness, thus, making it hard to understand.

Whatever is the logic and impression about something which is called consciousness, though undecipherable, the shared property which makes someone or a group conscious about some memory. Here the brain becomes important but neural registering of many events and suppression of its expression has somewhere become more intact and regulatory. The study of consciousness in law matters to the point it makes the uniqueness of the person more pronounced. For example, the person while committing any act of recklessness was not able to judge the ethics involved and the consequences. So, when persons acted, it was unintentional and unconsciously driven by some neurological defects. The reliability can be established through the number of observable instances. As Flanagan (1991) stated that "consciousness is essential to human nature" (p. 365), consciousness is a matter of identity, where one belongs, has relation with time and space and makes sense of others. Denying the understanding of consciousness is to deny the reality of existence and hence ignore the fact that the world exists, otherwise, all the struggle for being and becoming of humanity is myth and farce and the fundamental question of life becomes meaningless. Positioning oneself destined to the will of the permanent cause or mechanical working of the brain will not deny the fact that a person is responsible for his consciousness and in the long struggle between determinism and free will it was all consciously done the way we move into the present every time. Forgetting, memories, thinking perception and making sense of the world through language, action and mind are all consciousness and it is processed in some state of mind. Consciousness is in the will of the beholder and the practical aspect of understanding is to just investigate what consciousness is not. Here the law had constructed its domain out of conceptual confusion and what matters is our being conscious since the world is a matter of will. Alternatively, the world is simply not the world filtered through our eyes but we act in a community to fit into some framework called 'my world'. We try to build up our consciousness in the social realm which is preferred or in which we are supposed to be involved, for example, service towards one community or the social norms and exigencies. Since we have so many pictures of consciousness framed through the different theoretical models and stances, it automatically shows either that consciousness doesn't have a singularity of its stand and what consciousness is in terms of its understanding is incomplete. Searle (1999) opined that even the illusion of consciousness is consciousness but here we must be clear about the fact being different from the non-fact. The objectivity of scientific findings is in the congruence of what is shown to exist, but what if we fall into illusions and ignorance without putting any scientific knowledge about our illusions. We are generally conscious of that and it is our reality till our ignorance (avidya) becomes falsified by new evidences that can be demonstarted. So here we see the differences among all other pictures of consciousness, there are facts and non-facts, right and wrong, truth and false.

What about confirmation biases, false beliefs, and nonsense? People holding a false belief or some lie against any group

is also a consciousness technically because a person is aware and has knowledge about the contents of the mind, but holding any false information or belief is either added or counteracted with new logical propositions. Consciousness does not exist in its pure form but it has varieties of forms, though neuroscience assembles the localized function in a few higher-order brain areas responsible for consciousness about something (e.g., deception) (see Spence et al., 2004). Research that talked about the brain-consciousness interface in the case of stereotype threat and stigma (e.g., Derks, Inzlicht, & Kang, 2008), shows the importance of context and its signature on brain events. Truth corresponds to action and words, truth is also a matter of one's consciousness comprising intentions, memories, deception and lying. The consciousness of these sorts in the legal domain is filtered through the available evidence, however, the legal domain uses science to come to the rational decision based on the past legal categories (see Santosuosso & Bottalico, 2009). The instances available to us and their refutation by new instances moves the science ahead but what are the verifiable criteria through which the earlier proposition was taken as truth and later falsified by the new instances.

If truth is so clear and pure then how the new instance refutes it, but this is the context that shows that truth is embedded in its ontological understanding. Its epistemological stances shift as per the new kind of evidence and instances. Here the true value does not change as truth is there but knowledge about it makes a shift or changes. Karl Popper's (1968) falsification criteria to refute any scientific theory consisting of logically verified truth statements by new instances, but what was the guarantee that earlier held propositions by the scientific community were true, and hence any new event also does not guarantee its status as true. According to Berlin (1999), in what sense any proposition is true or not identical to the new statement of truth. He stated thus:

> *"But while this may provide a valid criterion of significance for general propositions about observation data, it throws no light on whether the sense in which they are called true is or is not identical with that in which singular propositions are so called" (p. 20).*

In the case of legal domains which look for stringent criteria to objectively understand consciousness and its correlates, usually try to avoid false alarms and misses which may lead to false positives and false negatives. Though consciousness is phenomenal, its epistemology varies in different disciplines, so which discipline is most suited for the legal domain to conclude that the person's mind is based on dominant and institutionalized metatheory that regulates the law (metatheory preferred by the legal domain to understand the truth and false, justice and injustice, stereotypical understanding of the context or weight of the corroborating evidence) and those other disciplines, like, neuroscience. Thus, true statements about consciousness pertain to human nature, as to how human phenomenology intends and this is collectively shared and affirmed. This is difficult philosophical speculation but for law and other disciplines of social sciences and sciences, if the disciplinary agents are trained in the metatheory which is a matter of long historical dealing with many cases, the drawing of boundaries becomes natural. In any case, the bipolarity and duality between right and wrong, truth and false, moral and immoral are so clearly embedded in the practices, that any form of logic beyond the stated and specified understanding becomes odd. The role of brain science and various techniques of understanding the brain gave the picture of the brain, difficult to be ignored in the legal domain (e.g., Greely & Farahany, 2019). This is like the Sun which does not hide behind the mountain but, this illusion is a matter of rotation of the earth (Searle, 1999). This scientific logic is

undisputed and has absolute evidence through machines like satellites and telescopes which are the extension of the human senses. What is beyond observation and still a mystery is less in the discursive zone of scientists. Similarly, for the legal domain what is under the reach through current scientific understanding matters and what is beyond the human capacity to understand, for example, the soul, at least in the scientific and legal domain is unnecessary and regressing.

Is there any truth statement for unconsciousness or preconsciousness? Since the formal inception of the unconscious mind, in the Freudian notion of the dominant and hidden aspect of personality, the unconscious has taken a banal and hegemonic form[4], and slowly getting its truth statement in the discourses and now in neurosciences. Of all the epistemological criticisms to measure unconsciousness, no doubt, the dominant scientific community did not reject the ontology of consciousness and hence its metaphysics. The only problem was the measurement and operationalization, and still, it stays, which never got its operational definition. Ironically, unconsciousness began to be understood better than consciousness. At least what is hidden was recognized and got its name, something at the backseat pulling the person from his consciousness, has more weight and like an undercurrent of the ocean seems to stimulate the consciousness. Whatever memory went into the unconscious is still a mystery, as wherever is the seat of unconsciousness we see through some changes when the person tacitly and unknowingly engages in any task and area of the brain becomes active. However, the seat of consciousness in the brain is probably recognized, though brain studies gradually advance our understanding of the localized functions (e.g., Gazzaniga, 2012). Sometimes these localized functions are interconnected to other parts of the brain and the sometimes same part of the brain performs many functions, for example, researchers asserted that the "function of brain regions is characterized via multidimensional diversity profiles", in other words, there is a dynamic affiliation of a particular region with the other brain network (e.g. Pessoa, 2014; see also Horwitz, 2014; Uddin, 2014), but the hard problem of consciousness is never resolved. What is all about consciousness and what is it, is a system problem and not some ontological problem in itself. Ontological speculation is about the reality of consciousness and picturizing it as it is. However, to describe consciousness as it is, we always need some channels, testing of some hypotheses, assumptions, and paradigmatic discourses. So, the ontological existence of any human-constructed entity is resolved in an epistemic way. This happens with all other constructs where the subjective experiences are resolved through some methodological interventions, not necessarily from the established scientific point of view. As dominant science will fix and objectify consciousness, the everyday scientific approach gives new avenues to understand consciousness from a shared perspective. Since, consciousness as a word may also symbolize meaningful understanding of oneself and its communication, indulging in a debate about the hard problem, beyond the language, was unexplored and manifested into the unconscious and the brain. For example, neuroscience identified and validated the seat of unconsciousness in the limbic system and basal ganglia (e.g., Schleim, 2012). Though identification of an emerging point and location still does not clarify the concept of unconsciousness. We are talking about unconsciousness, with the help of neuroscience, as something which exists and pricks us, and which is possibly the bipolar opposite of something which we call consciousness. Does this bipolarity matter? What is experienced not good enough to carry on rather than inferring about something which is not obvious? This obviousness of the brain tinkering but unknowingly affecting the person's actions and thoughts has given uneven shape to the unconscious mind but this still has not solved the question regarding the truth about the continuums of consciousness. Though it is very difficult to identify the exact

point where consciousness and unconsciousness intersect, in no way any sophisticated technique like the brain imaging may locate those points of intersection. The new technologies of brain scanning have made consciousness and unconsciousness more verbal, visible, and legitimized. The rise of trends to create sophisticated techniques to understand the world of consciousness was confined to brain studies and observation and their correlation with the intentions, thinking process, and actions. So, generally, scientists relied on the brain mechanism associated with consciousness and people's self-awareness based on how they appear and act (Sohn, 2019; Owen, 2013). Consciousness as a disciplinary concept had a confined meaning and in the case of the legal domain, its interdisciplinary connection was also limited to a few disciplines, for example, neurobiology. The holistic view of looking at the intersubjective aspects of consciousness has been gradually limited by more dominant characterization and fixed attributes. Is consciousness bound by rules? Is there a rule to understand and describe consciousness? Do we have to go into an endless debate about consciousness and falling on the shaky ground which is yet again contestable? Since the consciousness of something in the environment denotes the activities in the brain, understanding the brain and environment also requires some perspectives. What we need is a sensible verification of concepts through collective sensemaking, for example, to see the sun we look up and not into the picture, because the latter is a picture of the sun and not the sun. Similarly, looking at the sun may not give the ultimate meaning of the sun, unless it is observed close to the point, we are stopped by the fact that we cannot stand and look at the surface of the sun. We need a verification ground as a matter of collective reflex that it is useless and futile to run after the reason after a certain point in a paradigm.

For people who were historically oppressed, their consciousness of being in a collective humiliation, as some feature detectors common to all, determine their consciousness in a collective context. This inter-subjectivity corresponds to the qualitative experiences concentrated till the point it is not saturated and neither diluted. Consciousness verification beyond that point corresponds to the logical impossibility and thus absurdity. Among humans in general, how consciousness can go beyond human nature? And so, with other species in this world. We figure out consciousness through our prism of humanity and we do not need the cause always, to understand our nature as much as we can know about it. Even the shifting of one's position of awareness and knowledge or being cognizant of information that feeds our notions of awareness does not go beyond our nature. We infer the state of mind of humans or other animals which is verified in those states of affairs. For example, we know that someone is lying and we verify through the consensus. So, the knowledge about something and verifying it through the language, appearance, actions, neural pathways, what appears best is the consensual conscious detection whether it is based on the collective sense about the person's way of speaking, interpretation of brain events or behaviour in the diverse circumstances. Here one's subjectivity about self-consciousness also matters. For example, the persons from the oppressed group had to bear the prejudiced folk-psychological notion of the powerful outgroup. As we have seen that consciousness does not have a pure meaning but it can be understood through the true statement about something as consciousness about some object, person, or event. Legal decision making is done keeping in mind various aspects such as responsibility, guilty mind and guilty act, intention, and free will.

The power to understand the cultural contexts through reflexive understanding, which is one of the folk psychological notions of perspective-taking, has been objectified by corroborating it with the evidence of neural firings and brain

activation (e.g., the activity in the temporal-parietal junction in the situation of perspective-taking (Saxe & Kanwisher, 2003) and the role of posterior superior temporal sulcus in the movement inferences (Saxe et al., 2004). However, the hard problem of understanding the mechanism of consciousness, as an emergent substance out of the brain activation, does not solve the quest for real empathy towards the other's pain and dignity. Premack and Premack (2003) stated clearly that 'there is no need to teach the child empathy' (p. 233) as it is already a part of socialization and children are schooled enough in their home from their parents. They advocated the need to strengthen the child's disposition to practice empathy by allowing him to act. Though it is another matter when the same quest to know any behaviour which is not normative is discovered in the brain differences. For example, the consciousness, estimation, and prediction of the other's mental status in the given context, as Frith (2007) called the brain's mirror system, is a description of brain events when the observable actions are either imitated or felt by the observer (e.g., Gallese, 2007). Brain studies matters to the point it helps the legal domain decipher the cause of behaviour reliably across time and space. Here the behaviour anchors the cause, as we infer from the action about the cause. Cause is undefinable, nonsense or absurd in the legal domain and if the starting point to understanding others' minds or identities is a preconceived cause, it is nothing but previously held prejudice or some stereotype (See also Harris & Sen, 2019). Thus, juries or judges looking at the experts' reports may restructure it or anchor from their own preconceived or hindsight biases (see also Zeki, Goodenough & O'Hara, 2004; Zeki & Goodenough, 2006). However, the strongly verified neuroscientific evidence giving insight into the injured or different brain structures may be important for biological justice and the person's dignity. Usually, the defendant's inability to take others' perspectives, understanding others' mental status, lack of control over the movements and being empathetic may become important insights for neuroscience. Though, it needs a normalized form of public understanding of those rigorous scientific findings to affect legal decision making for rehabilitation. Thus, the story of people narrated becomes important when it is affirmed through the consensus and under the realm of necessary and sufficient conditions implied to human nature. What is mysterious or based on false beliefs and looks like a conceptual confusion or incoherent (see Bennett & Hacker, 2003), as in the case of understanding whether the defendant was conscious of his intentions, cannot give a burden of proof to the judges to change their opinion about the defendant's responsibility (see Jones, Buckholtz, Schall, & Marois, 2014), unless the exact cause is located. But fixing upon the intentions based on availed information about the mental and neurological status.

Understanding and demystification of pure consciousness

Is consciousness a linguistic confusion, as speculated by Wittgenstein? As consciousness is subjective and we apply language to understand it, language cannot reach the core of something subjective, we know more than our language expresses it (Polanyi, 1966). How does someone have more authority to talk about the pain of others? Do libertarians have more understanding of severe poverty and its social pain than conservatives? Do we need to go into this political dichotomy to feel the other's pain? Who reaches the experience of the poor more closely, do we have the authentic language for these private experiences since once the experiences and consciousness get their congruent vocabulary, the problem may be sorted out better? Some of these questions seek answers to the nature and structure of consciousness through intersubjective meaning-making. The way the brain of a person who knows that he is judged

contemplates the brain of another person who manipulates or unintentional the crime committed. This congruence of knowledge in which one person knows something about the other and the other knows something about himself/herself happens in the neurophysiological makeup of the brain of people involved in some circumstances. The relevance of the method which helps the former to know about the mind of others, as per neuroscientists, is a sort of neuro-connection whose brain structure operates as an expert in some specialized function to be deciphered by neuroscientists. But the judge infers about the other under the boundaries of inter-subjectivities of varieties of minds having some notion about this context. Consciousness thus seems intersubjective and bounded.

Consciousness, pragmatically, is also a conventional concept and figuring out its universalized essence beyond the embodied capacities and ecological engagement of different species is like burdening oneself with speculating different kinds of rocks on the moon and naming them, at the cost of relishing its beauty holistically. Consciousness and its debate fell into these confusions of obtaining single and pure aspects based on divergent categories. William James speculated about consciousness as a state which is like a stream. However, there are meta-theoretical positions on the place of the brain in the consciousness (e.g., Searle, 1991), and if the brain changes as per the societal and internal stimuli, so the consciousness (e.g., cognition, acts) also gets the shift. In other words, consciousness is not stagnant, so the identity and thus personal and social selves. Based on this analogy, how then the responsibility matters, since the person's consciousness shifts and the person goes through many changes as per different situations. The action or behaviour committed, which was conventionally wrong and morally incorrect, has the same intensity throughout, even though we know that changes in the consciousness and body are undeniably true. This shift is direct which James speculated about the existence and flow of the consciousness. As consciousness is a flow, like a stream or river, its nature cannot be disconnected. Consciousness moves in oneness which is nothing but the qualitative sense of being connected to oneself and identity. The river never disintegrates but changes its direction because if it disconnects it is no more a river. Similarly, consciousness never disintegrates but has a logical connection to the self, community, class, and value system. If the legal system gets valid scientific proof of someone being intentionally involved in the crime, that action is part of the persons' activity whose memory and knowledge connect to the time of the crime committed. This is not to say that retributive justice is the only rehabilitating solution but an understanding of the science of change of body, brain, and consciousness matters for the persons' rehabilitation rather than the fixed categorization based on past actions. We can rely on our transformative belief about consciousness, as we see in several social change attempts, to make people aware of the plight of the oppressed community and thus change their prejudiced knowledge in the direction of affirmative action and emancipation both for the oppressor and the oppressed (Freire, 1970).

The detection of consciousness can be a polarized attempt to cognitively downgrade the subjectivity of others. This form of inter-subjectivity is not democratic and shared but imposing, unsympathetic and dehumanizing. But no doubt this is also a kind of consciousness. The movement to sketch a mental and linguistic boundary for authentic and inauthentic consciousness is needed and from different group perspectives reaching the common thread is not only difficult but degrading the history of one group at the cost of others. So, how the legal domain evolves itself to these inter-subjectivities where the democratic form of consciousness is preserved or modified under the broader movement of social change. If it is for humans, then subjectivity must be preserved and respected or in other word, considered. In one sense,

detection of consciousness is not difficult but due to the long past of human interactions, the folk-psychological notion of consciousness is automatic and reflexive. Though it is also in human nature to do something like lying which is socially undesirable but normal, as differentiated from the behaviour which is highly appreciated but looks pathological (see Spence et al., 2004). The scientific understanding of the brain and its public understanding has also affected the change in language and the use of symbols. The consciousness detected through the help of changing discourses or the prevalent discourses has also changed the perspective on consciousness. The ontological purity of consciousness is still laden in the language and its essence of it is felt as a qualitative and subjective experience. The paradox between what is communicated and what is felt is not that pronounced and everything is laden in the context of communication. What is hidden, unspoken, and not seen is not unconsciousness and at the same time, the mental content which cannot find its language or the symbols to communicate is not consciousness either. As what is conscious has a meaning made in the social context through the connection of symbols and languages, which is essentially a mark of awareness in the legal domain. The picturizing of consciousness from one's eye is not possible to the others but it can only be shown through languages, actions, and emotional expression. Understanding consciousness ahistorically may be fallacious, since consciousness is a new word of philosophers but connected to historical activities. In one sense consciousness does not require definition since it seems like a spontaneous meditative act, we do not think about our consciousness but we are conscious.

The demystification of given consciousness is possible when we decolonize ourselves from the shackles of given and imposed languages and meanings (see also Markova, 2003). We not only live by the language and thought of the more sophisticated others but also bootstrap those languages with the new one (see Trilling, 1972). We extrapolate consciousness and create our world and when this happens at the collective level, a large part of our consciousness is shared, which exactly happens in the legal domain where shared views about the use of neuroscience in law become less critically taken and necessary. In the legal domain how, disciplinary languages are utilized and juxtaposed with the legal categories is a matter of interdisciplinarity and cultural context, where the meaning consciousness can either be driven by the majority view or some new language is adopted to enrich the justice system to replace the populist sense of justice with the novel one. Any concept and terminology are not adopted just based on novelty, but that novelty is upheld by groups considered to be authentic and reliable. The neuroscience language of consciousness becomes prominent because of rising interests and research based on high funding (Rose & Abi-Rached, 2013), which must integrate with the law, as neuroscience happens to be in direct connection with the mind and no other way.

Consciousness is anchored through the hierarchy of disciplines and identities, for example, if the methodology and strategy of neuroscientists are considered superior to the methods employed by sociologists, as it happens in the tussle between hard and soft science, consciousness will get its concrete definition and at the same time lose its essence which people try to achieve through the interdisciplinary reflections. As if the poet's way of understanding the memory is going to be discarded by more scientific and sturdy methods of natural science. The various brain scanning techniques add further to the aesthetic of science rather than humanities. Ironically, the brain is visible so the consciousness and the dominant discursive practices. The interdisciplinary dialogue between neuroscience and other disciplines of humanities and social sciences is needed to understand the meaning of consciousness which possibly eliminates the hierarchy of disciplines.

Brain, knowledge, and action

It is important to note that judge's assumption about the defendant based on common-sense knowledge can be debated as causing disrepute to the agenda of the judiciary (Stapleton, 2001, 2008). However, it is also possible that judges look at them as concrete assumptions and facts, instead of their unnoticeable biasedness. It is the experience of the person that makes the fact workable in the collective context. If a group of people including all the legal agents in a context comes to the final understanding about the accused as perpetrator based on the assumed validity of the outdated forensic methods, it shows one kind of link between law and science but it also creates the possibility of the populist understanding of the person stereotypes, confirmation bias and rooting of the inferred cause within the person via available methods, which may not be necessarily valid and reliable[5]. This is also a possibility that if one unconsciously is driven by the group stereotypes, the erosion of that biasedness through the valid method and the appointing of people from a different domain in the jury, may generate a good understanding of the nuances happening in the legal procedure to help in the avoidance of these biases. In any case, the public understanding of cause cannot be certainly based on scientific speculation as laboratory scientists do, but the public consciousness is a meaning derived from the broader context. In a very apt linguistic demonstration (as cited in Summers, 2018, p. 38), Hart and Honore (1985, p. 11), gave examples regarding the fire outbreak and construction of cause as"

> *"In most cases where a fire has broken out... the plain man would refuse to say that the cause of the fire was the presence of oxygen, though no fire would have occurred without it: [he] would reserve the title of cause for something of the order of a short-circuit, the dropping of a lighted cigarette, or lightning"*

Of all the decisions that happen in the court, both the precedent and the new evidence, the last is framed through the idea derived from common sense understanding and the prevailing discourses. The jury may know the scientific principles, such as fire is caused by oxygen, but that doesn't derive the person to obey the law, become a good citizen of society or fully appreciated giving justice to the plaintiff. What matters are the rules which give impetus to the existence of law. The same thing applies to the idea of brain science which may not compel the judges or juries to fix upon the cause of any action as something happened due to the over activation of the amygdala, but what matters, is how this information applies to the existing idea of justice and proving the knowledge and intention of the person in some acts, for example, criminal act.

The actions without the person's consciousness and control were rigorously scrutinised in the legal domain, where legal realism overpowered judges' intuitions (see also Haidt, 2001). Metaphysical entities like the mind emanating from dualistic thought processes have little value unless empirically substantiated by the science appreciated by the law. As it was mentioned earlier that "the intention is nothing but a way of thought, and its location is sceptical, whereas, the brain is more objectified but it is too late to know about its propensities to lead to the action as time has already passed. The logical inference discounted the brain studies much more than the intuition of the jury or judge to act in the present to review the matter. However, research showed how the intuitive belief in indeterministic free will is quite intact despite the neuroscientific evidence. Rose, Buckwater, and Nichols (2017) noted that "we suggest that the intuitive commitment to

indeterminist free will may be resilient in the face of scientific evidence against such free will." (p. 482). The confidence in the neuroprediction as shown by the brain scientist may not be as prudent when it comes to the judges' intuitions. But there is more evidence that also shows that the chances are high that judges may get influenced by the neuroimages and their decisions can be framed accordingly. In both cases still, the strength of belief in the ability and intuition of the judges are considered high.

The law going by these conceptual categories was observed to prejudice people from the oppressed categories as either consciously not choosing or acting rationally when it comes to their struggle against the status quo or demeaning their brain as inferiors during the normal and accepting situation. The paradox of the power discourses in modern times is to authorize and legitimize the power and use science to demean and devalue the oppressed in every form, as we see in the neuroscience studies but little is reported about the contextualized notions of brains belonging to the different communities. The understanding of a brain mechanism through various platforms such as neuroinformatic, brain stimulation, neuromorphic computing and other related association of neuroscience, as unifying brain models, provides correlative evidence to one's act. However, explanations related to complex social behaviour such as acts of prejudice with the aid of the above mechanism require acute neuro-social nexus for better understanding. The legal domain is based on the platform of responsibility, will and act based on which legal domain yields insight into the interconnected causes.

The radical publication by Szasz (1974) titled "The myths of mental illness" critically handled the dominance of institutions legitimizing mental illness and psychiatric myths. This had led to paradoxes for the criminal justice system handling the notions of insanity leading to rehabilitation, reduction of sentences, or punishment based on a person's freely chosen action assumed to be intended and objectively verified. This rise of the brain science or neuroscience in the criminal justice system (see Greely & Farahany, 2019) and many other domains such as education, organization, and other major areas apart from medicine, has given new critical understanding and speculation about the revival of eugenic discourse (see also Rose, 2000; 2013). For example, one of the originators of critical psychiatry in the colonial context, Fanon (1963) reminded us how psychiatrists were seeing criminal tendencies among the indigenous population in Algeria, and the kind of culmination of brain discourse was framed along with the free will, such as the inability of the native people in using their frontal lobes or underdevelopment of cortex (see Sartre, 1963). The way determinism is attributed to the brain and neutralized can be observed more critically in the discourses which attribute a form to the people who are the victims of the colonial prejudices. The imposition of the neuroscientific and psychiatric categories where the former is limited to the brain categories and the latter's the socially constructed language whose meaning is created and reified in diagnosing (e.g., insanity), limits the free will to rise above the limits ascribed and imposed by one's social positioning.

Decolonizing brain science: Critically conscious brain and law

Do animals also need to understand their brain mechanism to understand other animals? Why do only humans need neuroscience to be more precise about their understanding of themselves and others? The animal thought process, as far as we know, is true to their behaviour and it is very difficult to make sense of their understanding of deception as we

humans do. We have at least a theory of mind about ourselves that may be true or false. In the case of animals, it is limited to their repeated behaviour directed towards their interaction in response to threats or other behaviour. How do judges and other legal agents become critically conscious of existing stereotypes about the defendants and plaintiffs belonging to different social groups? The rise of neuroscience has made brain studies interpreted from one domain. It also seems to clear Wittgenstein's blindness to see the aspect or expression inherent in the diverse form of humanity. Neuroscience, as it seems, does not discriminate based on colour as it is focused on the brain, though it is a different story than whose brain it is studying. There was a case when racial discrimination was observed to be processed un-intentionally in the brain, while social decision making and attitude formation, between black and white social categories (see Bradley et al., 2020) and how unintentionally race attitude affects legal decision making (see Kubota, Banaji & Phelps, 2012; Matten, Wei, Cloutier & Kubota, 2018). Neuroscience does not talk about mysteries of the brain but it reveals something unknown earlier and correlates with the intention and behaviour. How it reveals and categorizes the brain structure based on the localized functions is a scientific disclosure of the mechanism rather than the mystery. However, in the typical neuroscience domain, this is taken as mysterious, deeply connected, mystical, and fascinating. This is because we hold our brain with us but never notice that we are deterministically regulated by it. Neuroscience bears the insurmountable responsibility to understand the brain and thus humanity which is very complex. Many disciplinary cultures engage to reveal the mystery of our being conscious, neuroscience revealing the brain facts is creating a kind of neuro-essentialism, unquestionable general brain categorizations. We have names of brain structures, knowledge of their localized functions and in many local languages, they are translated. In an interdisciplinary circle, academic domains and institutions across the world different centres and departments are looking into new avenues of neurosciences. Even the neuroscientific approach has advanced consciousness of different group members through the same lens of observation and came out with reductive results. The brain of colonizer and colonized, local and Western, powerful, and powerless, indigenous and occident has been subjected to the same method of observation. It is embracing to talk critically of these kinds of all neutral scientific methodologies operating on all social groups in an even manner. Decolonizing the brain or neuroscience which studies the brain, is a mark of social change and critique of the normalization of neuroscientific methods. Decolonization is also about giving space to the alternative sciences (Nandy, 1980). The increasing reliance on brain scanning techniques for lie detection is shown to be unreliable scientific standards, though some of them (EEG and fMRI) are established technology and are frequently used to graph and map brain activities (Rose, 2004; see also Langleben & Moriarty, 2013). In the brain scanning techniques, there is variation in terms of superiority and which seems more reliable than the other. The question about the hard problem of brain and consciousness is not yet resolved and the validity of these techniques is still in question. Consciousness and how it emanates from the brain are correlative assumptions. But the availability and the rise of these sophisticated brain scanning instruments have made the scientific studies on consciousness possibly clearer. However, it seems short-sighted for the people who anchor from the first-person phenomenological point to understand the hard problem of consciousness (e.g., Chalmers, 1996; see also Poldrack, 2018). The cultural variation in the use of these instruments together with the differences in the way and socialization of concealing, controlling, denying, and affirming offers an important point of contestation. For example, US polygraph analysts are not much interested in the concealed information test as it corresponds to the perpetrators as compared to the Japanese where CIT is in the law enforcement model (Ben-

Shakhar, 2001; Nakayama, 2001; see Lanleben & Moriarty, 2013, p. 224). This may connect to how US people are expressive in their display of emotions as compared to Japanese expressions of emotion (See Markus & Kitayama, 1991). This is not to say that expression of emotions does not correspond to the knowledge of the truth. What matters is how people's belief system corresponds to the universal sense of morality and deceptions and in what way modern tools are good in deciphering. If ever-evolving modern tools are generative and correspond to the human consciousness leading to justice, how was justice seen and came to enforcement when these modern tools were not available? Further, how these modern techniques are coming into the modern discourse is also limited by their vocabulary. We do not have a critical vocabulary at the general level to discuss the different perspectives on brain scanning techniques. Whatever language and vocabularies are available we generate our arguments by creating a picture of consciousness, however, these vocabularies are not detached from the experiences and knowledge but only seem limited in reproducing the thoughts exactly. If we imagine looking into the class or caste consciousness in the Indian situation, brain scanning is nowhere seemed to disclose the exact point where one is programmed to discriminate or get discriminated against, making the situation deterministic and unchangeable, but these brain activations are matched with the self-report and the behaviour, as it was observed in the Black-White context (Azarian, 2018[6]; Gorman & Gorman, 2017[7]). Decolonization of the brain attempts to focus on forced marketing of mechanized form of consciousness which is subjected to the visible brain activities through commercialized brain study techniques. It is a matter of choice made by the voiceless and classless, who are expected to not have any choice in the power-technology nexus.

Conclusion

How does the sense of agency emerge? Does the sense of self and agency emerge from the brain or embedded in the social activities of the person and meaning-making with the social objects? It can be inferred that the interpretation is made in the context of power. The sociocultural experiences of socially neglected people who do not have the channel to keep their viewpoint when it comes to technological dominance, for example, the mapping of the brain. The technology, market and power influence the reality of the oppressed in a coercive manner and the rising brain science if not checked through the critical lens will concretize the social structure without any space for social change. The simultaneous occurrence of intention and brain activity in the framed or real situation does not provide a sure mechanism of corresponding to historical context and collective memories (Pickersgill, 2013; Rose, 2007). The brain language is used in the general way to link with some consciousness events like social anxiety, hearing different viewpoints, a victim of power, derogation, stereotyping or in some situations of cognitive blackout and politics of bodies. Some of the speculation in the sociological literature in the US context (e.g., Pickersgill, 2013) highlighted the obsession of Americans with the health of the brain and the possibility of the brain languages anchoring the neurobiological way of thinking that may get saturated in the public discourse (Thronton, 2011), and impels seeing oneself in neuronal terms as dutiful biomedical citizenship (Pitts-Taylor, 2010). However, human beings in a society are also socio-legal agents and naturally assessing one's self in biomedical terms is against the natural law of human beings as social and physical beings (Harre, 1993; 1991). Understanding oneself as an individual and in terms of biomedical terminology is reductive and contradictory to one believed to be in some social milieu. Some of the scholars proposed the socio-psycho-bio model (Haslam et al., 2019)

making a case for the social as the appropriate force where a group shapes the psychology and biology of group members. This happens in a non-reductive manner and this social process is a basis for the collective experience leading to a new expression of both the psychological and biological makeup of the person. Neoliberal political situations have made brain science a time saver and hence transformed into the language of the brain and hence legality. Brain scan appropriates individuality and legal domain also is a matter of individual responsibilities, decolonizing both, is to give better understanding to the biomedical model of human and hence change in the thinking out of the neoliberalists box.

Data Availability Statement: Data sharing not applicable – no new data generated

Footnotes

[1] Psychology from an empirical standpoint, 1874

[2] Frantz Brentano. Stanford encyclopaedia of philosophy

[3] William James (2009). *Selected writings (edited by Graham Bird)*. Gurgaon: Hatchett, India

[4] According to Eric Fromm (1962), "Freud recognized that most of what is real within ourselves is not conscious and that most of what is conscious is not real". This devotion to the search for inner reality opened a new dimension of truth" (p. 85).

[5] See Douglas Star. Framed by forensics. Aeon Magazine.

[6] Understanding the racist brain: What are the psychological and neural underpinnings of these nasty bias? *Psychology Today.*

[7] Can Brain Imaging Teach Us Anything about Racism? What neuroscience can and cannot tell us about discrimination. *Psychology Today.*

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