

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

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### **Abstract**

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? This chapter discuss how we become conscious and aware and what is the role of the brain when the person is not conscious of his/her action. Consciousness in the wider philosophical framework was dealt in an asocial and individual framework. The understanding of consciousness also requires one's understanding of social context and group processes. The current race to objectify the brain is a new phrenology unless viewed critically through the societal lens. Brain has its dignity and objectification of the brain reduces humans into mechanistic entities. Law has a greater role to demystify itself from neuroscience and keep a balance taking into account precedents. This chapter ventures into how consciousness is constructed in a social arena and the way neuroscience can be included in the reformative law is the main agenda.

In some cultural frameworks where we share some common understanding of any object in the external world, where our brain gets activated with the perception of those objects, we can qualitatively have some shared language through which associations of anything like mind can be understood. Geertz (1973) showed how mind is our activity or cultural practice, which shifts its meaning in varieties of spaces, such as families, schools, courtroom, football ground. Vygotsky (1978) clarified how the 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 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 and the spread of methodology of introspection in different cultures only limited the reality of culture which moves along with the person's consciousness. Franz Brentano<sup>1</sup> who

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<sup>1</sup> Psychology from an empirical standpoint, 1874

was himself an introspectionist and 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 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 science of psychic phenomenon, expressed as acts and process. 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<sup>2</sup>. This infallibility of strength was also disguised as the infallibility of the church having 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 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 actually 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 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 with the technical concepts gives meaning to everyday interaction and it is always continuous. Some of the other

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<sup>2</sup> Frantz Brentano. Stanford encyclopedia of philosophy

time, new categories or subcategories are created, distributed and mobilized through media and gradually with daily engagement we form some understanding which are called as 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. Out of this there are always danger of 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 which 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 seem to be a slight difference, where the former is intentionally mobilized and 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 pseudoscience is active engagement with the phenomenon without much respect for the established way of doing science. For example, predicting earthquake on the basis of signs available in the environment rather developing a scientifically reliable methods approved by the scientific community. Pseudoscience is also a part of public knowledge of some physical phenomenon or legal phenomenon. However, these are some additional knowledge which one holds which never gets its hold, at least in the implications of the scientific policies. Moreover, when it comes to the legal decision making, the latent knowledge of the judges shaped by fake and pseudoscience cannot be denied. In the case of judging the psychology and the brain condition of any legal agent which is now seems to be a compulsory 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 bio data into the system. 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. 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 gives 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, the 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 shows the unconscious brain activities as a causal factor behind the persons act 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, is continuous in process. One is conscious about something is fact, whether it is a pretense, lie, manipulation or truthfulness. Whether this kind of consciousness is a matter of societal stimuli registered in an organized manner in the brain or it is something eventful in the brain that makes any stimuli apt to be noticed. Brain is a noncommittal organ like a closet which one opens to keep the book and take it out when needed. However, this closet doesn't 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 in consciousness is anchored through the operator's mind. Closet doesn't have a brain and thus it doesn't have will to be conscious. From where this will of being conscious comes from? If the brain is the starting point, then the brain is the conscious entity, but logically the brain seems to be active with the variations in the

environment, both internal and external, but the brain in itself 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 come to the conclusion 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 emphasize exploring individuals to understand society. Before we plunge into the metaphysics and neuroscientific meta-theoretical understanding of consciousness in order to have some say about the legal domain, we have to 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 clearly comes 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 their 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 appreciation of methods which is an institutionalized form of verification. The method adopted by psychologists and sociologists to understand consciousness may be different from the philosophers or may be psychologists is more content with methods which categorize consciousness into parts. As legal domain relies on these categories to understand consciousness, such as intentions, the empirical method has a larger say than pragmatist and functionalists like William James<sup>3</sup> de-categorizing it and seeing it as constant flow. Under the later version, categories then have shifted and logically so the brain and so the culpability. But this kind of assumption is generally mocked and rejected in law as it then doesn't give a reason to lay responsibility. Though repetition of one's behaviour becomes a priori criteria for law to punish someone as it shows the consistency of behaviour in the situation of freely willed action. Present work will not fall into the illusions of something called consciousness as mind generated imagery, which doesn't have anything to do with the socio-legal context. This is agreed upon that the brain matters, its discourse matters but this discourse shouldn't shun the living experiences and collected memories under the neutralizing effect of rising neuroscience. Consciousness matters when it gets its vocabulary in whatever capacity, through the brain, non-verbal cues, or whatever language which can connect to it.

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<sup>3</sup> William James (2009). *Selected writings (edited by Graham Bird)*. Gurgaon: Hatchett, India

The actual picture of consciousness is in the eye of a person who is conscious, where his/her consciousness becomes active when people encounter variations in the external environment. For example, mass operation of indigenous people by someone who himself claims to be indigenous, eroding the right of the original with his power. Here we will see two kinds of consciousness emerging, one within the oppressed and the other within the oppressor, though chances are there that the brain events in both the cases are charged to the extent that in the former he is more conscious of being oppressed and the other has taken this oppression for granted. As per 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 doesn't have the authentic consciousness, as it is lived-in by the oppressed. The first person understanding of his/her consciousness is a secondary step to understand consciousness, that is, contemplation on something which just passed is a new process of being conscious and so on. However, as Chomsky (2000) doubted the hard problem of consciousness (Chalmers, 1996) as it doesn't 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 as consciousness, though undecipherable, the shared property which make someone or a group conscious about some past memory or any object (for example, new heavy machine to clean the tribal land for any industry development) matters and philosophical dualism about uncertainty of the true nature of consciousness is nothing but imposition of the dominant will of the powerful on other and overriding the will of the powerless into the stagnation of determinism. The hard problem of consciousness may not be true, but the deeper problem is about something happening below the consciousness level or at the preconscious level. Here the brain becomes important but neural registering of many events and suppression of its expression has somewhere become more intact and regulatory and as per the unconscious rule it is generated in the preconsciousness. The study of consciousness in law matters till the point it makes the uniqueness of the person more pronounced across the time and situation, as when persons acted, it was unintentional and unconsciously driven by some neurological defects. The reliability can be established through the number of observable instances, otherwise, it is under the general social cognitive scheme common among the people for both conscious act and controlling, a virtue expected from the general population with normal cognitive capacities. 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 ignoring 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. It doesn't matter if one speculates about the existence of consciousness because it is the staunch reality that human questions raise criticism and work willfully. Positioning oneself destined to the will of 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 practical aspect of understanding is to just look into what consciousness is not. Here the law had constructed its domain out of the conceptual confusion and what matters is our being conscious, since the world is a matter of will, my will made me to see the world like this and so I am conscious. 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 have to be clear about the fact being different from the non-fact. Objectivity of scientific findings is in the congruence of what is shown exists in reality, but what if we fall into the illusions and ignorance with putting any scientific knowledge about our illusions. Of course, we are conscious of that and it is our reality till our ignorance becomes falsified by evidence which can be shown. So here we see the differences among all other pictures of consciousness, there are facts and non-facts, right and wrong, truth and false. Even if we say that the sun changes its location, we are still sure that it is otherwise.

What about confirmation biases, false beliefs and nonsense? People holding 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 mind, but holding any false information or belief is either added or counteracted with new logical propositions. Consciousness doesn't exist in its pure form but it has varieties of forms, though neuroscience assembles the localized function in few higher order brain areas responsible for consciousness about something (e.g., deception)

(see Spence et al., 2004). Lingering on its pure form may be a mistake to see any aspects of consciousness as the context in which group of people become consciousness, such as, about their identity (for example, students from minority background becoming conscious about their devalued identity in the context of evaluation and if social support is given anchor their devaluation from the vantage point of group solidarity and shifts their consciousness willfully). There was few research which talked about brain-consciousness interface in the case of stereotype threat and stigma (e.g., Derks, Inzlicht, & Kang, 2008), showing the importance of context and its signature on the brain events. Truth corresponds to action and the 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 are filtered through the available evidences, however, legal domain use science to come to the rational decision based on the past legal categories (see Santosuosso & Bottalico, 2009). The instances available to us and its refutation by new instances moves the science ahead but what is the verifiable criteria through which the earlier proposition was taken as truth and latter falsified by the new instances.

If truth is so clear and pure then how the new instance refutes it, but this is the context which shows that truth lies in its ontological understanding though epistemological stances shift as per the new kind of evidence and instances. Here the truth 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 was actually true, and hence any new event also doesn't guarantee its status as true. According to Berlin (1999), in what sense any proposition is true or not identical with 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 alarm 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 in order to arrive at the conclusion about the person's mind is based on which dominant and institutionalized metatheory regulates the law (metatheory preferred by legal domain to understand the truth and false, justice and injustice, stereotypical understanding of the context or weight of the corroborated evidences) and those other disciplines, like, neuroscience. Thus,



true statements about consciousness pertain to human nature, as how human phenomenology intends and this is collectively shared and affirmed. This is a 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 is 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 by the legal domain (e.g., Greely & Farahany, 2019). This is like the Sun which does not hide behind the mountain but actually 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 the observable and still mystery is not in the discursive zone of scientists and public. 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, 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 dominant and hidden aspect of personality, the unconscious has taken a banal and hegemonic form<sup>4</sup>, and slowly getting its truth statement in the discourses and now in neurosciences. Of all the epistemological criticisms to measure the unconsciousness, no doubt, the dominant scientific community didn't reject the ontology of consciousness and hence its metaphysics. 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 the 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 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 and unconsciousness in the brain is probably recognized, though brain studies gradually advance our understanding of the localized functions (e.g., Gazzaniga, 2012).

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<sup>4</sup> 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 up a new dimension of truth" (p. 85).

Sometime these localized functions are interconnected to other parts of the brain and sometime 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 are dynamic affiliation of 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 from the critical neuroscience perspective. 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 hypothesis, 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, everyday scientific approach gives new avenues to understand consciousness from the shared perspective. Since, consciousness as a word may also symbolize meaningful understanding of one self and its communication, indulging in 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 doesn't 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 unconsciousness and consciousness continuum. Though it is very difficult to identify the exact point where consciousness and unconsciousness intersect, and in no way any sophisticated technique like Brain imaging may locate those points of intersection. In fact, the new technologies of brain scanning have made the 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 the brain studies and observation and their correlation with the intentions, thinking process, and actions. So, generally the scientists relied on the brain mechanism associated with consciousness and people's self-awareness on the basis of how they appear and act (Sohn, 2019;

Owen, 2013). The consciousness as a disciplinary concept had the confined meaning and in the case of legal domain its interdisciplinary connection were also limited to 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 the consciousness? Do we have to go into endless debate about the consciousness and falling on the shaky ground which is yet again contestable? Since consciousness of something in the environment denotes the activities in the brain, to understand 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, by looking at the sun may not give the ultimate meaning of the sun, unless it is observed closely till 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.

People who were historically oppressed, their consciousness of being in a collective humiliation, as some feature detectors common to all, determine their consciousness in 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 by our prism of humanity and we don't need the cause always, to understand our nature as much we can know about it. Even the shifting of one's position of awareness and knowledge or being cognizant of information which feeds our notions of awareness doesn't 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 network of consensus as attributed to our being by us. 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, as sometimes, in the majoritarian contexts, the persons from the oppressed group had to bear the prejudiced folk psychological notion of the outgroup and the powerful group. As we have seen that consciousness doesn't have a pure meaning but it can be understood through

the truth 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 the 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 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, doesn't solve the quest of real empathy towards the others 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 giving him opportunity 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 others mental status in the given context, as Frith (2007) called it 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 till 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 in itself is undefinable, nonsense or absurd in the legal domain and if the starting point to understand others mind or identity 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). However, the strongly verified neuroscientific evidence giving insight to the injured or different brain structure may be important for biological justice and the person's dignity. Usually, the defendant's inability to take others' perspective, 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 about those rigorous scientific findings in order to effect 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 on the basis of 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, but language cannot reach to the core of something which is 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 its congruent vocabulary, the problem may be sorted out better? Some of these questions seek answers to the nature and structure of consciousness through the intersubjective meaning making. The way the brain of a person who knows that he is judged contemplates about the brain of another person who manipulates or unintentional about the crime committed. This congruence of knowledge in which one person knows something about the other and the other knows something about himself, 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 like 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 particular 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 in speculating different kinds of rocks on moon and naming them, at the cost of relishing its beauty in a holistic way. Too much interdisciplinarity fades away the idea of any concept. Consciousness and its debate fell into these confusions of obtaining single and pure aspects on the basis of divergent categories. William James speculated about the 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. On the basis of this analogy, how then the responsibility matters, since the person's consciousness shifts and person goes 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 is undeniably true. This shift is direct which James speculated about the existence and flow of the consciousness. As consciousness is a flow, stream or river, its nature cannot be disconnected. Consciousness moves in oneness which is nothing but the qualitative sense of being connected to one self and identity. 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 the valid scientific proof of someone being intentionally involved in the crime, that action is part of the persons' activity whose memory and knowledge connects to the time of the crime committed. This is not to say that retributive justice is the only rehabilitating solution but understanding of the science of change of body, brain and consciousness matters for the persons' rehabilitations rather than the fixed categorization on the basis of past actions. We can rely on our transformative belief about the consciousness, as we see in number of social change attempts, to make people aware of the plight of oppressed community and thus change their prejudiced knowledge into 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 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 words taken into account. 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 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 still laden in the language and the essence of it is felt as 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, 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, a-historically 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 don't 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). As Freire (1970) showed how oppressed liberate from the oppressor within through critical consciousness. 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 own world and when this happens at the collective level, a large part of our consciousness is shared, that 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 juxtapose with the legal categories is matter of interdisciplinarity and cultural context, where the meaning consciousness can either be driven by majority view or some new language is adopted to enrich the justice system to replace populist sense of justice with the novel one. Any concept and terminology is not adopted just on the basis of novelty, but those 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 has to integrate with the law, as neuroscience happens to be in direct connection with mind and no other way.

Consciousness if anchored through the hierarchy of disciplines and identities, for example, if methodology and strategy of neuroscientists are considered as superior to the

methods employed by sociologists, as it happens in tussle between hard and soft science, consciousness will get its concrete definition and at the same time loose 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 the 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 the common-sense knowledge can be debated as causing disrepute to the agenda of 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 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<sup>5</sup>. This is also a possibility that if one unconsciously is driven by the group stereotypes, the erosion of those biasedness through the valid method and the appointing of people from different domain in the jury, may generate a good understanding of the nuances happening in the legal procedure in order to help in the avoidance of these biases. In any case the public understanding of cause cannot be certainly based on the scientific speculation as laboratory scientists do, but the public consciousness is a meaning derived out from the broader context. In a very apt linguistic demonstration (as cited in Summers, 2018, p. 38), Hart and Honore (1985, p. 11), gave example 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:

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<sup>5</sup> See Douglas Star. Framed by forensics. Aeon Magazine.



[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, at the last is framed through the idea derived from the common sense understanding and the prevailing discourses. Of course, the jury may know the scientific principles, as fire is caused by oxygen, but that doesn't derive the person to obey law, or become a good citizen of society or fully appreciated in giving justice to the plaintiff. What matters are the rules which give impetus to the existence of law. 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 amygdala, but what matters, is how this information apply 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 the legal realism overpowered judges' intuitions (see also Haidt, 2001). Metaphysical entities like mind emanating from dualistic thought processes have little value unless empirically substantiated by the science appreciated by the law. As it was mention 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” (Sinha, 2019). However, research showed how the intuitive belief in the 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 which also shows that the chances are high that judges may get influenced by the neuroimages and their decisions can be framed accordingly. In both the 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 demean their brain as inferiors during the normal and accepting situation. The paradox of the power discourses in the modern times is to authorize and legitimize the powerful 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 others related association of neuroscience, as unifying brain models, provides correlatory evidence to one's act. However, explanations related to complex social behaviour such as acts of prejudice with the aid of above mechanism requires acute neuro-social nexus for better understanding. The legal domain is based on the platform of responsibility, will and act on the basis of which legal domain yields insight to the interconnected causes.

The radical publication by Szasz (1974) titled "The myths of mental illness" critically handled the dominance of institutions legitimizing the 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 on the basis of 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 how psychiatrist 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)<sup>6</sup>. 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 former limits 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 their limits ascribed and imposed by one's social positioning.

### **Decolonizing brain: Critically conscious brain and law**

Do animals also need to understand their brain mechanism to understand other animals? Why does 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

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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 theory of mind about ourselves which may be true or false. In case of animals, it is limited to their repeated behaviour directed towards their interaction in response to threat or other behaviour. How 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 the brain studies interpreted from one domain. It also seems to clear Wittgenstein's blindness to see the particular aspect or expression inherent in the diverse form of humanity. Neuroscience, as it seems, doesn't discriminate on the basis of colour as it is focused on the brain, though it is a different story that whose brain it is studying. There was case when racial discrimination was observed to be processed unintentionally 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 doesn't talk about mysteries of the brain but it reveals something which was unknown earlier and correlates with the intention and behaviour. How it reveals and categorizes the brain structure on the basis of 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, 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 the humanity which is very complex. In fact, many disciplinary cultures engage with an effort 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 structure, 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 centers and departments are looking into the 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 the 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 the social groups in an even manner. Decolonizing the brain or neuroscience which studies the brain, is a mark of social change and critique of normalization of neuroscientific methods. Decolonization is also about giving space to the alternative sciences (Nandy, 1980). The increasing reliance on the brain scanning techniques for lie detection is

shown to be unreliable scientific standards, though some of them (EEG and fMRI) are established technology and frequently used to graph and map the 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. As what is consciousness and how it emanates from the brain is still in the correlatory phase but the availability and the rise of these sophisticated brain scanning instruments has made the agenda of consciousness 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 analyst not much interested in the concealed information test as it corresponds to the perpetrators as compared to the Japanese where CIT is in law enforcement model (Ben-Shakhar, 2001; Nakayama, 2001; see Langleben & Moriarty, 2013, p. 224). This may connect to how US people are expressive in their display of emotions as compared to Japanese expression of emotion (See Markus & Kitayama, 1991). This is not to say that more or less expression of emotions doesn't 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 are also limited by their vocabulary. We don't have a critical vocabulary at the general level to discuss the different perspectives on the brain scanning techniques. Whatever language and vocabularies are available we generate our arguments creating a picture of consciousness, however, these vocabularies are not detached from the experiences and knowledge but only they 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 seem disclosing the exact point where one is programmed to discriminate or get discriminated, 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<sup>7</sup>; Gorman & Gorman, 2017<sup>8</sup>).

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. All the interpretation is made in the context of powerful and sociocultural experiences of socially neglected people who do not have the channel to keep their viewpoint on the technological form of oppression. 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 doesn't provide a sure mechanism of corresponding to historical context and collective memories (Pickersgill, 2013; Rose, 2007). The brain language used in the general way to link with some consciousness events like social anxiety, hearing different viewpoints, 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 US context (e.g. Pickersgill, 2013) highlighted the obsession of Americans with the health of brain and the possibility of the brain languages anchoring the neurobiological way of thinking which may get saturated in the public discourse (Thronton, 2011), and impels seeing oneself in neuronal terms as a 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 are against the natural law of human beings as social and physical beings (Harre, 1993; 1991). Looking oneself as individual and in terms biomedical terminology is reductive and contradictory to one believed to be in some social milieu. Some of the scholars proposed the sociopsychobio 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 new expression of both psychological and biological makeup of the person. Neoliberal political situations have made the brain science as time saver and hence transformed into the language

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<sup>7</sup> Understanding the racist brain: What are the psychological and neural underpinnings of these nasty bias? *Psychology Today*.

<sup>8</sup> Can Brain Imaging Teach Us Anything about Racism? What neuroscience can and cannot tell us about discrimination. *Psychology Today*.

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.

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