Making sense of law: Reflection on neuroscience, socialization and self

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Abstract

The development of self codified by the legal system acts as a marker of good citizens in a society where conformity and obligation to social norms matters. In most of the cases, despite cultural differences, conformity plays an important role in the continuity of society and socialization of laws. The question is, 'how law comes to mind and how we understand others as legally conscious people'? How do we make sense of others as law abiding agents as we are? Are there moral rules we confirm with and how we know about without having any specific knowledge of law discipline? Can we fully explain human experience and the understanding of law by analysing individuals only? What is the psychology of social context impacting our understanding of law and socio-legal self? In all of the above cases does our brain play any special role? These are the questions that will be discussed in this article where a case will be made to understand how free will, action, and our whole gamut of existence in a society are interconnected and any attempt to bifurcate these psychological aspects are on the verge of reductive and incomplete understanding of our existence.

Making sense of law can also be understood with the established research on legal socialization (e.g., Justice & Meares, 2021; Tapp & Levine, 1974; Tyler & Trinker, 2017). Legal socialization is one of the catching interdisciplinary fields in law and social psychology, though, it has not yet accounted for the role of rise of neuroscience in both the domains. Since brain studies are the work done in laboratories, its influence over different disciplines is

immense in the future. Legal socialization is the continuous process where all the stakeholders from child to adults make sense of law as per their interaction with alterities such as parents, teachers, media, peers, government agents, police whose powerful presence in the persons sociocultural activities keep on reminding what is legal. Legal is also what is morally upright in the sociocultural terms, which manifests in the person's ability to exercise his/her/them will to choose the action. However, the emergence of sciences such as DNA and neuroscience indicate towards determinism of the persons action to the uncontrollable cause both in the socialization, external events and the shaping of the brain. Studies indicated that neuroscientific knowledge can also create an exaggerated understanding about the human intention, action and responsibility. Judges may get easily influenced by the fMRI images which may affect their decision inclined in favour of defendant or plaintiff despite the available precedents (see Jones, Buckholtz, Schall, & Marois, 2014). Making sense of law and socialized with the law also involves the development of critical sense towards various sociocultural events. For example, how Juvenile law in India treat adolescents and understand their natural way of maturity and development needs to be debated without discounting the neurological development (e.g. Luna, 2012). Studies also showed that biology depends upon the developmental process and it is one of the important factors in the acquiring of reasoning skills, emotional regulation, self-control and perspective taking (e.g. Tyler & Trinker, 2018; Grusec & Hasting, 2015) and law's recognition of age and criminal responsibilities also depends upon the cultural context (e.g. Mercurio et al., 2020).

Damasio (2012) stated that cultures have evolved justice that take common sense approach to the complexities of decision making and aim at protecting societies from those who violate established laws. There he showed how the role of brain science is near to

negligible. However, the role of brain science is remarkable in itself and creates the possibility of systematic avoidance and undermining of legal concepts. The mundane reality is what we live by and to be conscious of it and making an attempt to offer resistance to those acts is a crux to bring sober connection between the law and society without losing our ability to be critically conscious. To understand others, we may follow various routes, like a formless critique not pointing towards anything particular or be in a shape to offer a visible critique to the situation exactly in front of us. Since these aspects of our lives are very much in our memories and experience, people, may as a naïve scientist, look for quick cause and avoid the uncertainty of being reflective or like a social psychologists or other social scientists, give explanation to the possible causal links.

The knowledge of law or being mindful of law is not as systematic as our society portrays it in a taken for granted way. The consciousness of law is being conscious of social structure or as Marx (1984/1867) noted "It is not the consciousness of people that determines their existence, but their social existence that determines their consciousness" (pp. 20-21). People are conscious of themselves in the social world. For example, in most simplistic and minimal situations when a person intends something towards any person or thing, this whole approach is a social conduit of one's self positioning in the social environment. The idea of self as one and pure is a myth and denies the logical connection of sociality which actually defines the self and even negates it. The self and consciousness (e.g., memory) are not dependent on just one kind of self-reference effect (SRE), which was a dominant paradigm to understand the role of self in memory, but flourish in the varieties of contexts making self, a multifaceted entity not difficult to be precisely defined (see Klein, 2012). Society attains its fabric through the objective and subjective view of the social objects, which Vygotsky (1978) indicated as a

form of engagement with the tools in a sociocultural context, where the objectivity of the external environment defines the subjectivity of the person. Law in its most pragmatic form is operational rather than symbolic and the very engagement of law with the people act draws the map and fabric of society. The sociocultural tools through which the society is understood with the active check by law, seems to be dominantly regulated by the scientific view of the people (e.g. as machine, organism, entity, unit, datum, sapiens) with the capacity to intend and think. This connection of law and science has the limited view of society and the stern boundary of law will not suffice to address the complex view of the society. The notion of objective view of society shows good interdisciplinary connection between law and science. In the words of Jovanovic (2010) "Critical science has to re-establish the relation to society as a whole in its historical dimension, not just the relation to scientific communities" (p, 580). The problem with critical science is its lack of foundation as it is not laden in the defined categories like the mainstream sciences and law. The defined categories make the established features of these categories more pronounced and easier to bring into the vocabulary of people engaged with various institutions. This engagement with established categories by the law and science is their inability to bring the invisible identities, subaltern identities and powerless definition of their experiential categories into the mainstream discursive picture of the society. The methods which make these undefined social categories readily come to the mind are taken as irrelevant, unstructured and useless. Some of the methods which in the majority of cases use dialogical and participant perspectives have much to survive from the threat of status quo, science and law trio.

In the case of law and neuroscience connection, the derivatory force is the evidence which neuroscience provides to aid the legal decision making. There is little evidence available

which shows the law actively involved with critical neuroscience. There are some areas like critical legal studies which have the potential to inform the legal domain about the authentic interdisciplinary connection of law and neurosciences. The hostility towards the indigenous as unstructured and useless shows the epistemological violence (e.g. Teo, 2010) showered over the subjectivities, by the imperialist and objective knowledge which finds difficulty to form association with the subjective aspect of locale mind (Smith, 1999). In all cases, it is the mind which interprets and tools which are designed to interpret are laden with the subjectivity designed by the powerful disciplinary domains.

The question about our understanding of law is in need of a better perspective where we can understand how law intervenes in our everyday consciousness and we confirm its metatheory. The law as defined by whom and as who are the people construct law for the prevention and detention. The idea of law to be imposed in order to see the right kind of behaviour or law aligned to the people in their heterogeneity complying with the universal values. The psychological input to the vagaries of law is in terms of obedience and conformity, which is a need to go by the hierarchy of thought, language and status. The law in itself is not understood unless it is the person who encounters anomalies and alter to what he and she believe to have taken for granted in theory acts and thoughts. The simplifying language which neuroscience adopts to frame the case of brain involvement into the complex behaviour of people is appreciated and granted a major starting point to all the actions and thoughts. If this is so then law is also a brain matter and unnecessary demarcation of the society as regulated through the law and reciprocally contributing to the law through the sustained moral principles is also a brain state seen in the discourses and power. In other ways, neural firings in some areas of the brain in a situation makes the person powerful or anxious and that's what impels

the brains to see the difference in legal consciousness and societal events. But how much can we be sure or bent ourselves to this idea that the brain is the powerful agent, all-encompassing and it is the brain only which creates our world? In the earlier work on brain, free will and law it was discussed that free will can be a valid one and it is not that the brain is so much laden with the stimuli around that all activity of humans is determined. This is not to argue that it is all the free will and any kind of brain determinism is not the possibility.

Zeki (1993) argued for the existence of neurological inputs without despising the will and consciousness and stated in this wider context that "no theory of the brain is complete if it cannot give a scientific account of the subjectivity of mental states" (p. 5). Further the inter-subjectivity question which accounts for the reciprocity in understanding the people and the social world will be having a limited snapshot kind of model. Neuroscience is expanding its research into varieties of domain and its metatheory is limited to the reductive understanding of the human brain which portrays a simple model of human complex actions and thoughts. Being sophisticated and under the influence of limited metatheory, bounds neurosciences becoming a grand approach or being part of human and social science. Thus, its disconnection from the everyday activities and offering an explanatory picture by seeking information about the people's social relationships is an unnecessary imposition of the will of neurosciences on the complex will of people. Since law believe in the individual narrative and is ideographic, the insufficient connection of neurosciences to the social cognitive enterprise of people shows how law is not going to be challenged by the neurosciences and since it is the emergence of the field of interest to know human brain from long time through different techniques that doesn't seems going to change the legal verdict made in the past nor it would deskill the lawyers from their intuitions and precedents. However, the neurosciences do not go to lose their importance

because it shows the brain involvement in acts and thoughts, and the latter does not emerge without any context. The primacy of law in its willingness to give the verdict on the basis of responsibility and accountability still doesn't make the legal agent libertarian. As Kane (2007) noted that we don't have proof about the existence of acts that are solely without cause and how can something which doesn't have true cause make us accountable?

Social perception of law

The understanding of law is also like understanding of expectations from one another in a bonded social system. Here the assigned and adopted roles, values, beliefs are sanctioned in a moral framework and communicated back through various legitimized institutions as rule of law. Our brain is a self-organizing system and plays an adaptive role rather than a commanding role. The act of the person which is sanctioned as valid and normal as per the deep-seated societal experiences makes the brain systematically adapted for its future triggering. Law in this case is a human thing and is not regulated by the purely scientific explanations as it does happen to the physical phenomenon. Even the physical phenomenon is a matter of ordering out of the mystery to give a scientific explanation in a limited way. Human action and thought are as easy to understand in a stereotypical and popular way as it is difficult to understand others in a scientific way. The rise of neuroscience as a discipline and as a popular science is a result of modernity and individualism. The charm of modernity, new era, individual freedom and will and technological sophistication gave an extra flash of light to the brain, if not in terms of final understanding, then in the creation of picture of systematic mapping which anyway portray an idea of authenticity or as Adorno (1973) and Baudrillard (1968) portrayed as creating jargon of authenticity and as a legitimized systems of object respectively. Postmodernists were more into the un-structuring and the dangerous portrayal of words rather

than in any kind of systematic and true knowledge as law preferred and scientific disciplines like neurosciences provided. Though both modernity and postmodernity worked simultaneously, modernity was more pro-system in comparison to postmodernity which never believed in anything like a system. Since law is a matter of systematic sanctioning of rules, texts, legal discourse and active categorization of ideography of individuals, there is rare possibility of postmodernist thinking, as it is assumed that it will make the system of law redundant, remove the legitimized form of articulation and make it baseless as languages are not necessarily representative of what one experience. However, it also doesn't mean that the system of law consists of final conditional statements of rules based on if-then logic. To reinvent we require new data, logical structure and truth statements quite linked to the views and worldviews of people who question the systems of law as unrepresentative and oppressive.

When we ponder upon this question about the law coming to mind, it is also important to look at the possible avenues which drive us to think in a particular way about the law filtered through or matching with the legal sensemaking with our experiences. The colonized understanding of law as taken in one's subjectivity already framed by the positive and popular view of colonizer to the understanding of law from the worldview of indigenous and powerless. The need to reinvent the notion of powerlessness through reengineering the dominant notions in society and law and many times through the systematic uprising of the technology to find the signature of psychological makeup within the brain embarked upon the story and experience of person, essentializing it, veiling the social make up and expanding consciousness and story of the person. To relate with the Adrono's (1973) critique of objectivity and reification, neuroscience in the majority of cases didn't form a firm association between history

of mind and determinism of object, as we see in the case of the brain. In the forward to Adorno's (1973) "The jargon of authenticity", Schroyer (1973) stated that

"the constitutive presupposition of human subjectivity must themselves be dialectically related to the historical context in which determinate subjects are formed. Failure to so relate the subject and object of historically situated knowledge results in the fallacy of 'objectivism'- or the reduction of subjectivity to the in-itselfness of facts (e.g., positivism) or the innate principles of mind (the idealistic philosophy of the identity of reason and mind)" (P. xi).

The case of neuroscience is well established in neurological categories. When neuroscience associates with social and legal categories it limits to the essential definition and understanding of the categories and concepts. In that process of explaining the human mind, the deeper meaning of categories seems to be missed out. Scientific knowledge is an established knowledge where connection is drawn consensually between terminologies and the truth. The use and misuse of these terminologies has largely strangholded the true connection between ascription and experience. Law becomes limited when it is placed on the platform of popular view of something, whether essentialized brain or lopsided history, and limiting the chance of expansion and solidarity to the human being as willing agents together with the chances of uncontrollability and choicelessness. The established model of neurosciences reflecting the cause-effect relationship not necessarily about the stating the truth of social reality but providing a utility function (e.g. Burr, 2003; Hruby, 2001) to predict one's preconceived biases, stereotypes, attitude, and so on. The legal domain in order to establish the authenticity of its stated verdict may look for reason at the post-hoc level concretely fitted into these neuroscientific models. It is not new that scholars had tried to look for the common thread in the metatheories such as realism and relativism and in that varieties of linkages such as the

need of neurosciences to understand brain and the role of language adopted to represent something technical for the purpose of usefulness and change in the perceptions (see Burr, 2003; Gergen, 2009). The system of neurosciences offers a picture of the brain whose area becomes active if the person is engaged in some thoughts, however, it is not yet clear about the kind of thought which particularly emerges from any particularly specified area. As thought of any action intended towards any person is simply a process which can be aligned to the brain area being active but what exactly was the thought is the matter of consciousness, discursive framework and self-reporting. Looking at everything from the brain point is like confining oneself in a box which is limited in its height, breath and wideness.

We as a human being have the tendency to be curious and to be curious about something pedantically and reductively knowingly and unknowingly about the complex environment is a futile exercise. The requirement to understand the brain and its process in order to conjecture about various human relational acts, may be one good possible exercise which may provide an understanding to the pathways between neurological imbalance and the person's other biological responses, for example, vision, or hearing. Though this has very less to do with the exactness of the type of thought and intention. That correlation between brain and behaviour is more an interpretation by the disciplinary experts, whose possibility of possessing a truth statement is not clear or cannot be stated with certainty. This is not to say that the probability of these neuroscientific statements doesn't matter and cannot be applied at the treatment level, but at the judicial level whose approach is ideographic, these statements hold the chances of error too, whose interpretation as completely true will invite repressiveness in the law rather than progressiveness. We perceive different events in our life, good, bad, normal but for the bad one we look for the cause with greater force as compared to the good events. For example,

why people committed suicide is one of the most thought about question with no clear answer. We look for the context, socio-political situations, history of the place and economic condition to give the most acceptable answer compatible with the situation and the individuals' unique response in that situation as compared to the other individuals. Legal scholars might construe the cause as per the evidences giving the impression of suitability of the best cause, for example, in the case of suicide, the evidence presented by the neuropsychologists possibly portraying a person or victim as depressed with earlier history of psychiatric treatment of depression or any part of the brain having neurobiological deficit. Finding cause is one of the processes of understanding and reasoning which judiciary look for to make a verdict. Moreover, it is the physical cause attained through forensics that matters much in the inference of the psychological one. Since locating the psychological cause is rather subjective and exactly unobservable, the location of cause along with the forensics systematically regulates the legal reasoning. Though this is another matter that how these legal reasoning, which is itself subjective, objectify itself with the forensics, locate the cause after the effect, and get impacted with the numbers of moderators and mediators like stereotype contents, group think, competence illusions, cultural hegemonic thinking, dominance trends of morality laden within the power and politics. In that denial of larger context, the visible picture of neuroscience looks more objective, scientific, sensible, reliable and valid, eventually, making legal reasoning more sophisticated.

To be mindful of law is accepting the superiority of law without much pretence to how legal reasoning happened with the aid of dominant superstructure, forensics, and interpretations of others subjectivity. The regimentation of expert view with the public view about the law and its site in the brain seems to be a mirage like view of the reality. The brain business is to show

its presence in all the cognitive and behavioural functioning, which makes up the social world, in a simplistic manner. Does it matter for neuroscientists to differentiate between expert kinds of thinking or majoritarian? It is quite probable that thinking process, as it is observed, through the fMRI, shows some area of the brain being active, and this is more important for the legal domain, whether it is the area of manipulative thinking in normative way or in a psychopathological way[1]. Law surrounds its categories symptomatically and orients one's thinking in a taken for granted way to the best of recognized evidence. Evidence is interpreted through some qualified assumptions, seemingly based on precedents and past success of the decision in making the majority of people agree to its authenticity.

Social and cognitive neuroscientists are interested in the number of social and motivational aspects of the persons. The heavy-duty research is observed demonstrating how people understand self and the mental states of others, how they derive logic behind the others action and embody the perspectives of others, and how much brain areas are automatically and in a controlled manner specify one's action (e.g. Lieberman, 2007; Satpute & Lieberman, 2006; see also Arioli, Crespi, & Canessa, 2018; Healey & Grossman, 2018; Spunt & Lieberman, 2013). In both the cases it is all a human thing to do, where in the legal domain it's the folk understanding about the human nature delivered through the histories, societal conjectures such as common sensical way of locating the cause, identities development and dominance, whereas in the neuroscientific domain especially, social and cognitive, the understanding of self and others is through the mediation of brain. In the latter case neuroscience is sophisticated and scrupulous. It has the methodological support of fascinating techniques and instruments which specifically locate the area of the brain with an increasing spatial and temporal resolutions. To

[1] Some of the studies showed that psychopaths manipulative thinking is untraceable in cortical areas, which usually matters in the thinking process (e.g.

the hypothetical question 'How do you feel when you believe in law or vice versa?', a possible response may be good and bad respectively. To the first part of the question, being a believer of law is to believe in the system of justice which makes one get relieved from the state of confusion and anxieties, and to the second part, the non-believer in law situate themselves into the anarchical thinking which demands complete overhauling of the system which regulates. Neuroscience is systematic and the believers in law are high on probability to believe in this system of science as compared to the non-believer who fall out of the systematic and deterministic way of thinking subjected to be legitimized by the state, psychiatry and structural viewers of society. Since the law is not universal along cultural lines, as societal structure, language and beliefs differ, the perception of different laws and their applicability also differs.

The exceptionalism of the dominant culture doesn't warrant homogenising the perception, however, the imposition of dominant values connected to that exceptionalism forced to be compiled directs towards the imperialistic and colonial coercion rather than any true justice. How justice is conceived by the legal neuroscience progenitors, has much to do with the idea of justice itself where what is fitting into the public and legal understanding of one's agency will be more pronounced despite the neuroscience systematic identification of active brain region in having one's sense of ownership of action and thoughts, agency and self-identifications. Recently, it is argued that free actions in the case of criminal proceedings, doesn't have subjective or objective probability of occurrence and only because insufficient information does accurate prediction about free action cannot be made. Since the probability of free action doesn't exists, free action cannot be predicted (see Pundik, 2020)[2].

[2] Pundik, A. (2020). Predictive Evidence and Unpredictable Freedom. *Oxford Journal of Legal Studies*, gqaa004. https://doi.org/10.1093/ojls/gqaa004

Legal socialization, brain and agency

How law comes to mind can be elusive unless we see how law is being continuously used to socialize us and then our varieties of action which makes us systematically a legal agent, whether we believe it as something delivering justice or not. In our populist discourses we make an impression about any phenomenon existing in terms of bipolar opposites, for example, it is highly probable that we think that the opposite of justice is injustice. To be more specific, denying right to someone is the opposite of giving right, however, political philosophers like Judith Shklar approached this bipolarity in terms of uniqueness and varieties of these bipolar opposite concepts. Thus, if neuroscientist identify that lateral parietal cortex (LPAC) become active when the person faces mismatches between one's action and the sense of ownership, for example, in the case of schizophrenics (Frank et al., 2002; Ganesan, Hunter & Spence, 2005; see also Lieberman, 2007), what can be better option of justice to be sanctioned by the law as per the report of neuroscientists? Justice in itself is inoperable unless nurtured with the socio-political values. Justice is not an entity in itself but it is framed under the worldview of society configured by the sequence of events in the history, collective memory, wars, crisis, attitudes and conflicts, deep seated emotions which were suppressed by the different regimes, oppressed-oppressor dichotomies, structure and social identities. Neuroscience is not taking a backseat in all of these issues and it is actively venturing through the brain mediation about the issues such as automatic filtering of the person based on stereotypically laden schemas, controlling function of the brain when expressing one's prejudice in a socially sanctioned way, formation of political attitudes, or perception of competence in political knowledge, partisan bias, motivated political cognition and so on (e.g. Jost et al., 2014; Lieberman & Schreiber, 2003). Justice is a social process which is not limited

to the procedure but also about the substantive visibility of the outcome, a kind of reciprocity based on the idea that every action has some equivalent consequences for the person. This action by the person affects others socially, physically, cognitively and emotionally, so the inherent consequence for that action seems to be received by the person as a reciprocal response. But how then does the other who is affected by the action and intention of the first person define justice or get justice in an appropriate way? For example, in the civil cases, the victim of financial fraud, gets justice through the compensation and possibly imprisonment of the accused for intentionally manipulating others for one's self-interested motive. In the criminal case, whatever be the compensation given or the punishment sanctioned to the confirmed accused, most of the time the impact on the victim is never redeemed and mostly it is irreversible. Justice seems to be a process where both the parties, victim and victimizer, lessen their dehumanization, where a criminal is punished for the crime, he/she committed and a victim drives his/her justice out of it. In both the cases happening, for example, in the context of the criminal justice system, justice outcome plays a significant role at the same time. However, this happens through the effect of system and legal agents and under the influence of power. In the legal system, the legal understanding and confirmation to the powerful progenitor, it's all the interpretation of the evidence and precedents. Legal system has very little room for dialogue between different parties, though dialogue happens in a limited space of media and humanities/academic circles. The need to be an expert in the practice of justice in the court is like an interdisciplinary connection between powerful, that is, powerful expert and powerful judge. Expert knowledge of neuroscientists is a systematic appropriation of technical knowledge presented sophisticatedly to the judges making the case for guilt prone mind, to be construed by the judges either as relevant and admissible or not. Though

neuroscientist presenting the case for the brain is relevant and applicable in the treatment of the brain damaged patient, its theory about the activation of the brain part which is supposed to be active while describing the past intention become debatable and not easily admissible to the court. In the current time, if neuroscientist present the case, for example, that the Medial prefrontal cortex (MPFC) and the Medial Parietal Cortex (MPAC) are active when the person is self-conscious (e.g., Ochsner et al., 2004; Johnson & Schmitz, 2005) as compared to the person who was engaged with some cognitive task (e.g. McKiernan et al., 2003; for extensive discussion see Lieberman, 2007), may add to the knowledge (see also Daubert test). However, the debate and differences among the neuroscientists is greater enough to lead to any detailed conclusion, except some broad generalizations, which most of the time retain the power of juries in going by the precedents and established legal categories. Some of the scholars posited that it is very difficult, if not impossible to ascertain the first-person experience and intentions and what remain in the air is the fitting of the established notions into the legal frameworks (e.g. Nagel, 1974), unlike other scholars who posited that "linking phenomenological with the psychological and neural is a promising research strategy for understanding person" (see Churchland, 1986; Flanagan, 2000, 2011; Searle, 1997). Since the notions and meaning of any category are the common sensical representations which formed the structure and come into our discourses, justice is not a part for these notions. We live our brain and it is embedded in our collective repertoire whether one is able to control his activities as normally others are doing, in terms of thinking, problem solving, social relationships, verbal expressions, obedience and conformity. If those controlled activities are not possible, either it is connoted to the will and socialization of the person or to the deficiency in some brain parts. In the latter cases, neuroscience can help in posting whether the person intended or is it happening

automatically and the person doesn't have knowledge or consciousness of his action. If the legal domain is sure that the action of the person is not intended, the meaning of justice in terms of giving punishment has to be relooked, and it becomes the responsibility of the law to convince the victim party to understand that the action of the defendant was not indeed and in control. The question may arise, whether the convict was equally unconscious for other activities which requires a control, which can be a decisive point in the legal decision making. Thus, neuroscience has it say but it is not that established as law. In philosophical speculation the point of justice may not be exact but in the legal domain, justice derived out of the evidence seems exact and therapeutic. The perception of any object in the external world is also a major area of study in psychology, for example, psychophysics. Here the external events are considered as actual and objective, but seem to be perceived by the subjective mind differently. The possibility of mismatch is provocative in the philosophical speculation, as how something subjective connects to a concrete and tangible external world. It is like a mirage which is not real but perceived. Law doesn't speculate the cause through this dualism, since it can be refuted as baseless.

Neuroscience resolves this dualism through its compatibility with the series of input-output and action-reaction debates. It resolves the dilemma of how something comes out of subjective by showing the localization of something which is active in the real time, only to be seen in the form of action in that real time. However, modern techniques show the brain activity, intention and behaviour delay in milliseconds, but this is very quick when one perceives or witnesses someone making any action. For the judges this delay between brain, intention and behaviour is like correspondence of causes rather than any Humean scepticism[3]

[3] https://plato.stanford.edu/entries/hume/

that they may be the impressions. Justice is, thus, a matter of acceptance of a situation which is activated in our social partnership and collectivity, demonstrated through the everyday symbolic use of our normative reasoning. Since human beings cannot be neutral and they are a political being, their existence is a politics of passions, desire and evaluations, their way of expressions cannot be neutral and thus their brain. They do politics, their brain gets activated by their actions and its reciprocities, thus it cannot be simulated as automatons but it's all the culminations of desires and passions superseding, though this is the different matter, that this shaping and socialization of desires and passions are the normal instance of human lives. Judges and juries are not away from their accumulation of memories, experiences and desires, as it is what gives them the standard of evaluation of others actions to be accepted by the society. For example, why after so many years of authentic evidence, judges delay and ultimately the decisions are the same as it was dominantly in our cognitive motions and understandings. The delay due to a number of social interventions doesn't change the course of history and philosophy, dominantly shaping the individuals, but it is natural inclination towards them as the time passes.

The understanding of law follows many pathways such as families, schools, peers, media, despite one never through the court proceedings. The law is everywhere, in our surroundings, moral acts, social relationships and in our everyday activities. The rebellions against the repressive law is an anarchical movement to eject out of something which is coercive and predatory[4]. This also comes under the periphery of law where it becomes imperative to know why people sometimes disobey law. There are instances when people hierarchize the intensity of punishment associated with the breaching of law and fall into acts

[4] See Appadurai, A. (2006). Fear of small numbers: an essay on the geography of anger.

which may align them to the legal categories. The severity of punishment associated with the acts thus systematize the action and so the brain gets adapted to the discourses and circumstances. The question about how we get socialized with the law and how law understands the psychology of individuals adds to the theory of justice. The socialization with law is to go through psychological processes such as learning, thinking and memory together with the macro level facets such as influence of culture, power and institutions. The legal domain while situating their decisions in order to attain justice has to go by the psychological appropriations also. Justice in itself cannot be the sole repertoire of legal categories but it has to conform to the psychological categories which make up the individuals and society. If psychology is going through the interdisciplinary phases of understanding any phenomenon at all the three levels of the social, cognitive and neural (Ochsner & Lieberman, 2001), then law which is in no way confine itself to the ivory tower of legal categories, established and normative assumption, and precedents, and inadvertently has to shape its assumptions at all those levels respectively. Since law is also a social process of imparting justice, its interdisciplinary alignment with psychology and neuroscience has a social connection too. Just by citing the atomist and discrete process of the brain will not feed to the broad and general form of understanding of human actions. How can we be sure that any neural firing supposedly corresponds to the social process? However, the observations show the relationship between brain and act and it doesn't leave any room for doubt that brain involvement is not clear. The clear correlation of the brain and acts together with the interpretations on the basis of social norms and rule of law makes the whole dynamic a social enterprise. The social experience as a legal experience and vice versa goes together in the society at the general level. Though these social and legal experiences understood through the standards don't fully account for the

qualitative experiences and qualitative mechanism of phenomenon, it is the theory of mind that we hold logically towards the externally focussed situations that matter dominantly. In one study pertaining to the empathetic understanding, Singer et al (2006) showed that "it is unclear whether subjects are imagining their own experience of pain or truly empathising by the perceived fairness of other" (as cited in Lieberman, 2007, P. 265). Neuroscience has given a systematic account of the brain, but the qualitative experience is within the memory of the person and the way he/she is able to communicate it.

The way people communicate their intentions and subjective feelings is not always conveyed through the standard format of understanding, this account has the potential to be incomplete. Law's control over humans is paramount which gives meaning to society. Melton (1992) pointed out that the idea of culture is announced by law and gives a statement of cultural identity. He further stated that "The law is a social glue that offers cues for behaviour consistent with respect for the community and the person it subsumes" (p. 384). The notion of culture and identity as sanctioned by law was appreciated by few scholars in support of law as a good thing. However, it was not clear how the meaning of culture and identity emerges and why there are hierarchies like inferior and superior culture and identities (see also Han et al., 2013). Why is the same amygdala important for emotional expression and suppression with the variations of neural firing in that area remarkably shows its limitations when it comes to the cultural and identity differences? Since law, science, and society connect together, it is absurd to say that law is fixed, as it is observed in history and present that science and society shifts. If law is assumed to be fixed, it is an example of reification and rigidification of social objects, phenomenon and identities and not much beneficial in the justice system. Science is a continuous process and it comes out with an evidentiary principle in a reliable way. Since

categories of sciences are also amenable with new instruments and questions, the neutrality picture of science is also questionable as it is the society and scientists' worldviews that constructs the idea of something called as facts. As noted, earlier facts are systematic but not apart from the changes that it undergoes.

The legal decisions and verdicts are assumed to be justified on the basis of available evidence. It is the new evidence only which may claim the limitations of earlier decision making which further impels the legal agents to look back at the earlier evidence and their authenticities. How to be sure that the evidence available is sufficient enough to prove an accused guilty? The justice system is an operational system where outcomes matters and most of the time the content which led to this outcome is not in the social and cognitive periphery of the people. The judicial verdict had a long-term impact on the psyche of people despite the new expert evidence and refutation of earlier evidence and interpretations (Asokan, 2016; Biedermann & Kotsoglou, 2018). Once an impact is made on the public mind due to the verdict, it is difficult, if not impossible, to eradicate that impression with new evidence. Though, the reliance on evidentiary principles which is continuously advancing with new methods and techniques, may not remove the stain which fed the stereotypes or nurtured the first impression of the society. These impressions come under the public intelligence and passed through different channels. The irony of legal socialization is its reification of consciousness and impressions which are constructed and reconstructed in collective memories and becomes the truth. Since vocabularies does not assure about the truth of individuals' subjectivities, and any recall of the memories can also be not relied upon as it is. As the brain is associated in these processes of memory re-construction, neuroscience can only be helpful in providing a picture of the brain, may be through longitudinal analysis about shifts in the memories and activation

in the brain areas such as the hippocampus. It still does not reveal why the brain led to the reconstruction of memories. Whether it is individual's life, legal domain, or any social institutions, the essence of something personally related like a flashbulb or episodic will define our memory but the other challenges available in the context, in our activities and sense-making will nurture the memory, the way our will strands it (Patihis, Ho, Tingen, Lilienfeld, & Loftus, 2014). Overestimation, misinformation and guided stereotypes constructs and co-constructs the memory of evidence and its interpretations (Loftus, 2017). If the verdict is passed and the social desired decisions are made, it gives an epistemic sense of justice only. There is nothing like a true justice in itself but it may be socially unacceptable and demeaning to the victim to say that the judicial verdict is not true but socially desired. However, it is a valued form of social enterprise to have an even form of desire and to be part of society. In an innocent project where care is taken not to punish the innocent due to misinterpretation of evidence or lack of best possible method to reach the conclusion, the vitriol use of witnesses and creating a false image of reality may create a factual understanding of one's systemic involvement in the events, that actually never happened (See Loftus & Pickrell, 1995; Woolston, 2017).

The role of neuroscientists and psychologists as an expert in the judicial proceedings to give their view on the memory, is sometimes not entertained by the judges and rejected as embarrassing and unreliable. The legal domain is sceptical about the methods designed to understand the subjectivities and even the most sophisticated methods prevalent in these fields are questioned as unsuitable and meta-theoretically limited (see also Monahan & Loftus, 1982). Does realization of one's intentions and action as wrong and morally incorrect make the person less vulnerable to legal punishment? Common sense says that, 'Once an accused, always an accused', though this labelling seems to get moderated by many events at the micro and macro

level. The positive attitude towards the person either belonging to one's group may dilute the effect and enhance the empathy factor as compared to the attributions in the context of outgroup. Some studies explored the relationship between learning and enhancement of empathy in the brain towards the outgroup. For example, Hein, Engalman, Vollberg, & Tobler (2016) showed that classical learning signals update empathetic brain responses and few positive experience and emotion towards the outgroup were sufficient to increase out-group empathy, giving affirmative sign of plasticity of brain in terms of empathetic reactions (see P. 80), perspective taking and empathy. How much the law regulates, becomes responsive and derives the usefulness of any evidence from the expert's viewpoint, depends upon the system of beliefs that any society holds as normative belief about one's roles, responsibilities and internalization of rules. The society which is based on the scientific belief looks for the useful designs, intrinsic values and exactitudeness of any theory to be replicated and confirmed (Polanyi, 1966). Laws vary in those societies either as regulatory and autonomous or as responsive towards the varieties of ideas provided, they don't feed to the nonsense. Neuroscience has systematically upgraded itself in modern society and has the ability to form a discourse of power to be convened by the law. In traditional societies, its status and emergence in the form of discourse of power is still in an ambivalent state.

How socialization with law is like being socialized with morality, ethics, norms, prevalent beliefs and science? Nonet and Selznick (2007) hinted towards the risk involved in the law being responsive, if not prudently applied, can distort law and policy in an undemocratic way and may weaken the legitimacy of law and the court (see Kagan, 2007, p. xvi). The coming of neuroscience in the periphery of law and if not utilized within the standard of law and society, speculation is that neuroscience will change the picture of law in the eye of

society (Green & Cohen, 2004). Accordingly, law, as a social technique (Kelsen, 1941), in itself is nothing but social activity and rules, as per the legal realists, did not decide case but it is what legal agents do. Similarly, for neuroscientists, it is exactly what they do by showing the picture of the brain through the natural controls (post-hoc situation only), developing the meaning of case (e.g. neurological deficit). Some of the studies using mass empirical analysis and task free fMRI data pointed towards the replication crisis in brain imaging studies and neuroscience (e.g. Eklund, Nichols, & Knutsson, 2016; Szucs & Loannidis, 2017), where they noted that " the parametric statistical methods used for group fMRI analysis with the packages Swift Package Manager (SPM), FSL, and Analysis of Functional Neuroimages (AFNI) can produce Family Wise Error (FEW)-corrected cluster *P* values that are erroneous, being spuriously low and inflating statistical significance" (p. 7903), thus suggesting to embrace nonparametric analysis with fewer assumption[5]. As per the above evidence, chances seem to be high that even the experts appointed by the prosecutor or defendant to show the authenticity of evidence based on the published paper, may fall into self-serving bias of overestimating the reliability of their findings, thus creating a possibility of distortions. The perceived normative significance of neuroscience may trigger a peak of inflated expectations (see Schleim, 2014). This also creates people's explanatory preference for scientific phenomenon suggesting that "people's sense of the relations among scientific fields are fairly well calibrated but display some general attraction to neuroscience" (e.g., Weisberg, Hopkins & Taylor, 2018. P. 1). It is the accuracy of the data that matters in the subjective understanding of phenomenon in terms of teleological and longer explanations (see Lombrozo & Carey, 2006) with many causal

[5] See Inflated False Positives in fMRI: SPM, FSL and AFNI https://www.discovermagazine.com/mind/inflated-false-positives-in-fmri-spm-fsl-and-afni

factors (see Zemla, Sloman, Bechlivanidis, & Lagnado, 2017). Some of the research showed that judges may get allured by the neuroscientific evidence (e.g., Jones et al., 2015). This was also stated as a seductive allure effect which states that, "people without advanced training prefer explanations for psychological phenomena when those explanations include a neuroscience component, even when that component is irrelevant to the logic of the explanation" (as cited in Weisberg, Hopkins & Taylor, 2018. P. 2). The meaning of socialization is laden with the pathways through which it happens, the progenitors of science socialize through the authenticity of methods through which any conclusion is reached. As individuals from different sections of society derive the legitimacy of law from sources considered to be authoritative by common understanding, the reason to accept and be driven by the logic of law as legitimate and defending the system, is a paramount factor for one to be considered as a responsible citizen. The law is there to create responsible citizens who will be working for the advancement of society and culture on the basis of normative ways of do's and don'ts. The system of morality is a matter of culture which is preserved by law. If neuroscience is scientific and authentic its interpretation by the legitimate expert orientations towards the systematic contribution to society and law. Since at the majority of levels society is considered to be in the institutions, family culture, social relations and adherence to authority, which is a normal way of seeing the world, self and social objects, so the construction of morality depends upon this normal way of living. Neuroscience, as a normal science will be adhered to the systematic and normal societal discourse and will be useful to the law till the point it helps it to regulate society on the basis of derived morality.

Emergence of legal self

Neuroscience can't persuade beyond the point where law loses its end. Since neuroscience is not neutral it can't have unitary metatheory, but it is observed through the different metatheories, what law will prefer derives its status quo. People get socialized with law, in the neuroscientist's terminology, their brain gets adapted to the circumstances laden in the stimulus occurring outside and before the actual change occurred. Law has the power to shape the thinking, behaviour and emotion of the masses. According to Kagan (2007) "Law's power does not stem from tradition or its formal pedigree alone, but also from its persuasiveness as good public policy" (p. xxiv). He pointed towards the responsive law where various institutions embody the legal values, and hence are legal institutions. Our brain shows the picture of continuity at all the levels of consciousness, sub-consciousness and unconsciousness. The nerve cells are active despite the persons' knowledge. It is a paradox that why we think in a categorical way rather than in terms of continuity. The need is to clarify this point that it is in the social language to explain something in terms of categorical benchmark, otherwise, the continuity of brain and mind are always at their pace, what Whitehead called 'fallacy of misplaced concreteness' and Ryle (1949) called as category mistake. Our observation of people and forming an impression about them and self becomes more intense as a child grows. Some of the studies noticed that even the child of age three develop the sense of real and imaginary objects (see Harris, Brown, Mariott, Whittall & Harmer, 1991; Sussman, 2001; see also Dunlosky & Metcalfe, 2009). If the law is objectified through the family and other social institutions, it impels the brain to think categorically about ethical-unethical, moral-immoral, good-bad and right-wrong. The children's capacity to be cognizant of law based on their maturity is also an understanding from something concrete to abstract. The law is understood by different people in various ways, where some understand it in terms of

following the orders of elders and some view it in the form of social obligations. In the case of the former, despite their ability to differentiate between real and imaginary forms, the wrong and right are mostly concretized and associated with the consequences. Extensive critical are work done in the domain of development, cognition, and activities of the children, despite the systematic differences in the approaches (see Mattingly, Lutkehaus, & Throop, 2008). For Piaget it was the development and maturation which transformed the moral understanding of the child from the stage "morality of constraints' to the 'morality of cooperation' as the child's cognitive development matures from concrete thinking to abstract thinking. The quality of being cognizant of one's thought about something comes under the category of abstract thinking which according to Piaget is hardly developed in the previous stages. Though Piaget (1965) differ significantly from other theorists like Vygotsky (1978), at the perspectival level, where Piaget emphasize the natural maturation order in the child as compared to Vygotsky view which emphasized the importance of significant others, such as one's parent or teacher who are better equipped with experience and capable to transform the cognitive capacity of the child. Piaget didn't show how some children understand the cultural morality better than the other at the same age or how some better abstract level of understanding and some still hang back on the conventional level (e.g., Kohlberg, 1981; Candee & Kohlberg, 1987).

In conclusion, if law is to be understood as per the legal doctrine by the people, the age group matters, where some understand law as per the instructions, some live law and some critique law. Usually, the legal domain seems to be driven by this maturation-cognitive development account which is quite prevalent in the public view of cognition and also confirmed by Piaget. However, Vygotskian view seem to be collinear with the Bruner (1986) and G. H Mead view at the meta-theoretical level in which the child discovers in the context

and form the consciousness of the 'generalized other' such as rational understanding of group activity which helps the child in developing autonomy and capacity to participate in the society (see also Mead & da Silva, 2011 for detail on Mead) respectively. It is established knowledge that the brain develops with the maturation and growth that leads to the child's intellectual capacity, problem solving and relationships understanding. Is the brain development sin quo non for the development of perceptual and other cognitive and social activities? If the answer is affirmative, then it is important to understand what is the meaning of growth, embodied understanding of one's physical being and the cultural and the context under which the consciousness of self develops. If we focus on the self, society and culture, does the brain mould through the social stimuli, as discussed earlier, to develop the capacity to perceive self and others in the social context? The answer seems to be positive as there is no other scientific measure, in terms of observation, to rely on the continuity of the brain. In the legal domain time matters and any kind of fixity towards the person is scientifically inappropriate, as consciousness of oneself and others shifts because of the development and maturation. Going by the theory of Vygotsky, the competent others which comprise the society and dominant individuals also nurtures the perception about oneself and others, as the brain captures the bombardment of social, emotional and cognitive stimuli to shape the identity of the person in the present. Luria (1980) stated clearly:

> *"In order to explain the highly complex forms of human consciousness one must go beyond the human organism. One must seek the origins of conscious activity and 'categorical' behaviour not in the recesses of the human brain or in the depths of the spirit, but in the external conditions of life. Above all, this means that one must seek*

these origins in the external processes of social life, in the social and historical forms of human existence" (P. 25).

This anti-modular view of Luria denotes his sociocultural position playing an important role in our brains executive function. The judges' understanding of the neurological concepts are not facts in itself but a form of interpretations laden in the sociocultural context. The direct property of brain cells as equated to the psychological functioning and stimulating our behaviour was rejected by Luria. He advocated "that meaningful or language related activity organizes cerebral processing" (See Harre & Gillett, 1994, p. 84). The description of the brain and what its localized part do is legitimate till it contributes to the understanding of human brain but seems to be unlawful, if its structure and functions are regulated.

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