A NEUROSCIENCE PERSPECTIVE OF CONDUCT AND CAUSATION IN CRIMINAL LAW IN INDIA

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Abstract

Neuroscience is increasingly finding its association with legal discipline. The fundamental principles of Neuroscience establish certain inalienable behaviour of human being which natural law jurisprudence pleads to give legal right in different domain of law. The diagnosable behaviours of Neuroscience can also be due to non-biological social origin where law plays a dominant role. The current paper explores the association of neuroscience with two cardinal constitutes of crime, conduct and causation. Conclusion: The paper concludes with an observation that the courts in India are discussing the diagnosable neuro-scientific facts suggesting relevance of neuroscience on conduct and causation in the criminal law in India paving the way for the scientific orientation of facts presented before the court of law.

Keywords: Neuroscience, Neuro-law, Conduct, Causation.

Introduction

Neuroscience is a robust multidisciplinary science. Neurolaw is the association between neuroscience and law. It is an association by accident but has the ability to influence the foundation of legal discipline, more so in criminal law. The focus of the criminal law is to define offence, and enforcement of the same. The conditions under which the action of an individual becomes offence are the preview of criminal law**.** Conduct, the act of a person and causation, the link with harm caused to another person, are two essential constitutes of crime. The present paper explores the association of neuroscience to the fundamentals constituents of a crime, conduct and causation.

Principles of Conduct

Conduct means the outward manifestation of the action of a person. Since the law is concerned with regulation of behaviour, conduct of a person is relevant fact for the examination to find the criminality. Conduct is actus, that is reus, prohibited. Here, the scope of the law is, those conducts which stem out the volition and from the mind of a person. It is not the conduct of a person who has no biological or psychological or neurological capacity to director it according

to his volition. It can be both commission and omission. An associate concept to the conduct is act.

The definition of the word act, on careful analysis gives array of meanings. Let's take an example. "Suppose A murders B by shooting him with a pistol. What is "the act?" The usual answer would probably be, "the act of killing B." Even a brief consideration shows us that we have here a complex rather than a simple thing; that if we are to use words in an accurate, scientific manner we must recognize that the term act is here used so as to include more than one thing. Apparently it covers (i) what may be called the act (or series of acts) in a narrow sense of the word, i. e., a muscular movement (or movements) willed by the actor; (2) some reference to the surrounding circumstances; (3) the consequences or results of the movement (or movements). It seems obvious that if we are to make any careful analysis, we must distinguish between these three things; to do so, we need to have separate names for them. Perhaps we cannot do better than to restrict the word act to the narrower sense above suggested, i. e., so that it means simply a muscular movement that is willed. If we do this, we can say that in considering criminal liability we have to consider (1) the act (or acts); (2) the concomitant circumstances; (3) the consequences; (4) the actor's state of mind at the time he acts with reference to these circumstances and consequence[1]".

From this we can strictly say that, act in restricted sense lies in (1). The point no.03 though is consequence of act, and in broader definition can be considered as act, however, it shall be more logical to confine the effect to harm that is caused, which is discussed in next. Mr. Justice Oliver Wendell Holmes expressed "An act is always a voluntary muscular contraction, and nothing else. The chain of physical sequences which it sets in motion or directs to the plaintiff's harm is no part of it, and very generally a long train of such sequences intervenes[2]."

There is important difference between act and conduct. Conduct is a broader term. Conduct is important as it shows the behaviour of a person. In the law of evidence, it has special value to influence the case, and sometime, words or statement or complaint is considered through the canvass of the conduct. So much so that, conduct not only of the accused but also, of the complainant and witnesses are relevant in Indian the Law of Evidence. Section 8 of the Law of Evidence states whether prior or subsequent to the event, conduct is relevant.

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[1] Walter Wheeler Cook, *Act, Intention, and Motive in the Criminal Law*, 26 The Yale L. Journal . 8 (1917), available at https://www.jstor.org/stable/786267

[2] *Id,,*1.

Principles of Causation

Causation establishes the link or relationship between conduct and harm for the logical sequence of an offence. The association between conduct and harm, to state legally, is to establish the cause-and-effect relationship between these two. This is the causal relationship between the conduct of the person and the harm that is effect. This is significant considering its relevance under the law of Evidence as well as to establish *directly* the association of the action or conduct of a person to that of the effect he produced. So, "A causal inquiry, therefore, would first ascertain the sine qua non, or necessary, in the strictly physical sense, participation of the defendant's conduct in the production of the harm"[3]. However, the conduct should not produce incidentally the harm. According to Jeromy Hall, the conduct should *be effective enough to cause harm*. Hall finds that if the action is not that effective, it does not contribute to the casual connection to the harm. The criterion of effectiveness in causation is pivotal. "As Hall rightly notes, the use of the criterion of effectiveness in causation is not confined to law, but in law it has achieved singular significance"[4].

In the principle of causation, when we collect the manifestation of casual effect or relationship between the act and the effect, we see causation in fact. These facts are produced before the court to ascertain the causal relationship.

Section 7 of the Indian Law of Evidence also is in line with this causation principle. It considers the conditions those are necessary for happening of the crime, the *state of things* under which the crime has happened, that which *occasioned* a crime and afforded an *opportunity* for the occurrence of crime relevant. In variety of language

The extension on the principle of causation through norm is the policy of law. The reason for doing this is, another area for the determination, which though not strictly another carnal principle for the criminal theory, is consider as a principle for the determination of the accountability of criminal legislation by judicial scrutiny. The possibility of another such criterion apart from the above four was also considered by Jerome Hall himself, not he could not specify it.

Conduct, Causation and Neuroscience

[3] Gerhard O.W. Mueller*, Criminal Theory: An Appraisal of Jerome Hall's Studies in Jurisprudence and Criminal Theory*, 34 Indiana Law Journal 2 (1959), available at https://www.repository.law.indiana.edu/ilj/vol34/iss2/
[4] *Id.,*4.

The concepts of causation and conducts, though at times they overlap, however, in criminal jurisprudence specific meaning are attached to. In case of Indian Law of Evidence, 1872 too, treatments to these concepts are given separately. While section 7 deals with the Causation of the crime, making relevant facts which shows the existence or non-existence of cause or effect of an event, section 8 deals with relevancy of the conduct, which is outward manifestation of the behaviour of a person. Conduct at times, overlaps with the "act" or "omission" of a person, which shows the actus reus of a crime and helps in establishing the causation of the crime. Both Conduct and Causation help in building circumstantial facts in logical and credible form. Causation establishes the relationship Conduct of the person with proscribed Harm, .i.e. Crime.

Christopher Slobogin states that, in order to find the association of crime and neuroscience, if we consider the effect of a cause for evidence, from neuroscience perspective, that shall be a crucial link to a case. He says neuroscience could be of use for two ways, from effect to cause, and cause to effect, of showing evidence. He says, firstly, "Effect-of-a-cause evidence: Evidence tending to show that the defendant's neurological impairment predisposed him or her to commit the crime (eg research showing that people with FLD are more likely to commit crime than those without FLD)"[5], here he linked, a person who has Frontal Lobe Disorder, is more likely to commit crime than those who has no such disorders, where medical examination of this sort can be helpful for the investigating team to sway the causation towards the crime through the conduct of a person. The principles of causation as we can see, in terms of legal science, is most probability of the happening than must happening a thing, and this finding shall, in association with other facts can inch towards establishing the causation of the crime. Secondly, he says "Cause-of-an-effect evidence: Evidence showing that the defendant's neurological impairment is common in criminals or others who behave in an antisocial manner (eg research showing that many criminals have FLD)"[6], means this sort of facts can show the same causation from the cause to the effect, rather than earlier, effect to the cause.

In *Burrage v. the United States*, "the issue of causation was discussed in the context of a criminal case, The Court granted certiorari on two questions involving causality regarding a death due to alcohol and heroin use as contributing cause and foreseeable result ". "The court noted that causation has been long considered a hybrid concept. In the criminal context, the crime has to constitute both the actual cause and the legal or proximate cause". "The court's

[5] Christopher Slobogin, *Neuroscience Nuance: Dissecting The Relevance Of Neuroscience In Adjudicating Criminal Culpability,* 4 J Law Biosci 3 (2017).
[6] *Id,,*5.

decision is related only to the actual cause in the particular case. The court referred to the classic but-for test of causality – the harm at issue would not have occurred absent the defendant's conduct". "In the but-for test, the event at issue constitutes the minimum requirement for effective causation. Typically, courts consider phraseology such as results from, because of, based on, and by reason of as consistent with the but-for model".

To address the challenges to address of the association between the Neuroscience and Crime, let us take two possible ways. Firstly, to consider the neuro-scientific facts on the side of Harm or secondly, to put it on the Conduct. If we put the whole causation relationship in x and y formulae, where x is the conduct and y is the harm, then neuro-scientific facts can either be x or y and in between, causation to establish the relationship between both.

Let us first take into account the y axis, where the harm that has happened is a neuro-scientific fact. It means, that the harm that has happened is a fact that is treatable in neuroscience or neuroscience takes those facts or happening or the event for its clinical examination. One such popular example can be a traumatic effect on the mind of the victim. Here the traumatic effect on the mind of the victim is the harm in a normative sense and can be put in the y axis. And further, if the traumatic conduction which is the effect or the harm leads to disorder, it can further put in the language of Neuroscience as Post-Traumatic Stress Disorder, let's put it Z. So, the relation of the Conduct to the Harm statement in the language of the Causation shall be in the following ways.

Figure 1

Here the conduct of the accused person is leading to the PSTD of the victim and hence both are *causally* attached. Section 7 of the Indian Evidence Act, 1872 recognizes the relationships between two events or phenomena in a causal relationship, the facts can be adduced before the court of law as to the traumatic condition of the victim or the PTSD by way of neuro-scientific images/ documents like MRI, fMRI or any other tools those are used by the discipline of Neuroscience to diagnose the traumatic condition. However, to put in Y-axis all those diagnosable conditions under Neuroscience, only those conditions or disease can be assigned which has roots in sociological/physical as well as biological/ neurological origin, as the original causal origin in X-axis is sociological/physical fact i.e., the conduct of the accused.

Similarly, if we turn in to X-axis, the causation shall be considered twice. One is neurologically established with scientific principles, where the opinion of the Expert shall be considered u/s

45 of Indian Evidence Act, 1872 along with the neuro-scientific images documents like MRI, fMRI to substantiate the claims. Here due to the Neurological conditions of Z the Conduct X happened that causally lead Y, Harm/Crime. To put the statement simply here, had not there been the neurological condition the crime could not have happened.

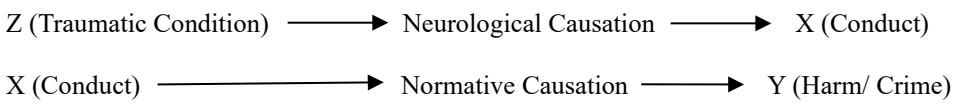

Figure 2

This way of approach to the causation is also called as interventionist causality approach. "The most widely considered approach to causality is an interventionist account If one intervenes to remove a potential cause, and the putative effect no longer occurs, then that makes it more likely that the potential cause does cause the putative effect. More formally, where X and Y are variables, X causes Y if there are some possible interventions that would change the value of X and if such intervention were to occur, a regular change in the value of Y would occur. So, this is a necessary condition for causality [7]".

In the case of *Sohan Singh vs. The State Of Madhya Pradesh*[8] the court while trying to understand the presumption of absence of statutory consent dwell upon trauma undergone by the victim as one of the relevant fact to strengthen its belief regarding the fact in issue of the case as well as a tool to give an objective interpretation to the statutory presumption.

The court states "Section 114-A no doubt addresses on the consent part of the woman only when the offence of rape is proved but it also impliedly would be applicable in a matter of this nature where the victim girl had gone to the extent of committing suicide due to the trauma of rape and yet is sought to be disbelieved at the instance of the defence that she weaved out a concocted story even though she suffered the risk of death after consuming poison. If this were to be accepted, we fail to understand and lament as to what is the need of incorporating an amendment into the Evidence Act by incorporating Section 114-A which clearly has been added to add weight and credence to the statement of the victim woman who suffers the offence of rape and a claustrophobic interpretation of this amended provision cannot be made to infer that the version of the victim should be believed relating merely to consent in a case where the offence of rape is proved by other evidence on record. If this view of the matter is taken into

[7]Carl F. Craver, William Bechtel, *Top-Down Causation Without Top-Down Causes,*22 Bio & Philo. 4 (2007)
[8] Sohan Singh @ Bablu v.State Of Madhya Pradesh, (2021) India Kanoon Org, available at https://indiankanoon.org/doc/142920032/

account relying upon the amended Section 114-A of the Evidence Act which we clearly do, then even if there had been a doubt about.....the version of the victim girl is fit to be believed due to the attending circumstances that she was subjected to sexual assault of rape and *the trauma of this offence on her mind was so acute which led her to the extent of committing suicide which she miraculously escaped*, it would be a travesty of justice if we were to disbelieve her version which would render the amendment and incorporation of Section 114-A into the Evidence Act as a futile exercise on the part of the legislature which in its wisdom has incorporated the amendment in the Evidence Act clearly implying and expecting the court to give utmost weight-age to the version of the victim of the offence of rape which definition includes also the attempt to rape "

Christopher Slobogin states the use of psycho-neurological tests to show the accused behavioural impairments can be legally relevant. This sort of evidence brings near to the concept of conduct which criminal law describes. He says, "Individualized neuropsychological findings compared against known performance baselines[9]", can be found through "Psycho-neurological testing results showing that the defendant has behavioral impairments that are legally relevant (e.g., testing showing that the defendant, say one with FLD, is highly impulsive or unable to conceptualize)."[10]

In another case, *Chenga Tshering Bhutia vs State Of Sikkim*, the single Bench of Sikkim HC while upholding the conviction of Lower Court on a case of rape, among other discussion on circumstantial evidence, also dealt with traumatic facts. Here, the court tried to figure out the delay lodging of the First Information Report due to the trauma suffered by the victim. Delay lodging of the F.I.R is one of the factors taken into consideration view it suspiciously. Here also, doubt was also cast on the veracity of the F.I.R more particularly due to fact that Medical Report of Gynaecologist could not establish the presence of the semen was that of the very accused person. The court noted "from the entire evidence on record, it emerges that the delay in lodging of the FIR was a result of the trauma suffered by the victim[11]".

Here the court tried to bring the some underlying motivation for the commission of the offence. Motive for the commission of the offence is a circumstantial fact relevant u/s 8 of the Indian Evidence Act. This is established in order to find the mens rea for the offence. Here in this case,

[9] *Id,*5.
[10] *Id,*5.
[11] Chenga Tshering Bhutia vs State Of Sikkim, (2018) Indian Kanoon Org, available at http://indiankanoon.org/doc/13171121/

no motive so far was established by the prosecution of the accused person. The court here *deconstructs* the meaning of rape as "*not an act of sex, but an act of violence, with sex as the primary weapon*[12]", and lead credence to fact of "confiding the facts of crime on the next day of occurrence around 3.30 pm" possibly due to the *trauma*.

Here the court not only took the help of neuro-scientific phenomena of trauma to lend credence of a circumstantial fact but also tried to establish the chain of circumstantial evidence deconstructing the normative meaning of rape to restore the conviction of the accused person.

Conclusion

The foregoing discussion throws light the relevance of neuroscience to the cardinal principles of criminal law, conduct and causation. The courts in India are also discussing the unwittingly clinically diagnosable facts in the domain of neuroscience to base its obiter and ratio. The association between both these domains shall pave the way for the scientific orientation of the relevant and discussible facts presented before the court of law to enforce the rights, and impose penalty on the parties.

[12] *Id,*11.