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EVIDENTIARY VALUE OF LAST SEEN TOGETHER EVIDENCE

*Arvind Kumar & Himanshu Mene**

ABSTRACT

“In short our jurisprudential enthusiasm for presumed innocence must be moderated by the pragmatic need to make criminal justice potent and realistic. A balance has to be struck between chasing enhance possibilities as good enough to set the delinquent free arid chopping the logic of preponderant probability to, punish marginal innocents.”

– Justice Krishna Iyer

*One of the fundamental principles of criminal jurisprudence is that an accused is presumed to be innocent till he is proved to be guilty. **Article 11(1) of the Universal Declaration of Human Rights, 1948** provides that everyone charged with a penal offence had the right to be presumed innocent until proved guilty according to law. Presumption of innocence is a human right as envisaged under Article 14(2) of the International Covenant on Civil and Political Rights. India is a signatory to the Covenant. Right to fair trial and presumption of innocence, are the twin essentials of administration of criminal justice. Once if a person is held to be not guilty of a criminal charge, he enjoys the benefits of such presumption of innocence which could be interfered with by the Courts only for compelling reasons and not merely because another view was possible on appreciation of evidence.’*

*The **burden of proof** in a criminal case lies on the State. Subject to the statutory exceptions, the said principle forms the basis of criminal jurisprudence in India. The policy has been that let thousand criminals be acquitted one innocent must not be punished. A reasonable doubt is not an imaginary, trivial or merely possible doubt, but a fair doubt based upon reason and common sense. It must grow out of the evidence in the case.*

*However, with the development of ‘**Last seen together,**’ principle, the investigation system and the courts have been a little bit relieved of the burden of proof. When the principle could be invoked, the burden of proof would be shifted to the accused to explain any intervening facts after the last seen together with the victim of any criminal offence. In this paper an attempt is made to analyse the principle inter alia with the help of the latest case law.*

INTRODUCTION

The theory of ‘last seen together’ is considered to be the one where two persons are ‘seen together’ alive and after an interval of time, one of them is found alive and the other dead. If the period between the two is short, presumption as to the person alive being the author of death of the other can be drawn. Time gap

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should be such as to rule out possibility of somebody else committing the crime. Last seen together principle is one of the latest principles which are taken into consideration in establishing the guilt of the accused.

In the absence of eye-witnesses and tangible evidence, it is the last resort of the prosecution in a murder case – the person last seen with the victim is presumed to be the murderer, shifting the onus onto the accused to prove otherwise or come up with an alibi.¹The foundation of the theory is based on principles of probability and cause and connection. Where a fact has occurred with a series of acts, preceding or accompanying it, it can safely be presumed that the fact was possible as a direct cause of the preceding or accompanying acts, unless exists a fact which breaks the chain upon which the inference depends.

EVIDENTIARY VALUE²

In the case where the witnesses are independent, the non-examination of the same affects the credibility of other witnesses. Evidence of an independent witness cannot be rejected merely on the ground that he was once convicted in the past. The evidence of an independent witness cannot be discarded by merely branding it as that of a coached or tutored witness.

Where the testimony of the witness is consistent, straight forward and cogent in all respects and there is no motive for false implication, then their testimony cannot be ignored on minor discrepancies. It is neither rule of law or for prudence that if nothing is found against the witness to show that they were interested or inimically disposed towards the complainant then their evidence as such has to be accepted on its face value. Where the eye witness produced had serious animus against the accused and they were interested in implicating the accused, it is incumbent on the prosecution to examine the independent

¹ 'SC uses 'last seen with' theory to convict killer,' *Times of India*, [2006] , *YuvarajAmbarMobite v. State of Maharashtra*, [2006] (10) SCALE].

² S.P. Tyagi, *Law of Evidence*, (1stvolume 2ndEdt2008), 439.

witnesses from those who were present on the scene of occurrence otherwise the court would be justified in drawing an adverse inference against the prosecution.

The evidence of witness cannot be thrown out merely because certain complaints have been made against him to higher officer by some persons when there is nothing to show that the authorities concerned found substance in any of those complaints.

HYPOTHESIS OF LAST SEEN TOGETHER:³

The hypothesis of last seen together in a criminal case of murder is a circumstance which is only a link in the chain and would be a material piece of evidence in the process of finding out as to who is the guilty person but that evidence alone would not be sufficient.⁴The only circumstances that the deceased was last seen with the accused and the dead body was found near the residential portion of the accused, are not sufficient to convict him for the offence under section 302/34 Indian Penal Code, when there is no direct evidence to connect the appellant with the crime.⁵

The last seen theory comes into play where the time gap between the point of time when the accused and the deceased were last seen alive and the deceased is found dead is so small that possibility of any person other than the accused being the author of the crime becomes impossible. Even in such a case courts should look for some corroboration.⁶

CIRCUMSTANTIAL EVIDENCE⁷

Circumstantial evidence in its very context means a combination of facts creating a network from which there is no escape for the accused, because the facts taken as a whole do not admit any inference but the guilt of the accused. The

³ S.P. Tyagi, *Law of Evidence*, (1st volume 2nd Edt 2008), 439.

⁴ *K. Nageshwar Rao v. State*, [1992] (3) Crimes 759 (ALL) D.B.

⁵ *Anant Bhujang Rao Kulkarni v. State of Maharashtra*, [1993] SC 110.

⁶ *Ram Reddy Rajesh Khanna Reddy v. State of A.P.*, [2006] (2) Crimes 69 (SC).

⁷ Manmohan Lal Sarin, *Law of Evidence*, (15th Edt., 2nd Vol, 2010,) 1323.

circumstances as a whole must be thoroughly inconsistent with the hypothesis of the innocence of the accused.⁸ Indirect Evidence is known in forensic procedure by the name of circumstantial evidence. Circumstantial evidence is species of indirect evidence which the Municipal Law deems sufficiently proximate to judicial decision.

Any circumstantial evidence can be reasonably made the basis of an accused person's conviction if it is of such a character that is wholly inconsistent with the innocent of the accused and is consistent only with his guilt. If the circumstances proved in the case are consistent either with the innocence of the accused or with his guilt,⁹ then the accused is entitled to the benefit of doubt. But it is necessary to distinguish between facts which may be called primary or basis on the one hand and interference of facts to be drawn from them on other. In order to make the proof of basic or primary facts, the court has to judge the evidence in the ordinary evidence way and in the appreciation of evidence in respect of the proof of the basic or primary facts, there is no scope for the application of the doctrine of benefit of doubt. The court considers the evidence and decides whether it proves a particular fact or not. When it is held that is certain fact proved the question arises whether the fact leads to the inference of guilt of the accused person or not, and in dealing with this aspect of the problem, the doctrine of benefit of doubt applies, and the inference of guilt in can be drawn only, if the proved fact is wholly inconsistent with the innocence of the accused and is consistent only with his guilt.

Circumstantial evidence has its own limitations. Before acting on the evidence, the court must first see whether the circumstances put forward are satisfactorily proved and whether the proved circumstance are sufficient to bring home satisfactorily the guilt to the accused. The established circumstance must not only be consistent with the guilt of, the accused, but at the same time they must be inconsistent with his innocence. While appreciating circumstantial evidence, the

⁸ S.P. Tyagi, *Law of Evidence*, (1st volume 2nd Edt 2008), 1956.

⁹ *State of U.P. v. Ashok Kumar Srivastava*, [1992] SC 840.

court should not view in isolation the various circumstances. It must take an overall view of the matter, without substituting conjecture for legal inference. The circumstantial evidence, however, should be scrutinised properly and must be sufficient to prove the prosecution case beyond reasonable doubt and the fact so proved must be incompatible with the innocence of the accused.

The circumstantial evidence must be of such conclusive nature so as to point out sufficiently proximate to a principle fact, small *factum probandum*, and in brief the circumstantial evidence must satisfy at least three tests.

The circumstance from which inference of guilt is sought to be drawn be cogently and firmly established; that circumstance should be of a definite tendency pointing towards the guilt of the accused; the circumstances taken cumulatively should form a chain so complete that there is no escape from conclusion that within human probability the crime was committed by the accused and none else.¹⁰

Andhra Pradesh v. I.B.S. Prasad Rao¹¹

The SC has gone a step ahead and laid down that further, it is not necessary that every one of the proved facts must in itself be decisive of the complicity of the accused or point conclusively to his guilt. It may be that a particular fact relied upon by the prosecution may not be decisive in itself, and yet if that fact, along with other fact which have proved, tends to strengthen the conclusion of the guilt, it is relevant and has to be considered. In other words, when deciding the question of sufficiency. The court has to consider is the total cumulative effect of all the proved each one of all those facts taken together is conclusive in establishing the guilty of the accused, the conviction would be justified even though it may be that anyone or more of those facts by itself is not decision.

CIRCUMSTANCE OF LAST SEEN

¹⁰S.P. Tyagi, *Law of Evidence*, (1st volume 2nd Edt 2008),. 2006.

¹¹ [1970] Cr LJ 733,

*Relevancy in criminal trial*¹²

In absence of proof of homicidal death, accused could not be convicted merely on theory of last seen together with deceased.¹³

Without probing further into the correctness of the last seen version emanating from PW A's evidence, even assuming that the deceased did accompany the accused in their vehicle, this circumstance by itself does not lead to the irresistible conclusion that the appellant and his companion had killed him and thrown the dead body in the culvert. It cannot be presumed that the appellant and his companions were responsible for the murder, though gave suspicion arises against the accused. There is considerable time gap between the deceased boarding the vehicle of the appellant and the time when PW B found the dead body. In the absence of any other links in the chain of the circumstantial evidence, it is not possible to convict the appellant solely on the basis of the last seen evidence, even if the version of PW in this regard is believed. In view of this, the evidence of PW as regards the alleged confession made to him by the appellant assumes importance.¹⁴

ORAL EVIDENCE¹⁵

According to section 3 of Evidence Act, oral evidence has been defined to be all statements which the court permits and requires to be made before it by witnesses in relation to matters of fact under inquire. All facts except the contents of document may be proved by oral evidence under circumstance, when evidence of their contents is admissible as secondary evidence. It is recognized that the only rule that can be an application of the best evidence formula is one that excludes secondary evidence of documents, if the originals are available. That it has no connection with the exclusion of hearsay is well demonstrated,

¹²S.P. Tyagi, *Law of Evidence*, (1st volume 2nd Edt2008), 2016.

¹³*Madho Singh v. State of Rajasthan*, 2003(2) Crimes 111 SC.

¹⁴*JaswantGir v. State of Punjab*, 2005(12) SCC 438.

¹⁵ManmohanLalSarin, *Law of Evidence*, (15thedt., 2nd vol.2010), 1336.

apart from the historical factor, by the fact hearsay evidence not coming within any of the exception is not receivable.

EYE-WITNESS¹⁶

The criminal justice system relies heavily on eyewitnesses to determine the facts surrounding criminal events. Eyewitnesses may identify culprits, recall conversations, or remember other details. An eyewitness who has no motive to lie is a powerful form of evidence for jurors, especially if the eyewitness appears to be highly confident about his or her recollection. In the absence of definitive proof to the contrary, the eyewitness's account is generally accepted by police, prosecutors, judges, and juries.

Where the accused caused the death of the deceased by stabbing and the conduct of eye-witnesses was un-natural and their statement were not corroborating and when recovery of weapon by itself did not connect the accused with murder and when the recovery of watch belonging to the deceased from the person of the accused also did not connect him with the offence of murder even by invoking section 114 of the Indian Evidence Act, then apex court of India set aside the conviction of the accused under section 302, IPC but convicted the accused under section 411, IPC for being in possession of stolen property.¹⁷ Where presence of an eyewitness at spot and his deposition did not inspire confidence, conviction could not be sustained.¹⁸

When the eye witnesses are related to deceased and where their evidence did not suffer from any infirmity, then conviction and sentence passed by lower court should be upheld.¹⁹ When the presence of an eye witnesses, the brother of the deceased is established, then his evidence cannot be rejected merely on the ground that he happened to be the brother of the victim.²⁰ Where the eye

¹⁶ S.P. Tyagi, *Law of Evidence*, (1st volume 2nd Edt 2008).

¹⁷ *Surjit Singh v. State of Punjab*, 1993 Cri. [1994] S.C. 110.

¹⁸ *Ram Kumar v. State of (N.C.T. of Delhi)* 2007(4) Crimes 46 (Delhi).

¹⁹ *Visbram v. State of U.P.*, [1993] A.C.C.61.

²⁰ *Ram Asrey v. State of U.P.*, 1993 (2) Crimes 339 (S.C.),

witnesses account in found credible and trustworthy, medical opinion to alternative possibilities is not accepted as conclusive.²¹ Where eye witnesses in murder case were consistent in their evidence and their testimony was found credit worthy, mere fact of their relationship itself was not sufficient to discredit their evidence.²² When eye witnesses account of murder case was of convicted related to each other and there was conflict between their evidence and medical evidence, witnesses could not be relied on.²³

ASSESSMENT OF EYE-WITNESS

The evidence of eye witness has to be assessed as a whole and the impact created by such evidence has to be seen. If it is passing the test of truth and inspire the confidence in the judicial mind sufficient enough to hold the accused guilty of crime, there is no error whatsoever in accepting such evidence and recording conviction against accused qua the crime for which happens to be charged and happens to be tried.²⁴

Lakhanpal v. State of M.P.²⁵

PW son of the uncle of the deceased deposed that on the previous day noon, he saw the deceased and 'A' going to a war, and the deceased and 'A' got into an auto and 'A' and deceased got down at a place called Cherkalam. There were many people in the war and there was ample time gap between the incident and the time when the PW is stated to have seen 'A' with the deceased.

In this case, motive also is not proved. Ordinarily, there must be object and motive for every criminal act. Motive is something which prompts a man to do an act. If there is direct evidence regarding the assault which is worthy of credence it can be believed and absence of evidence regarding motive is not material. Unless and until accused and deceased are seen together at a time very

²¹ *State of M.P. v. Dharkole @ Govind Singh*, 2004(4) Crimes 270 (S.C).

²² *Gonchi Rajasbekher Reddy v. State of A.P.*, 2006(2) Crimes 87 (S.C.).

²³ *Sukhdev v. State of U.P.*, 2004(2) Crimes 166 (DB) (All).

²⁴ *Narayan v. State of M.P.*, 1997 (2) J.L.J. 273.

²⁵ [1979] SC 1620.

proximate to death, accused cannot be convicted on basis of last seen theory. The evidence of last seen of a PW, even if believed cannot be pressed into service by the prosecution, on account of the long-time gap, that too during day time. It would be strong piece of evidence when the accused persons are found in the company of the deceased at various places immediately preceding the day of the death of deceased.

CONCLUSION

At the end of my research paper come to the conclusion that, last seen theory is totally depends upon the probability. It is a last theory which is emerged for putting the burden of criminal cases in certain circumstance. This theory totally depends upon presumption and time. In this theory, there is need of more development, because it is totally based on presumption. Without any corroborative evidence, this theory should not be treated as conclusive proof for the conviction, because it's a question of life of any person. It should be changeable on the purview of the judges because it's question of life or death.

CYBER-SQUATTING AND DOMAIN DISPUTE UNDER TRADEMARK LAW (THE NAME GAME)

-Gunjan Jain*

ABSTRACT

Cyber law is evolving at a faster pace and in every direction crossing its own boundaries. Today, the most skirmished area of this law is the name game dispute. The use of domain of other well-known trademark companies for wrongful use of their goodwill has become one of the most challenging issues as trademark infringement in trademark laws. United States introduced cyber-specific trademark legislation which is known as Anti cyber squatting infringement Act, 1999 (ACPA).

The concept of cyber squatting dates back much before the perspicacity about the commercial opportunities on the internet. The main targets of the cyber squatters are well-known trademark companies as they sell products or commence activities in their name.

INTRODUCTION

With an increased change in the working culture, there have been new issues cropping up and one of them is domain name disputes. As more companies are moving towards putting information and products online, more no. of registrations are also increasing and hence, conflicts over domain names are increasing. In simple words, domain names are an address to internet.¹ Domain name connects people and they can be differentiated by their suffixes. The .GOV represents a government entity, .COM represents a commercial enterprise, .ORG indicates a non-profit organisation, .TRAVEL is for travel agencies, .JOBS is for employment related sites, .NET is for network and internet related organisations and .IN or .UK or .US, etc. represents the countries. The misuse of such facility starts as soon as popular brand names are misspelled or deliberately confused to divert the website traffic. The squatters use the same or similar name with different suffixes for example NAME.COM is the well-known trademark, it

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¹ Daniel A. Tysver, *BITLAW* <<http://www.bitlaw.com/internet/domain.html>>, accessed on August 24, 2015.

can be manipulated as NAME.CO.IN and the common public fails to identify the trap.

TRADEMARK CYBER SQUATTING

The term itself describes that when somebody registers or uses domain name with ill intentions which is similar or confuses the common public with some well-known trademark. A trademark can be the slogan, logo or the domain name itself. However, all domains are not trademarks. The certain guidelines are being drawn by various cases (REDIFF, SATYAM, YAHOO, etc.), they are:²

- The defendant should have sold/ offered its goods/ services in a manner that deceives the public into thinking that the goods/ services of the defendant are in fact the plaintiff's.
- Misrepresentation by the defendant to the public should be established.
- Loss/ likelihood of it should be established.

CYBER SQUATTING IN THE US

The numbers of cases in the US have seen an increased graph since 1994 when the first case was registered. Dennis Toeppen is a well known name in the country who registered most of the trademarks as well as well known trademarks as domain names in US. There have been many cases registered against Toeppen for issuing similar domain names; one of them is *Panavision v Toeppen*³. In this case, Toeppen issued various similar domain names to different owners such as Panavision.com, panaflex.com, etc. The plaintiff got the remedy in this case as the court held that offer to sell a domain name similar to a trademark to the owner of such trademark, amounts to commercial use and hence it is not permitted.

²Christine Chiramel, 'Advocate, The Domain Name Chaos – A Legal Perspective' [2011], <<http://www.mondaq.com/india/x/142874/Trademark/The+Domain+Name+Chaos+A+Legal+Perspective>>, accessed on August 20, 2015.

³ *Panavision v Toeppen*, [1998] 141 F. 3d 1316.

Adding to it, court in the case of *Card Service International Inc. V. McGee*⁴, stated that a domain name is more than a mere internet address, it identifies the internet side to those who reach it, much like a person's name identifies a particular person, or, more relevant to trademark disputes, a company's name identifies a specific company.

With an increase in delivering justice to such cases, people started believing that anything can be bought under cyber squatting and there court in *Virtual Works, Inc. V. Volkswagen of America, Inc.*⁵, clarified that a mere resemblance of a domain name to a famous trademark does not prove bad faith. There must be circumstantial and direct evidence establishing the bad faith intent of the cyber squatter. Hence, this is when a need for enacting some legal remedy against cyber squatting was felt and as a result the Anti- Cyber squatting Consumer Protection Act, 1999 in US came in amending Lanham Act by adding a new Section 43(d).

The ACPA laid down a specific line to trace the cyber squatters as “the one who, with a bad faith intent to profit from that mark,” “registers, traffics in or uses a domain name” that is either identical or confusingly similar to “distinctive” mark or is identical, confusingly similar or dilutive of a “famous mark”.⁶ It punishes the cyber squatter but does not entitle the owner of a well known trademark to attain monopoly in the market. Therefore the one who registers first becomes the legitimate user of such domain name. This rule can be better understood in *Playboy Enterprises Inc. v. Netcape Communications Corp.*⁷, in which one non-Playboy sponsored banner advertisement appeared whenever an internet user entered “playboy” or “playmate” as a search term, in this case, court did not allow injunction as it observed that Playboy would not suffer irreparable losses in case such use of word “play” is done by the respondent.

⁴ *Card Service International Inc. V. McGee*, [1997] 50 F. Supp. 737 (E.D. Va.)

⁵ *Virtual Works, Inc. V. Volkswagen of America, Inc.*, 238 F. 3d 262.

⁶ Martin Samson, *Internet Library of Law and Court Decisions*, <http://www.internetlibrary.com/publications/anticybsquattSamson9-05_art.cfm>, (accessed on November 29, 2015).

⁷ *Playboy Enterprises Inc. v. Netcape Communications Corp.*, [1999] 52 U.S.P.Q. 2d 1162 (C.D.Cal.)

CYBER SQUATTING IN INDIA

Cyber squatting in India is not that famous as compared to other countries. The Indian courts have drawn the distinction between trade mark and domain name unlike other countries. In the famous *Satyam case*⁸, the respondent registered two domain names as www.siffynet.com and www.siffynet.net which were similar to the plaintiff's domain name www.sifynet.com. The appellant had good reputation in the market and in June 1999, the word "Sify" was coined through Internet Corporation for Assigned Names and Numbers (or "ICANN") and WIPO. The appellant filed a suit in the City Civil Court and the judge granted a temporary injunction against the respondent stating that the appellant was the prior user of the word "Sify". The respondent appealed in the High Court and it was held that as both the parties have invested huge sums of money in the business, the customers would not be misled as they are entirely different business entities and hence they can use the domain names. Satyam Infoway Ltd. filed a Special Leave Petition in the Supreme Court and these three issues were coined:

1. Whether a domain name can be said to be a word or name which is capable of distinguishing the subject of trade or service made available to potential users of the internet.
2. Whether internet domain names are subject to the legal norms applicable to other intellectual properties such as trademarks.
3. Would the principles of trademark law and in particular those relating to passing off apply?

The Hon'ble Supreme Court held that a large number of trademarks containing the same name can comfortably co-exist because they are associated with different products belonging to business in different jurisdictions. The SC further stated that the use of similar domain name may lead to diversion of users as ordinary customers seeking to locate the functions available under one domain

⁸*Satyam Infoway Ltd. v Sifynet Solutions (P) Ltd.*, [2004] SC 3540.

name may be confused with another domain name which offers dissimilar services. Thus, the customers may conclude misrepresentation, which will result in loss of customers. Thus the Hon'ble SC held that a domain name may have all the characteristics of a trade mark one can also file an action for passing for passing the same.

The Hon'ble Supreme Court also mentioned that “the distinction lies in the manner the two operate. A trademark is protected by the laws of a country where such trademark may be registered. Consequently, a trade mark may have multiple registrations in many countries throughout the world. On the other hand, since the internet allows for access without any geographical limitation, a domain name is potentially accessible irrespective of the geographical location of the consumers. The outcome of this potential for universal connectivity is not that a domain name would require worldwide exclusivity but also that national laws might be inadequate to effectively protect a domain name.”

Similarly in *Reddif Communication v. Cyberbooth*⁹, the respondent used radiff.com which was similar to rediff.com court observed that the value and importance of a domain name is like a corporate asset of a company. The court also mentioned that the domain names are of importance and can be a valuable corporate asset and such domain name is more than an Internet address and is entitled to protection equal to a trade mark.

Another most famous case in India is *Yahoo Inc. v. Akash Arora*¹⁰, the plaintiff filed a suit seeking for permanent injunction against the respondent who was using 'Yahooindia.com'. The respondent argued that the domain name 'Yahoo' is not registered in India and hence cannot be an action of infringement of the registered mark. Adding to this, the respondent also stated that Yahoo has a general dictionary meaning and is not innovative and therefore, it cannot acquire any distinctiveness and there is no deception. The court held that Yahoo served

⁹ *Reddif Communication v. Cyberbooth*, [2000] Bom 27.

¹⁰ *Yahoo Inc. v. Akash Arora*, [1999] 78 DLT 285.

services socially that has global recognition and hence the provider of the same is to be provided protection against people using it, hence, injunction was granted.

Similarly, in *Dr. Reddy's Laboratories Limited v. Manu Kosuri*¹¹, the court granted permanent injunction against the respondent for using 'drreddyslab.com' even when Dr. Reddy is globally recognized. Hence the respondent was held liable for passing off.

Apart from all this, there is one important point to be noted in that as far as India is concerned, there is no legislation which explicitly refers to dispute resolution in connection with domain names but the operation of the Trade Mark Act, 1999 is not extra territorial and may not allow for adequate protection of domain names, this does not mean that domain names are meant to be legally protected to the extent possible under the laws relating to passing off.

CYBER SQUATTING IN UK

There is no specific law on cyber squatting in the UK but the issues are solved by applying fraud laws and the Trade Marks Act. One of the leading cases in the UK is *Prince Plc v. Prince Sportswear Group Inc.*,¹² where the plaintiff was a computer service company based in UK got prince.com as its domain name in 1995 with Network Solutions Inc. ("NSI"). The defendant also applied for the same domain name in 1997 which got rejected because of already existing domain name. The defendant then wrote a letter to the plaintiff asking to assign the domain name in favor of defendant to avoid litigation. The plaintiff filed a writ application for seeking declaration about the registration of the domain name and also that the treat was unjustifiable and hence seeking an injunction against any further threats. The court granted injunction preventing the defendant from any further threats of infringement proceedings against the plaintiff.

¹¹ *Dr. Reddy's Laboratories Limited v. Manu Kosuri*, [2001] (58) DRJ 241

¹² *Prince Plc v. Prince Sportswear Group Inc.*, [1998] FSR 21

Another important observation was in the case of *Harrods Ltd. V UK Network Services Ltd.*,¹³ in which the defendants got “harrods.com” registered as their domain name with an intention to sell the same to the plaintiff. The plaintiff filed a suit against the defendants on the grounds of passing off, trademark infringement and conspiracy. The court granted injunction in favour of the plaintiff holding defendant liable for illegitimate use of trademark of original owners.

OTHER METHODS OF CYBER SQUATTING

Typo Squatting

Typo Squatting is also known as URL hijacking which is a form of Cyber Squatting¹⁴ which misuses the typographical errors by the internet users and lead them to another similar websites that are designed for malicious purposes. The users feel that they are accessing the correct website as such websites are designed in such a manner that creates confusion in identifying the real and fake website. Such websites steal certain personal information including important passwords, credit card nos. and other details by spreading *drive-by-download* software that scans the entire system without asking for acceptance/permission.

In the case of *Texas Int’L Property Associates v. Hoerbiger Holding AG*,¹⁵ in which the registrant owned more than 500,000 domain names, registered as “horbiger.com” which is similar to “hoerbiger.com”. The court went on to say that the registrant’s use of the similar domain name constituted malice intentions and hence such domain names were struck down.

Another case was about the parody website of GodHatesFags.com which is GodHatesFigs.com. The website GodHatesFags.com is famous for picketing soldiers’ funerals and chanting about God’s hate for the world whereas, in the

¹³ Unreported 1996 (Ch D).

¹⁴ Robert Sicitiano, *What is Typosquatting, M Blog Central*, <<https://blogs.mcafee.com/consumer/what-is-typosquatting/>>, accessed on June 12, 2015

¹⁵ *Texas Int’L Property Associates v. Hoerbiger Holding AG*, [2009] 624 F. Supp.2d 582.

parody website, the registrants mentioned about the biblical reference to Jesus' dislike of figs and fig trees.

Phishing

According to the dictionary meaning, Phishing means to try to obtain financial or other confidential information from the Internet users, typically by sending an email that looks as if it is from a legitimate organization, usually a financial institution, but contains a link to a fake website that replicates the real one. As in the case of *Atlas Copco AB v. Atlascopcoiran.com*,¹⁶ in which the court found that the defendant's phishing scam was evidence of its bad faith intent to profit from the plaintiff's trademark and hence the claim brought under the ACPA was given in favour of the plaintiff.

Domain tasting and Domain kitting

Domain kitting is that practice in which the registrant keeps on registering and deleting a domain name so that it can into effect without paying for it. Whereas, Domain tasting is a practice of buying numerous domain names and then exploiting a five-day grace period of ICANN's calendar to determine which names would be profitable to own and receive a refund.

Gripe Sites

Gripe Sites are websites that are aimed at making consumers more aware of deficient goods and services.¹⁷ They are also known as "complaint" or "sucks" sites. With an increase dependence on internet, the idea of gripe sites developed in favour of the consumers who feel that they need a common medium and source to raise their voices against being treated unfairly. The web has enabled individuals to address their problems at a global level. This all started in the year 1996 in connection with the controversial practices of McDonalds and the retail giant K-Mart.¹⁸

¹⁶ *Atlas Copco AB v. Atlascopcoiran.com*, [2008] 533 F.Supp.2d 610 (E.D. Va.)

¹⁷ Macmillan Dictionary, 2002.

¹⁸ Macmillan Dictionary, 2002.

In *TMI, Inc. v. Maxwell*,¹⁹ the court observed that the registrant violated the Anti Cyber Squatting Act as the gripe site created was only with an intention to inform the potential customers about a negative experience with the trademark holder. Hence it was established that there were insufficient evidences to prove that there was bad faith.

In *Utha Lighthouse Ministry v. Found for Apologetic Info. And Research*,²⁰ the website in issue was critiquing the Church of Latter-day Saints. The court went on to say that the registrant's use of the gripe site was entirely non-commercial and also went on to say that there was no likelihood of conclusion on the part of registrants

In *Coca-Cola Co. v. Purdy*,²¹ the court observed that there were sufficient evidence to prove the bad faith on the side of registrants as they had almost registered 70 domain names, there was an offer to stop using the mark if the trademark owner publishes the registrant's opinion piece on its editorial page, the website provided links to sites that solicit funds for the antiabortion movement and sell merchandise, and the record contained evidence of actual confusion.

Even though gripe sites are active in resolving problems but as observed from the practices, they are not relied upon by majority and hence in year 1999, ICANN adopted a Uniform Dispute Resolution Policy (known as "URDP").

DISPUTE RESOLUTION UNDER UDRP

UDRP is like arbitral proceedings. The cyber squatting issues are generally not referred to the courts because these include cost and lengthy time to attain justice. However, when cyber squatting is established, the issue can be merely dealt by summary judgment that reduces delay and is cost effective. Trademark

¹⁹ *TMI, Inc. v. Maxwell*, [2014] 368 F. 3d 433, 438-39 (5th Cir.)

²⁰ *Utha Lighthouse Ministry v. Found for Apologetic Info. And Research*, [2008] 527 F.3d 1045 (10th Cir.)

²¹ *Coca-Cola Co. v. Purdy*, [2004] 382 F. 3d 774, 776 (8th Cir.)

experts consider the ICANN arbitration system to be faster and less expensive.²² The ICANN come into the scenario in 1999 and adopted Uniform Domain Name Dispute Resolution Policy (UDNDRP). There are four nonexclusive circumstances that, in practice, cover a good bit of the universe of possibilities. Bad faith is found on proof of 1) extortion, 2) expropriation, 3) competitor foul play, and 4) impersonation. The first three are distinguished by focusing on registration. The fourth targets mark owners through their use of the domain name. In counterpoint to the acts of bad faith there are three circumstances in defence of the registration of the domain name, which are also nonexclusive. Forfeiture is not warranted where the domain name holder is 1) making a bona fide offering of goods or services before any notice of a dispute; 2) commonly known by the domain name, and 3) using the domain name for non-commercial or fair use.²³

After registering a complaint and proving the above mentioned contentions, if the other party is found guilty then the exclusive rights of that domain will be handed over to the complainant as no other financial remedies are available under UDNDRP.

²² Stephen Elias and Richard Stim (Nolo), 'Cybersquatting: *What It Is and What Can Be Done About It*', <<http://www.nolo.com/legal-encyclopedia/cybersquatting-what-what-can-be-29778.html>>, accessed on September 13, 2016

²³ Gerald M. Levine, 'Understanding the legal ptions used to fight cybersquatting', *Network World*, accessed on January 14, 2016.

USE OF POLYGRAPH TESTS IN CRIMINAL INVESTIGATION

-Eesha Shrotriya & Vipula Bhatt*

ABSTRACT

The work focuses on polygraph test, its scientific validity and legal admissibility. The scientific reliability of the test is often challenged because there is a lack of standardization, which is the most important requisite of a "test". The problem of "contamination" also makes the test questionable, as the examiner brings his personal biases into the interpretation of the test results. The basic concept behind the test is itself debatable and lacks consensus of scientific community. The subjects tend to use several countermeasures to evade the test, which can be learnt easily. Some subjects might not perceive their acts as criminal since they function in an alternate morality. The work briefly discusses the evolution of laws related to polygraph tests in the United States of America. Article 14 of the International Covenant on Civil & Political Rights contains the minimum guarantees provided to the person accused of an offence and bars compelled self incriminatory testimony. Under the Indian Constitution, legal protection extends only to the evidence obtained from the accused and that which is self incriminatory. The relevant provisions of the Indian Evidence Act, 1872 and the Code of Criminal Procedure, 1973 have also been examined. The statutes fail to provide a system of regulation for conducting the test on the victims and witnesses. Even in the case of accused, detailed and specific guidelines related to the procedure of administering the test have not been provided in any statute. The reliability of polygraph test being questionable, they cannot be depended upon as conclusive evidence in criminal investigation.

INTRODUCTION

“Any sufficiently advanced technology is indistinguishable from magic.”

-Arthur C Clarke

It is often assumed that there is a magical character surrounding polygraph tests. Common understanding of these tests assumes that they compel a guilty individual to bare his soul, and to accept the crime that he has committed. It is not in any way less than magic in this sense. But, it is necessary to understand that these tests are science, and not magic. They are vulnerable to inaccuracies and errors. The assumption of invincibility of these tests can lead to grave

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consequences. Not only can they be inaccurate, but intrusive as well. This article attempts to examine the scientific reliability and the legal validity of the tests.

WHAT IS POLYGRAPH?

Employees Polygraph Protection Act of 1988 defines the term 'Polygraph' which means an instrument which-

- Records continuously visually, permanently and simultaneously as minimum instrumentation tendered; and
- Is used, or the result of which is used, for the purposes of rendering a diagnostic opinion regarding the honesty or dishonesty of an individual.¹

PRINCIPLE

The basic principle behind all polygraph tests for detecting deception is psycho physiological in nature. A physical or psychological threat will automatically elicit a complex set of physiological reactions manifested as changes that readily measure with a polygraph instrument.² These changes include increase in palmar skin conductance and blood pressure and decrease in respiratory activity and peripheral circulation.³ This is based on the theory that when a person is deceiving, his body's physiological and psychological responses will be different from and inconsistent with the standard reactions in normal circumstances. This is because of fear of detection, enhanced attention, information processing, orienting reflexes, conflict and arousal.⁴

PROCEDURE

During the lie detection test a corrugated rubber tube is tied around the subject's chest (pneumograph) that measures respiratory changes; an inflated cuff wrapped round the upper arm (the sphygmograph) which measures cardiovascular changes; electrodes attached to the palm or fingers to measure the electrodermal

¹ Employees Polygraph Protection Act 1988, s 2001(4).

² RF Thomson, *The Brain: A Neuroscience Primer* (3rd edn, Worth 2000).

³ RM Stern and others, *Psychophysiological Recording* (Oxford Press 1980).

⁴ JA Podlesny and DC Raskin, *Physiological Measures and the Detection of Deception*.(1977) 84 Psychological Bulletin 782-799.

response (G.S.R); and a transducer attached to the thumb (the plethysmograph) for measuring the blood volume reflecting the pulse rate. These recordings collectively are known as Polygram, which is evaluated to find out whether during the lie detection test the subject experienced emotional stress with any of the questions asked.⁵

The paper limits itself to the scientific evaluation of the Control Question Test or Control Question Test devised by John E Reid.

The concept behind this test was first propounded by Summers. According to him, the comparison questions are “emotional standards” designed to “evoke within the individual rather intense psychogalvanic reactions due to surprise, anger, shame or anxiety over situations he would ordinarily prefer to conceal”⁶ Reid further advanced this concept and formulated the Control Question Test. In this test, the physiological reactions to relevant question, directly addressing the matter under investigation are compared to those produced by control questions.⁷ Control questions are intentionally vague, cover a long period of the subject’s life and include acts that most individuals have committed but are embarrassed or reluctant to admit in a polygraph test.⁸ Reid explained this concept, saying that- “the magnitude of the response to that question is to be compared with responses to questions pertaining to the actual crime, and it may therefore serve to include or exclude definitely the subject as a suspect in the crime under investigation.”⁹ It is usually observed that innocent subjects are more concerned about the control questions than the relevant questions and thus react more strongly to them. Stronger reaction to the control questions is an evidence of the subject’s truthfulness. Whereas, stronger reactions to relevant

⁵ BR Sharma, *Forensic Science in Criminal Investigations and Trials* (3rd edn, Universal Law Publishing Company Pvt Ltd 2001) 17-24.

⁶ JE Reid, *A Revised Questioning Technique in Lie Detection Tests* (1947) 37 *Journal of Criminal Law, Criminology and Police Science* 542-547.

⁷David Faigman and others, *Science in the Law* (West Group c2002) 576.

⁸*Ibid.*,576.

⁹ Reid, *supra* note 5 at 544.

questions show that the subject was being deceptive to the relevant questions.¹⁰ An example of control question would be “Have you ever thought of taking revenge against someone who has done you a wrong?”¹¹ This is an act that most of the people would have done in their lives and thus it would elicit a strong response from the innocent subjects as well.

Polygraph tests are not limited to test results only, but also include the correct interpretation of those results. And thus it would be more appropriate to talk about the whole “polygraph process” rather than “polygraph test” only.¹²

SCIENTIFIC RELIABILITY OF THE PROCESS

The scientific validity of the CQT is questionable. According to Messick – validity is an overall evaluative judgment of the degree to which empirical evidence and theory support the adequacy and appropriateness of the interpretations and actions based on test scores.¹³ Thus, when evaluating a test, it is not sufficient that the results conform to some standard criterion. It is equally important to have a theoretical foundation, as we need to generalize the results from the experiments to realistic situations, which is not possible without a theory.¹⁴

One of the major problems associated with the CQT is confusion related to the nature of “control questions “to be used in the test. The word “control” suggests that they should perfectly match with the relevant questions. The only difference should be in the factor being tested, which is the relation of the subject to the commission of the offence. Therefore, ideally, a subject must not be able to distinguish between the control questions and the relevant questions. However,

¹⁰ DC Raskin. And JC Kircher, *Comments on Furedy and Heslegrave: Misconception, Misdescriptions, and Misdirections* (Jessica Kingsley Publishers 1991).

¹¹ Dennis Howitt, *Forensic & Criminal Psychology* (Pearson Education Limited 2002) 255.

¹² Ibid.

¹³ S Messick, 'Validity of Psychological Assessment: Validation of inferences from persons' responses and performances as scientific inquiry into score meaning' [1995] 50 *American Psychologist* 741-749.

¹⁴ G Ben-Shakhar A Critical Review of the Control Question Test (CQT) in Murray Kleiner, *Handbook of Polygraph Testing* (Bath Press 2002) 106.

this is not the case. The nature of both types of questions is explicitly different. Control questions are vague and general, whereas relevant questions are specific to the crime and very particular. If the subject is aware of the principle and rationale behind the test, he can easily infer that only the relevant questions pose a real threat. This flaw in the test can lead to false positive outcomes which mean that the innocent can be classified as guilty.¹⁵

The basic principle behind the test is that an individual's body gives an indication of his deception by corresponding physiological responses. However, there is no "profile" of these deceptive reactions. Everyone can have a distinct set of biological responses in such cases.¹⁶

Also, the polygraph test measures the stress caused by deception and not deception. Stress and deception are two different things. Deception may not necessarily induce stress in everyone.¹⁷

The lack of standardization is another problem associated with polygraph tests. Psychological studies reveal that the basic requirement of a "test" is standardization.¹⁸ The pre-test interview, which is conducted by the interrogator, is an important factor in determining the questions to be asked during the test. However, this interview is entirely subjective. Thus the determination of questions too depends upon the intuition of the interrogator and the kind of opinions he forms during the interview. According to Honts and Perry, the kind of questions also depends upon the motivation of the examiner. The questions asked by an examiner motivated to produce a deceptive result would vary from the questions asked by an examiner predisposed to produce a truthful result. Similarly an unethical examiner would ask narrow and inappropriate control

¹⁵ Ibid,118.

¹⁶ John Savino and Brent Turvey, *Rape Investigation Handbook* (Elsevier Academic Press 2005) 99.

¹⁷ Ibid.

¹⁸ Kleiner, *supra* note 15 at109.

questions.¹⁹ Thus the results would vary according to the techniques used by different examiners.

Another problem is that of “contamination” of the test. The examiners are generally aware of the criminal record of the subject, the evidence against him, and other details of the case. This prior information available to the examiner might contaminate the test because the examiner would not completely depend on the objective physiological results produced by the test. He would also take into account other characteristics of the subject’s behaviour during the interrogation. Thus, he would subconsciously form a hypothesis regarding the guilt of the subject which would influence his interpretation of the results. This has been termed as the “confirmation bias” and is quite harmful from a legal perspective.²⁰

Another major problem associated with polygraph tests is that of countermeasures adopted by the subjects in order to deceive the examiner and to “cheat” in the test. Countermeasures are of two types: general state countermeasures which affect the general physical and mental state of the individual and specific-point countermeasures which are used to produce physiological changes at specific stages.²¹ The underlying principle is quite simple: produce similar responses to control questions as well as relevant questions. The techniques used to do this include- biting one’s tongue, pressing down hard with one’s toes, doing mental arithmetic etc.²². Such techniques can be learned very easily and are even available on the internet. An article on the highly popular and easily accessible website wiki How is titled “How to Cheat a Polygraph Test?”²³. The article provides a number of ways to cheat on a polygraph test including

¹⁹ CR Honts & MB Perry, “Polygraph Admissibility: Changes and Challenges” [1992] 16 Law and Human Behaviour 357-379.

²⁰ G Ben Shakhar, “Clinical Judgment & Decision Making in CQT Polygraphy: A Comparison with other Pseudoscientific Applications in Psychology” [1991] 26 Integrated Physiological & Behavioural Science 232-240.

²¹ David Faigman and others, *supra* note 8 at 589.

²² Howitt, *supra* note 12 at 256.

²³ [http://www.wikihow.com/Cheat-a-Polygraph-Test-\(Lie-Detector\)](http://www.wikihow.com/Cheat-a-Polygraph-Test-(Lie-Detector)).

mental countermeasures. A research conducted showed that the rate of mistakes made by examiners testing “guilty” subjects who used countermeasures ranged between 50% and 70%.²⁴ Mental countermeasures are more problematic because they are difficult to detect. The use of countermeasures usually results in false negative outcomes which mean that guilty suspects are classified as innocents.²⁵ Certain psychopathic criminals function in an entirely different universe and an alternate form of morality. Thus, they would produce no biological response while deceiving. Certain normal persons too may have convinced themselves of certain “truths” or they simply might have forgotten certain details. Their “lies” would not be detected by the polygraph test.²⁶

LEGAL VALIDITY

It has been argued that subjectivity in a polygraph examination is not the primary problem as subjectivity contaminates other investigative procedures as well. The primary problem is that the ethical and legal regulations in the conduction of polygraph tests are not very strict. Such tests are not even conducted in the presence of lawyers. The subjects are not given many of the legal protections which are usually guaranteed to them in regular court proceedings²⁷

The privilege against self-incrimination is a fundamental canon of common law criminal jurisprudence. The characteristic features of this principle are

- The presumption of the innocence of the accused
- Burden of proof lies on the prosecution to establish his guilt
- Accused can't be forced to make any statement against his will.

²⁴ CR Honts & others, “Mental & Physical Countermeasures reduce the accuracy of Polygraph Tests” [1994] 79 Journal of Applied Psychology 252-259

²⁵ Kleiner, *supra* note 15 at 114

²⁶ Savino and Turvey, *supra* note 17

²⁷ G Ben Shakhhar *et al*, “Trial by Polygraph: Scientific & Juridical Issues in Lie Detection” [1986] 4 Behavioural Sciences & the Law 459-479

In USA, the first judgment on polygraph law came in *Frye v United States*²⁸. In this case, a crude form of polygraph test was used. The court devised the “Frye test” in this case. It was held that:

“...while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.”²⁹

This test dominated the admissibility of scientific evidence including polygraph evidence for around 70 years.³⁰ In 1989, in the case of *United States v Piccinonna*³¹, it was held that “since the Frye decision, tremendous advances have been made in polygraph instrumentation and technique:” that “in recent years polygraph testing has gained widespread acceptance as useful and reliable and scientific tool:” and that “a per se rule disallowing polygraph evidence is no longer warranted.”³² In the case of *Daubert v Merrell Dow Pharmaceuticals Inc*³³. Decided in 1993, it was held that the austere Frye approach to of waiting for general acceptance of the scientific community was too restrictive.³⁴ Rule 702 of Federal Rules of Evidence was taken into consideration. It states that expert testimony can be placed before the jury if it is based on “scientific knowledge” and if it will “assist the Trier of fact” to decide the fact in issue. This case laid down certain guidelines to determine the admissibility of the evidence which are known as Daubert standards. These include:

1. Whether the technique is capable of being tested.
2. Whether it has a known rate of error in its application.
3. Whether it has been subjected to peer review and publication.

²⁸*Frye v United States*, 293 F.1013[D.C.Cir.1923]

²⁹ *Ibid*, 1014

³⁰ Charles W Daniels, “Legal Aspects of Polygraph Admissibility in the United States” in Murray Kleiner (ed.), *Handbook of Polygraph Testing* (Bath Press 2002) 328

³¹ *United States v Piccinonna*, 885 F.2d 1529 (11th Cir. 1998)

³² *Ibid*, 1635

³³ *Daubert v Merrell Dow Pharmaceuticals Inc.*, 509 U.S. 579(1993)

³⁴ Kleiner, *supra* note 31 at 329

4. The level of acceptance of the technique in the relevant scientific community.
5. The extent to which there are standards to determine acceptable use of the technique.

In the case of *United States v Scheffer*³⁵, despite dissenting opinions, it was concluded that per se exclusion of polygraph tests is unconstitutional (Stevens) or unwise (Kennedy, O'Connor, Ginsburg and Breyer)³⁶

The International Covenant on Civil and Political Rights, Article 14 (3) (g) enumerates the minimum guarantees that are to be accorded during a trial and states that everyone has a right not to be compelled to testify against himself or to confess guilt.³⁷

This privilege is embodied in the Indian Constitution as a fundamental right under Article 20 (3). The article reads:

“No person accused of any offence shall be compelled to be a witness against himself. The components of the provision are- the right is available to a person”accused “of an offence.”

The protection is against “compulsion” to be a witness. Such compulsion should result in him giving evidence against himself.

In *Rojo George v. Deputy Superintendent of Police*, it was observed that since the traditional methods of questioning do not always yield results, tests like polygraph should be allowed if they are carried out under the supervision of an expert.³⁸

³⁵ 523 US 303, 332(1997).

³⁶Kleiner, *supra* note 31 at 337.

³⁷ International Covenant on Civil & Political Rights 1966.

³⁸ 2006 (2) KLT 197.

In *Ramchandra Ram Reddy v The State of Maharashtra*, it was held that a statement's incriminatory nature can be determined only after it has been made. Therefore, there should be no bar on the administration of the test.³⁹

The issue of admissibility of the results of polygraph tests as evidence was raised in the case of *Selvi & Ors v State of Karnataka*⁴⁰. The issue here was whether the involuntary administration of polygraph examinations violates the right against self incrimination enumerated in Article 20 (3) of the constitution.

Whether the protection given in Article 20 (3) extends to the investigation stage or is it limited to trial only? Arguments in favor of the test say that it will only enhance the investigation efforts and results by themselves aren't admissible as evidence. If the answers to the test, in any way lead the investigator to find any evidence which is material to the case, then that evidence should be admissible in the court. Section 27 of the Indian Evidence Act, permits the derivative use of custodial statements in the ordinary course of events. Section 27 is not under the prohibition of Article 20 (3) unless compulsion has been used in obtaining the information. Thus, any material which is subsequently discovered with the help of voluntarily administered test results can be admitted in accordance with Section 27 of the Indian Evidence Act.⁴¹

An important issue that needs to be addressed at this stage is, whether the results of the polygraph test amounts to testimonial compulsion under A 20 (3). Before considering this question, we need to consider what amounts to testimonial compulsion.

This was addressed in *M.P. Sharma's case*⁴² wherein the court laid down that self-incrimination must mean conveying information based upon the personal knowledge of the person giving the information. The scope of testimonial compulsion can be understood using two premises. First is that the information

³⁹ Ramchandra Ram Reddy Vs. State of Maharashtra, MANU/MH.0067/2004.

⁴⁰ (2010)7SCC 263.

⁴¹ The State Of Bombay vs Kathi Kalu Oghad And Others 1961 AIR 1808.

⁴² M.P. Sharma And Others vs Satish Chandra 1954 AIR 300.

based upon personal knowledge amounts to personal testimony and is prohibited under A 20 (3). Second, the information obtained on conducting the test can be relied upon for the purpose of identification or comparison with facts and materials that are already in the possession of the investigators.⁴³ In any case, the compulsory administration of the impugned tests impedes the subject's right to choose between remaining silent and offering substantive information. The requirement of a 'positive volitional act' becomes irrelevant since the subject is compelled to convey personal knowledge irrespective of his/her own volition⁴⁴

In **Dinesh Dalmia v State**⁴⁵, the Court observed that investigative agencies resort to such tests only when the accused does not reveal the truth. This does not amount to "testimonial compulsion". Only when the information obtained incriminates the accused, can the test come under Article 20 (3). Other information can be used in the investigation.

It was held that the Article used the phrase "to be a witness" and not "to appear as a witness". This means that the protection provided in the article is not confined to compelled testimony in the courtroom, but extends to such testimony previously obtained during the investigation stage. The purpose of the article is completely defeated if the protection given is limited to the testimony given in the courtroom, because then the person can be compelled to give all the evidence outside court and that evidence can later be proved in the court through other witnesses.⁴⁶

Another question is that to whom does the constitutional protection given in the article extend? It is required under Article 20(3) of the constitution that the person making the statement should have been "formally accused" of the offence at the time of making the statement. The protection isn't available if he

⁴³ *supra* note 42.

⁴⁴ *supra* note 41.

⁴⁵ *Dinesh Dalmia v State* 2006 CriLJ 2401.

⁴⁶ *supra* note 42.

was accused subsequent to his statement. However, persons acquainted with the facts and circumstances of the case have been given protection under Section 161 (1) and 161 (2) of the Code of Criminal Procedure, 1973. This protection is given only at the investigation stage; and Section 132 of the Indian Evidence Act limits the applicability of this protection to witnesses during the trial stage providing that the witnesses cannot refuse to answer questions during a trial on the ground that the answers could incriminate them.⁴⁷

What constitutes 'incrimination' under A20 (3) is another question that needs to be answered. Answers that would in themselves support a conviction are confessions but answers which have a reasonable tendency to point out to the guilt of the accused are incriminatory.⁴⁸ Thus the settled position of law as laid down in the Selvi case⁴⁹ is that placing reliance on the contents of compelled testimony comes within the prohibition of Article 20(3) but its use for the purpose of identification or corroboration with facts already known to the investigators is not barred.

Another issue that requires our consideration is what constitutes a medical examination for the purpose of S.53 and S 54 of the Code of Criminal Procedure, 1973.

Section 53 states that it shall be lawful for a registered medical practitioner to make a necessary medical examination of the accused that may afford evidence and reasonable force can be used for this purpose.

The explanation to Section 53, 53A, 54 reads

“ ‘examination’ shall include the examination of blood, blood-stains, semen, swabs in case of sexual offences, sputum and sweat, hair samples and finger nail clippings by the use of modern and scientific techniques including DNA

⁴⁷ *supra* note 42

⁴⁸ Nandani Satpathy vs Dani (P.L.) And Anr 1978 AIR 1025

⁴⁹ *supra* note 41

profiling and such other tests which the registered medical practitioner thinks necessary in a particular case;

The court, while answering the question laid down that the phrase 'and such other tests' should be read so as to confine its meaning to include only those tests which involve the examination of physical evidence. The rule of "ejusdem generis" applies here. It should also be noted that the Explanation not enumerate certain other forms of medical examination that involve testimonial acts, such as psychiatric examination among others.⁵⁰

Now we need to understand if the involuntary administration of the polygraph test constitutes violation of 'Personal Liberty' as understood in the context of A21 of the constitution. Personal autonomy of a person recognizes his right to choose between remaining silent and speaking. This makes it very clear that subjecting a person to the impugned techniques without his consent violates his personal liberty. Forcible interference with a person's mental processes is not provided for under any statute and it most certainly comes into conflict with the 'right against self-incrimination'. However, this determination does not account for circumstances where a person could be subjected to any of the impugned tests, but not exposed to criminal charges and the possibility of conviction.⁵¹ The possibility has been outlined in '*Guidelines relating to administration of the polygraph test (Lie Detector test) on an accused (2000)*', published by the National Human Rights Commission. According to the report the test must be regarded as illegal and unconstitutional and the only basis on which it can be justified is if the test has been taken voluntarily.

POLYGRAPH TEST ON VICTIMS

Although there have been very few cases where the victims or their families had to undergo polygraph tests, it is significant to realize the repercussions such tests can have on criminal investigation. This can be particularly harmful in the case of

⁵⁰ *supra* note 41

⁵¹ *supra* note 41

victims of sexual assault. The use of polygraph tests to test the credibility of the victim is harmful to both the victim and the investigation. The advocates of polygraph say that since, normally there are no eyewitnesses in the event of a sexual assault, and the evidence is hard to find, polygraph is the best means to ascertain the credibility of the victim's account. But it is essential to note that making the victims to take a polygraph test discourages their participation in the investigation procedure.⁵² They often think that their story is not being believed. This shakes their faith in the criminal justice system which can lead to many incidents not being reported. Such tests may also produce inaccurate results as stress and anxiety related to the incident might be misconstrued as being linked to deception. Some of the victims might also be suffering from Post Traumatic Stress Disorder. In individuals with PTSD, the traumatic event is experienced over and over again, they may avoid certain thoughts, people, or places that remind them of the trauma, they may feel numb or detached, or they may experience heightened arousal.⁵³ Such victims can show physiological responses which might indicate deception, even when the victims are telling the truth.

CONCLUSION

After evaluating the scientific and legal validity of the polygraph tests, it can be safely concluded that although polygraph tests can aid criminal investigation in certain cases, they cannot be completely relied upon. Scientific research and progress has tried to make the process objective and accurate, but the very concept on which the test is based is faulty. Thus results of such tests are not dependable and reliable. The constitutional protection extends only to the accused for self incriminatory evidence. There are no laws which regulate the administration of such tests on victims and witnesses. Thus, taking polygraph

⁵² J. & Lonsway Archambault, "VAWA 2005 restricts polygraph use with victims of sexual assault" (2006) WA: End Violence Against Women International.

⁵³ Diagnostic and statistical manual of mental disorders: DSM-IV-TR, (American Psychiatric Association 2000).

results as conclusive evidence might cause grave injustice. The legislature needs to come up with specific guidelines and rules regarding the complete procedure of administering the tests, persons on whom it can be conducted, and the extent to which the test results are to be relied upon. Criminal investigation is a complex and comprehensive process, each step of which is equally important. Thus, the test results should be interpreted in the light of all the other evidence and should not be viewed in isolation. If used cautiously, polygraph tests can aid criminal investigation.

DECIPHERING THE INTERMEDIARY LIABILITY AND CRIMINALISTICS: A CYBER LAW APPROACH

-Bishwa Kallyan Dash*

ABSTRACT

Internet today is diluting all frontiers and waiving all jurisdictional boundaries due to its volatility. Twenty first century has been witnessing a complete reliance over the cyber space for getting any of its functions done. However, with the ever growing competition between the various stakeholders in the market to get an edge over others, the reliance over cyber space to achieve the desired aim may grow monstrous in the near future. In controlling the illusionary space called 'the cyber space', it has proven to be a herculean task for all the policy framers and stakeholders associated. And one of the most controversial aspects in it is the fixation of liability of the intermediary or the service provider who facilitates these services at our door step. Though, the Information Technology Act, 2000 and the IT Rules, 2011 have tried to bring such people under the legal umbrella; but have miserably failed in complying with the procedural loopholes in answering the 'Criminalistics' i.e. a basic criterion of criminology. Failing to do so has shown our judiciary a nightmare in delivering justice in the recent past. Therefore, this paper tries to analyse the legalistic approach to identify the true intermediary and the regulating approaches that has been in place for the time being to jot down the 'criminalistics' approach of criminology.

INTRODUCTION:

Human dependence on computers has ever increased in the recent past for greater viable option to exchange information. Information in today's world is considered as wealth¹. The more one is in possession of the current information; the advantageous the person is in the competitive market. But, we often neglect the fact that, we being the primary user of the computer services are only consumers and depend upon the service provider. The services that we use which emanates from a source enabling us to access the mythical world of cyber space are nothing but the service providers. With the passage of time, we have had witnessed the mal-usage of these resources which attracts criminal sanctions under the procedure established by law. However, as the domain under discussion over here having wide amplitude, it is practically not possible to curb

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¹ S.K.Bansal., "Cyber Crime", [2003, APH Publishing Corporation, New Delhi, p. 277].

the whole cyberspace under control and trace back the culprits to bring them to justice.

The collection and preservation of evidence are essential for any successful criminal investigation². Indeed, if all of the evidence and information surrounding the crime are not properly collected, preserved, and analyzed, the entire investigation may be jeopardized giving a chance to the culprit to get out of the holds of law. In addition, the collection and preservation of evidence are accompanied by another essential element of crime scene investigation; namely, a record of what occurred at a particular time and location and which actions were taken by specific individuals³.

But, taking these aspects of consideration with respect to that of the cyberspace, is very much unrealistic considering the intermediaries involved in the whole process. Though, it is one of the most challenging tasks that the crime investigating agencies do perform, but the laws have taken their shape in the recent past to put a check on this aspect. Taking an example the laws and agencies that regulate the quality of our food, the nature and potency of drugs, the extent of automobile emissions, the kind of fuel oil we burn, the purity of our drinking water, and the pesticides we use on our crops and plants. It would be difficult to conceive of any food and drug regulation or environmental protection act that could be effectively monitored and enforced without the assistance of scientific technology and the skill of the scientific community. Thus, the scientific agencies play a pivotal role in investigating the factual scenario behind a crime scene.

CRIMINALISTICS

The term ‘Criminalistics’ is often confused with that of ‘forensic science’. Though both are two distinct words in the criminal investigation, but often used

² Mark. F. Grady and Francesco Parisi., *“The Law of Economics of Cyber Security”*, [1st Edition, 2006, Cambridge University Press, New York].

³ Ibid.

interchangeably. Both, criminology and criminalistics centered in law enforcement. However, criminology explores the nature of crime and prevention, while criminalistics involves the collection and analysis of evidence. The websters' law dictionary defines criminology as:

*“Criminology is the study of crime and its prevention, as well as the exploration of criminals and their treatment. Criminology as a branch of criminal justice system and is developing new theories for dealing with crime and its causes. Typical course topics in a criminology program include deviance, juvenile delinquency, punishment, criminological theory and social research.”*⁴

While the above definition tries to give a holistic dimension to the aspect of criminal investigation through advanced means, the criminal psychology is also growing with a fast pace to criminalize the cause of action. When the law enforces a mechanisms try to bring the cause of action under their legal control, the criminals always searching and inventing new means to bypass the legal construct⁵. These tussles between the criminals and the investigating agencies have put a restraint over the justice dispensary units, as they are constrained by the due procedure established by law. As Prof. Karl Llewellyn⁶ said that “The judicial process Indian legal construct follows is the mere approximation of the fact with that of law and the courts are to say authoritatively what the law IS”. In no means the court can deviate from the legal construct and go to an extent to deliver an opinion as to ‘what the law OUGHT to be’. This procedural hurdle has ever pressurized the investigating agencies.

⁴ Meriam Webster's Law Dictionary.

⁵ P.J.Fitzgerald., “*Salmond on Jurisprudence*”, [12th Edition, 1966, Universal Law Publishing Co. Pvt. Ltd, Delhi]

⁶ **Karl Nickerson Llewellyn** (May 22, 1893 – February 13, 1962) was a prominent American jurisprudential scholar associated with the school of legal realism. *The Journal of Legal Studies* has identified Llewellyn as one of the twenty most cited American legal scholars of the 20th century.

ISP AND THEIR LIABILITY

It is only in *American Civil Union vs Reno*,⁷ the term Internet was defined for the first time as: “The Internet is not a physical or tangible entity, but rather a giant network which inter-connects numerable smaller group of linked computer networks. It is network of networks. Many networks are connected to other networks, which in turn are connected to other networks in a manner which permit each computer in any network to communicate with computers on any network in the system. This gives a wider dimension to the jurisdiction that the legislature must try to encapsulate. However, the herculean task has somewhat been answered in India which is one of the few nations across the globe that has come up with a legislation on Information technology Laws.

Intermediaries, including Internet service Providers (herein after ‘ISPs’) are considered as spokes of the Internet wheel. Without these spokes, Internet as a medium will simply collapse. ISPs are considered as one of the prime intermediary that facilitates the prime functions of the access to the cyber space. It help in the transfer of information, communication and/or, data from the source to the recipient. As the service provider is the route through which these electronic communications pass through, thus are called as an intermediary. If these intermediaries are taken away from the whole scenario, the communication would be a myth in such sense. It is time and again argued, whether there is any need to control these intermediaries to check the occurrence of any crime? The primary logic behind such argument is: as these intermediaries carry communication from one source to the other; they have all possible options to know the contents of message if liable to be scrutinized or having potential to cause disruption in the legal order. On the contrary, the opponents are of the view that; when someone in good faith communicates an information from source to the recipient via any cyber medium; his right to privacy ought to be given importance. This tussle between the investigative requirements to know

⁷ [(929 F) (Supp. 824): (1996) US District Court of Pennsylvania Report].

the communication that is being passing through the cyber medium and that of the right to privacy which is guaranteed by the fundamental law of the land i.e. the constitution of India has given enough nightmares to the legislature of the state.

As a result of such constant struggle the “Information Technology Act, 2000” came to the legislative role of India. This Special Act in its preamble enshrines the onus,

“to provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as "electronic commerce", which involve the use of alternatives to paper-based methods of communication and storage of information, to facilitate electronic filing of documents with the Government agencies and further to amend the Indian Penal Code, the Indian Evidence Act, 1872, the Bankers' Books Evidence Act, 1891 and the Reserve Bank of India Act, 1934 and for matters connected therewith or incidental thereto.”⁸

This on the contrary is an effort made under Art. 253⁹, of the Constitution of India empowers the state to legislate upon anything that has been ratified before the International community to embody in the legislative roll of the state. The United Nations resolution A/RES/51/162, dated the 30th January, 1997 has adopted the Model Law on Electronic Commerce adopted by the United Nations Commission on International Trade Law, and have given a wider amplitude to the states to ponder upon the need of such laws in the respective states according to their socio-economic environment. On a larger paradigm, when these aspects of development are looked into; it is pertinent to understand or gauge the nuances that it aims to create in future. Thus, the legislative effort in India has been a step forward to control the power matrix through a defined way. Here power matrix refers to that of the Hohfeldian matrix which illustrates

⁸ Preamble, The Information Technology Act, 2000.

⁹ The Constitution of India, 1950.

the jural relatives and jural opposites which are nothing but the emanating concerns of any law that is in place for the time being.

While intermediary liability is often considered as much controversial, they are being penalized in some of the countries across the world. But, certainly in the recent times there has been a tremendous growth in the mind set of the legal systems to facilitate a safety valve to put a check on such instances. The current position in India pertaining to the liability of the ISPs are pretty much twisted one which suggests that; A wrong committed by a third party on the net cannot bind an ISP or NSP *IF [provided]-*

- They don't have knowledge of such commission.
- In addition, exercising due diligence¹⁰ also can exempt an ISP and NSP from liability.

But, it is always advised to any researcher to identify the person at the beginning to fox up a liability upon him for any commission or omission which is forbidden by law. Thus, to identify who is an intermediary; S.2(w)¹¹ gives an inclusive answer. This states as follows-

“With respect to any particular electronic record, means any person who on behalf of another person receives, stores or transmits that record or provides any service with respect to that record and includes –

- telecom service providers,
- network service providers,
- internet service providers,
- web-hosting service providers,
- search engines,
- online payment sites,
- online auction sites,

¹⁰ *Dixon vs Holden*, [(1869) LR 7 Eq 488].

¹¹ The Information Technology Act, 2000.

- online market places and
- cyber cafes'

This section elucidates the mechanism or entity who holds, receives and transmits any information on behalf of the source is nothing but the intermediary. But, when the same is being contrasted with that of S.79 of the IT Act, 2000¹²; intermediaries have another off shoot i.e. Network Service Provider (NSPs). However, be whatsoever the nomenclature of the service provider; it is the fixation of liability over such an entity is that the IT Act, 2000 under the foregoing sections aims at.

If a person¹³ commits a wrong, he is said to be liable or responsible for it. Liability or responsibility is the connection of necessity existing between the wrongdoer and the remedy of the wrong. It may be either civil/remedial or criminal/penal depending upon the purpose with which it is imposed by law.

Normally the person who is liable for a wrong is he who does it or to an extent who facilitate in the conduct of such wrong. This is termed as direct liability. One may also be held liable in respect of wrongful acts/ omissions of another person. Such liability is termed as indirect liability or vicarious liability. Normally a person is vicariously liable if he is an employer/master and the wrongful act is done by his employee/his servant and if the act is done by the latter while on the job/during the course of employment. Thus, every right or immunity corresponds to some limitations in our legal system. Thereby making ISPs liable for two things i.e. one is for negligence and another for the intellectual property infringement. However, the ISPs have time and again argued that; they are mere transporters or carriers of the information and acts as passive actor, thus shall be immune from all liabilities. The optimum solution till date that has been achieved is: though negligence is been taken as a factor for fixation of liability, it is

¹² Vakul Sharma., *"Information Technology Law and Practice"*, 2005, Universal Law Publishing Co.Pvt.Ltd, Delhi, p. 186.

¹³ S.3, The General clauses Act, 1897.

required to place definite clarifications to the role and object that the ISPs comply while carrying any information from the source to the recipient.

The year 2008 has been taken as an earmark in the history of Information Technology legal regulations when S.79 of the IT Act, 2000 has been amended to waive the liability of these intermediaries unless they have knowledge of some offence that may happen due to their intervention. And they ought to have taken due diligence to restrict such incidence. However, the extent of knowledge and clarifications as to 'third party information' is still lacking in the prevailing piece of legislation. Thus, the post 2008 Act says; the intermediary shall not be made liable for any third party information if he observes due diligence while discharging his duties under this act and also observes such other guidelines as the Central Government may prescribe in this behalf. To summarize the conditions that precedes the fixation of liability are-

- No active involvement of the intermediary in providing content or uploading contents, designing contents etc¹⁴....
- Due diligence: taking immediate action in case of report of internet misuse

Though, the legislation put much emphasis on the term 'due diligence', it has been questioned in the courts of law time and again. In the path breaking judgment of Baze.com case i.e. *Avnish Bajaj v. State of Delhi*¹⁵, an internet website carried a listing which offered for sale a video clip, shot on a mobile phone, of two children of a school in Delhi indulging in an explicitly sexual act. Petitioner, Avnish Bajaj, MD of Baazee.com India Private Limited [BIPL], a wholly owned subsidiary of Ebay Inc. USA, and the owner of the website asked the Court to annul his criminal prosecution for the offences of making available for sale and causing to be published an obscene product within the meaning of Section 292 IPC (IPC) and Section 67 of the IT Act 2000. But, taking a stringent view on this

¹⁴ Direct liability cannot be imposed on the ISP since it does not reap the benefits of the illegal act; it does not participate in the crime directly and does not participate in the very act of uploading/downloading information.

¹⁵ [150 (2008) DLT 279].

issue, the Delhi High Court opined that; “ISP failed to exercise due diligence as it failed to provide efficient filters to screen pornographic contents and also failed to introduce operative or policy changes to prevent the listing / display/sale of the same on the portal.” This kind of observation by the Delhi High Court had questioned the functioning of intermediaries in India.

But, U.S Courts have ruled in some decisions that an ISP may be held liable in case of defamation, copyright infringement, child pornography, false advertisement or fraudulent misrepresentation by facilitating distribution of such material¹⁶. When this landmark judgment of the Delhi High Court is being contrasted with that of the courts of USA in the case of *Doe v. MySpace*¹⁷: where Peter Solis and Julie Doe were both minors who purported to be adults on the social site, MySpace. They arranged to meet one day when the latter allegedly sexually assaulted the former. The question before the court was whether MySpace, which was the internet service provider, was also an information content provider, and it was answered in the negative. Plaintiff further argued that MySpace ought to have exercised greater duty of care which was dismissed by the court. Thus MySpace was eligible to claim immunity under s.230 of the CDA.¹⁸ Matters of this kind are on the spread over the passage of date. Judicious control over such incidents is the need of the hour. However, the judicial intervention has formed the basis of legal control over intermediaries rather than mere placing ethical control by themselves.

Cases like; when the Mumbai Police have booked four teenagers for allegedly gang-raping a 15-year-old schoolmate, recording a video of the sexual assault and

¹⁶ *United States v. X .Citement Videos*, 115 S.Ct. 464 (1994); *Playboy Enterprises, Inc v. Frena*, 839 F. Supp. 1552 (M.D. Fla 1993).

¹⁷ [No. 1:06-cv-00983-SS (W.D. Tex 2007)].

¹⁸ Communication Decency Act, 1996. The CDA was passed in order to effectively tackle indecent and obscene content on the internet. The law was however stuck down for the most part in *Reno v. ACLU* [521 U.S 844 (1997)] for violating the First Amendment. A provision that still remains however is s. 230, also called the Good Samaritan clause. It allows for intermediaries on the internet to escape liability as long as they are merely internet service providers and not information content providers. This provision has assumed significance over the past in cases of defamation on the internet.

using it to blackmail her into silence. One of the accused shared the video with a friend, after which it went viral in the locality.¹⁹ The police are now holding talks with the locals to discourage them from sharing it further suggests the gravity of the situation and warrants the urgent need of joining hands that of the intermediaries and that of the investigating agencies; so that the menace could be tackled in due course of time.

On the contrary, the latest trends of internet to pass on information that is vital for the people at the other end. The circuit courts have opined that, the ambit of immunity under S.230 of the CDA. As long as the intermediary merely organizes and makes cosmetic changes to content that was already user generated, it retains immunity. Here, the information content providers were users of the website and not the website itself; the intermediary was not involved in the creation or development of content.²⁰

Apart from the above mentioned remedies provided in the IT Act, 2000 the Code of Criminal Procedure places liability upon such person who holds any incriminating material at its perusal. S.39 of Cr.P.C. states that; any person who is of knowledge of any material corresponding to any offence under law for the time being in force, has to be communicated to the investigating agencies in due course of such matters²¹. Thus, applying the same analogy deduced from the said section, the intermediary if handles any such information that is likely to commit or omit anything that is forbidden under any law has to take the liability. At the same time there has been ancillary laws i.e. Copyright violation, Penal laws, Tort laws etc are the recourses available to any violation of right. The liability of service providers for copyright infringement is not expressly covered by the Indian Copyright Act. The Information Technology Act, 2000 exempts ISPs from liability if they can prove that they had no knowledge of the occurrence of the alleged act, and that they had taken sufficient steps to prevent a violation.

¹⁹ *The Hindu*, [Mumbai, November 27, 2015]

²⁰ *Fair Housing v. Roommate.com* [521 F.3d 1157 (2008)]

²¹ *Supra* note 12.

However, the existing provision does not clearly prescribe liability limits of service provider²²s. But, as IT Act,2000 is a special legislation; the maxim '*generalia specialibus non derogant*' would be applicable which says: in case of tussle between a general law and a special law, the special law shall prevail over the former. Thus, there has to be given primacy to IT Act, 2000.

CHALLENGES FORWARD

The whole segment of internet services depends on ISPs. If we take any one of them, the whole system would collapse. It's like a patient in a ventilator who needs the services of the machine to run his life, taking away the support system would leave the patient dead. Thus, extreme action against a giant monstrous space that is called the cyber space, and making the person authorised to control such would undermine the very purpose of need. There is a need of balancing the approaches, else it would certainly lead to disastrous consequences. But, certainly ISPs are not free birds in the cyber domain to place monopoly and curtail the right based society.

The convenience mechanism that these ISPs do away their obligations with has to be strategically managed to make them aware of a greater benefit. If the ISPs would felt the need of such instances to which they have contributed directly or indirectly; they would certainly keep an eye on their subscribers and would act vigilant.

It would be a tiresome task for TRAI to keep an eye over such intermediaries whereby it can safeguard the interests of the service providers as well as the consumers. So, that there could be an orderly growth that is visible from the facet of the happiness index. This could happen only by ensuring quality standards, setting tariff policy, specific technical and commercial policy etc. and ensuring its compliance by the service providers.

²² Rodney.D.Ryder., "*Guide to Cyber laws*", [1st Edition, 2001,Wadhwa and Company, Nagpur, p. 870]

CONCLUSION

For a common man, it is very easy to put forth a statement to bring in a change in the system. But, when such statement requires action, it has to pass through a number of litmus tests in the society. The organs of our democracy always thrive to achieve the true sense of democracy failing which there would be total chaos in the society. Earlier, it used to be the need of the society that used to realize legislation. However, in the recent time the need theory has been surpassed by the experience theory. Experiencing the ever growing field of computers and cyber world, it is the mind set of people who are holding the rudder of the society shall change. The continuous pace would only help in defeating the nuance.

As it is rightly pointed out by various scholars, without knowing to reap the fruits it's a bad investment to sow some. The criminalistic do demand the inculcation of such ideas in the daily routine of the investigators. Unless, they are well tuned with the development in the field of computers, it is worthless to count on the penal legislations that is in place. The culprits would take advantages of such procedural loopholes and would set themselves free from the grasp of law.

ISPs are just genus to a species. If the end results are bad or wrong, then it would be inappropriate to blame the genes since the genes can be put to good as well as bad. A concerted, co-coordinated and uniform effort from all directions is required to check this growing menace of cyber insecurity

ARTICLE 19(1) (A) VIS-À-VIS SECTION 66A: NEXUS CHALLENGED

- Yophika Grace Thabab*

ABSTRACT

*The freedom of speech and expression guaranteed by our Constitution under Article 19(1) (a) has been described as a 'basic human right', 'a natural right' and the like. It is the edifice on which a true Democracy rests. It is also an ever changing concept that has evolved with time and advances in Technology. Three concepts that are significant in understanding the scope of this right were Discussion, Advocacy and Incitement. However, this right is not an absolute right and thus, the Freedom of Speech and Expression can be curtailed by reasonable restrictions as laid down under Article 19(2) of the Indian Constitution. In this article, the scope and Constitutional validity of Section 66A of the Information Technology Act, 2000 is analyzed critically to see if this particular section satisfies the test of "Reasonable Restrictions" especially public order to curtail the Freedom of Speech and Expression through words present in the said provision, like "Grossly offensive" or has "Menacing character" or causes "Annoyance" or "Inconvenience" to another. The Apex Court in *Shreya Singhal v. Union of India* struck down Section 66A as Unconstitutional as it does not pass the Nexus Test, i.e., the Nexus between the Law and the object the Law seeks to achieve but also failed to provide any guidelines if a case involving this Section occurs, especially in this present Era when the internet is a global dominating reality. The problem of "Vagueness" and "Overbreadth" became the most debated topics over Section 66A and its Penal character is often abused by Officials. Thus, it is the need of the hour to put in a safety Valve at the threshold before Criminal proceedings can be initiated and also promote a culture of tolerance in our country.*

INTRODUCTION

In the Constituent Assembly Debates, the Freedom of Speech and Expression has been identified as the *very life of Civil liberty*.¹ The Supreme Court has described this freedom as the "*ark of the covenant of democracy*".² In ***Ramlila Maidan Incident re***³, the Supreme Court held that the freedom of speech and expression is regarded as the first condition of Liberty. Freedom of speech plays a crucial role in the formation of public opinion on Social, Political and Economic matters. It has been described as a 'Basic Human Right', 'A Natural Right' and the like.

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¹ Constituent Assembly Debates: Official Report, (1946-1950) VII, p. 18.

²[1973] SC 106.

³[2012] 5 SCC 1.

The concept of Freedom of Speech and Expression under Article 19(1) (a) is a wide and diverse one. It represents numerous facets, both with regard to the content of the Speech as well as Expression and in the means through which communication takes place. In ***S. Rangarajan v. P. Jagjivan Ram***⁴, the Apex Court held that Article 19(1) (a) covers the right to express oneself by word of mouth, writing, printing, and picture or in any other manner. It includes the freedom of communication and the Right to propagate or publish one's views. The communication of ideas may be through any medium, newspaper, magazine or movie, including the electronic and audio-visual media.

However, the freedom of speech and expression is not an Absolute Right and is subject to the restrictions set out under Article 19(2), allowing the state the power to impose by Law restrictions in the interests, among other things, of the Sovereignty and Integrity of India, the security of the state, friendly relations with foreign states, public order, decency or morality or in relation to contempt of Court, defamation or incitement to an offence. *“These restrictions must necessarily be reasonable and the question of reasonableness is a matter for the courts to decide”*.⁵

The Information Technology Act, 2000 is one law which aims to regulate this basic Right of Freedom of Speech and Expression virtually. “The Supreme Court in ***Shreya Singhal v. Union of India*** had struck down Section 66A of Information Technology Act, 2000 as it curbs free speech and expression and robs of the citizens of India of their basic inalienable freedom. The judgment of the Apex Court in this case is a Gospel of free speech and expression”.⁶

Section 66A was too vague and it suffered from ambiguity as it did not contain any precise definition of its penal behavior and thus, a bare reading of the provision would suggest that it is a backhanded form of censorship.

⁴[1989] 2 SCC 574.

⁵[1961] SC 884.

⁶ Bhatia.K.L., *Shreya singhal v. Union of India, Magnum Opus of Freedom of Speech and Expression, Thought on “About Me”*, (2015), <https://klbhatia.wordpress.com/about-me/comment-page-1/>, 10th February 2016.

The balance is always tilted one side. It is very difficult to bring equilibrium when it comes to equating ‘*Right to Free Speech*’ and ‘*Right to Reasonable Restrictions*’ and this is a concept which is vulnerable and highly influenced by the minds of the society. It is observed that enacting a provision like Section 66A of the IT Act, 2000 the state’s objective is to curtail certain matters online which can be prejudicial to the interests of the society and the Country as a whole. But a provision not accurately worded is open to thousands of Interpretation, and in my personal opinion this provision even infringes the “Right to Privacy” of any person using a “Computer Resource or a Communication Device” and since we know that courts throughout history have been struggling with the question as to what it means to impose “reasonable restrictions” in the interests of “public order”, therefore, judicial activism is the only tool available to help determine whether section 66A would amount to a “Reasonable Restriction” under Article 19(2).

SCOPE AND AMBIT OF THE TERM ‘PUBLIC ORDER’: WHAT IS SOUGHT TO ACHIEVE?

India is a signatory to *the Universal Declaration of Human Rights, 1948* and *the International Covenant on Civil and Political Rights 1966*, the two major edifices on which major democracies and constitutions of the world rest. Article 19 of the Universal Declaration of Human Rights, 1948 entrusts absolute freedom of opinion and expression without any interference. Article 19 reads: “*Everyone has the right to freedom of opinion and expression; this includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers*”. Article 19 of the International Covenant on Civil and Political rights by virtue of Para One and Two guarantees the freedom of holding opinions and expression. The only restrictions necessary as per Para Three of Article 19 of the Covenant is in respect of “Rights and Reputation of others”, protection of “National Security” or of “public order” or “public health” or “morals”.

Since the amendment of Article 19(2), the scope and ambit of the term “Public Order” has been interpreted in a Plethora of cases by the Courts. Public order is considered to be a fundamental need in any civilized society or Democracy and nothing can flourish in what Hobbes called the “State of Nature”. As the American Politician, Bob Wise said, “well the first order of government is to preserve the public order and safety”. Public Order is an expression of wide connotations and includes public safety or interest which signifies that the state of tranquility prevailing among the members of a political society as the result of the internal regulations enforced by the Government which they have instituted. However, this notion of Public Order is to be distinguished from the popular concept of “Law and Order” and of “Security of State”. Aggravated disturbance of public peace, safety and tranquility disturbs public order. This means that, for an act to be prejudicial to public order it must be shown that it is likely to affect the public at large and is not limited to affecting an individual. Section 66A however, gives an opportunity to even a single individual to misuse the Law laid down in this section. Two people conversing through a communicating device may neither find the content to be “Grossly Offensive” nor to be “Menacing Character” but to a third party it may be so, enough to cause him annoyance or inconvenience. This makes the conversation a criminal offence under this section.

The words ‘*in the interest of public order*’ includes not only such utterances as are directly intended to lead to disorder but also those that have the tendency to lead to disorder. Thus, in ***Ramji Lal Modi v. State of Uttar Pradesh***⁷ the Supreme Court upheld Section 295A of the Indian Penal Code by holding that a law punishing utterances made with the deliberate intention to hurt the religious feelings of any class of persons is valid because it imposes a restriction on the right of free speech in the interest of public order since such speech or writing has the tendency to create public disorder even if in some case those activities

⁷[1957] SCR 860.

may not actually lead to a breach of peace. But there must be reasonable and proper Nexus or relationship between the restrictions and the achievements of public order. By virtue of Penal laws, like Section 153A and 295A of the IPC, anticipatory action can be taken by the authorities in case of likelihood of immediate danger of breach of peace. A question may then arise as to what can be considered as likely to affect public at large? Well the most appropriate way of dealing with this question is to decide objectively on the basis of the circumstances prevailing at the time the expression was made or to the audience it was targeted at. In ***The Superintendent Central v. Ram Manohar Lohia***⁸ for instance, the Supreme Court insisted that the link between the offending speech and public disorder must be “Proximate” and not remote or farfetched.

Section 66A therefore, does not pass the Nexus test, viz., nexus between the law and the object which the law seeks to achieve. It is also seen that this provision is penal in nature but reading sub clause (a) of section 66A which is given as “*any information that is grossly offensive or has menacing character*” does not suggest the immediate or imminent consequence of such act of holding or giving out information, as to whether it would amount to some criminal offence or not⁹. For instance, if this act of giving “any information that is grossly offensive or has menacing character” amounts to defamation, then the non existence of the element of “*Mens Rea*” or intention would make it a Civil wrong, making such act outside the scope of this sub clause.

In striking down Section 66A, the Court upheld what the court said in ***Arup Bhuyan v. State of Assam***¹⁰ that “there must be an incitement to imminent violence.” The Court drew a distinction between “advocacy” and “incitement”. Article 19(1) (a) protected the advocacy of ideas. It allows for free speech and expression and this advocacy could be restricted only to that level when such Ideas, Speech or Expression has reached the level of incitement to imminent

⁸ [1960] AIR 633.

⁹ Parthasarathy S, ‘The Judgment that Silenced Section 66A’, *The Hindu* 26th March 2015.

¹⁰[2011] 3 SCC 377.

violence. The Court applied the clear and present danger test which was first propounded in *Schenk v. United States*, the Supreme Court held in this case held that “the question in every case is whether the words used are used in such circumstances and are of such nature as to create a **clear and present danger** that they will bring about the substantive evils that Congress has a right to prevent.”

VAGUENESS AND OVER-BREADTH: DISRUPTION OF PROPORTIONALITY

The words in Section 66A suffer from Vagueness and Over-Breadth. A Statute is overbroad when it potentially includes within its prohibitions both Speech that it is entitled to prohibit, and speech that it is not. In *Gooding v. Wilson*¹¹, the court held that the statute left “*wide open the standard of responsibility, so that it was easily susceptible to improper implication*”, thus; it was liable to be struck down¹². Reading the Section, we see words like Annoyance, Inconvenience, Hatred or ill-will, Criminal Intimidation, Injury, Danger, Obstruction, Insult, etc. These words went far beyond the mandate of Article 19(2), i.e., reasonable restrictions of “*decency or morality*”, “*defamation*” or “*public order*”. In *State of Madras v. V.G. Row*¹³ the court said that “*for a restriction to be reasonable there must be a relationship of proportionality between the extent of the restriction, the goal, and the broader context. The relationship of proportionality is disrupted in cases of over-broad statutes which clearly go beyond the constitutionally sanctioned restrictions.*”

A Statute is vague when persons of “*ordinary intelligence have no reasonable opportunity to know what is prohibited.*” In *Grayned v. City of Rockford*¹⁴, the American Supreme Court noted that “a vague law impermissibly delegates basic policy matters to Policemen, Judges, and Juries for resolution on an *Ad Hoc* and subjective basis, with the attendant dangers of Arbitrary and discriminatory

¹¹405 U.S. 518 (1972).

¹²Patanjali D, ‘*Freedom of Speech and Expression India v America -A study*’, *India Law Journal*, (2007) http://indialawjournal.com/volume3/issue_4/article_by_dheerajendra.html, 18th March 2016.

¹³ 1952 AIR 196.

¹⁴ 408 U.S. 104.

application.” Vague legislations often lead to a number of problems. They leave space for arbitrary misuse of implementing power and also leave the citizens in a state of dismay as they are not certain as to the object of a particular legislation. This often causes havoc amongst the citizens as an innocent may also fall trap within the ambit of a vague law¹⁵.

In *State of Madhya Pradesh v. Baldeo Prasad*¹⁶ the Court had struck down a law which Criminalized “Goondas” but failed to define who a “Goonda” was.

Also Section 66A suffers from the defect of bad classification in as much as their Rights under Articles 14 and 21 are breached as there is no **intelligible differentia** between those who use the internet and those who by words spoken or written use other medium of communication. The said provision of the ITA has no clear object sought to be achieved and, therefore, it carries a discriminatory object and would fall foul of Article 14.

As it has been mentioned earlier, even the “Right to Privacy” of an individual is also affected by this provision as rightly said by the Supreme Court while striking it down, that it provides a “chilling effect”, i.e., individuals would have to go through a process of self-censor every time they use Social Media or Private chats including Electronic mails, which somehow gives the government the power to take away a person’s Fundamental right. In *Kharak Singh v. State of Uttar Pradesh*¹⁷ where two of the seven judges have recognized Right of Privacy as part of Article 21, thus, making it a Fundamental Right.

Also Courts in their robust mechanism have protected this Right to Privacy under the Tort Law, where a personal action for damages would be possible for unlawful invasion of privacy.

¹⁵Bhatia G, *Two Arguments Against the Constitutionality of Section 66A*, The Centre for Internet & Society, 31 May (2014)<http://cis-india.org/internet-governance/blog/two-arguments-against-the-constitutionality-of-section-66a>, 19th March 2016.

¹⁶ 1961 AIR 293.

¹⁷[1964] SCR (1) 332.

CONCLUSION

We are living in a world of imbalances, where on one hand the right to free speech and expression is being propagated proactively and laws suffering from the vice of intolerance, impatience, egocentric, feudalistic, autocratic and elective despotism are being challenged as unconstitutional and therefore, struck down, while on the other hand, the modern era witnesses that the internet is capable of mobilizing public opinion and becoming a dangerous tool in the hands of bigots and hate mongers who find themselves easily armed with the enormous power of social media to make the dreaded offences under section 66A come true. Therefore, it is the need of the hour that our country stops making repressive laws in order to maintain public order and start building a better atmosphere for free speech to confront and withstand bigotry and promote healthy culture of tolerance.

WHAT IF A ROBOT COMMITS MURDER? : AN ANALYTICAL STUDY ON CRIMINAL LIABILITY OF ARTIFICIALLY INTELLIGENT BEINGS

-Shubham Singh & Pallavi Singh*

ABSTRACT

The Artificial intelligence is becoming an integral part of our Society. The interaction of Artificial intelligence with Humans can be observed in every field. These interactions will increase in the future as the Technological world is evolving. What if an artificially intelligent being commits a Crime, then who should be held liable? Therefore, to ensure that these interactions are beneficial and occur as intended we need to subject artificially intelligent beings to Law, especially criminal law as it is the most effective way for Social Control. The artificial intelligence can be treated as a Legal personality like Corporations, to subject them to Law. Treating artificial intelligence as a legal person not only makes them subject to the law, but also protects the Innocent Developers and Owners from the Criminal liability arising from the acts artificial intelligence. The criminal liability arises basically out of the presence of the two factors that are Mens-Rea and Actus-Reus. Actus Reus, is the physical outcome of the act. In the case of artificially intelligent beings, the main challenge arises is detecting the Mens-Rea which is the mental factor, as there is no yardstick to measure this factor. This problem can be solved by the application of the ‘Turing Test’ by the court to detect whether the artificial intelligence entity is capable enough to formulate Mens-Rea or not. The Human laws can be imposed on the artificial intelligence in the same manner as they are imposed on the other legal personalities like Corporations and of the similar vein punishments that can be awarded by making necessary alterations.

Keywords: *Artificial intelligence, Legal personality, Criminal Law, social control, Punishment.*

INTRODUCTION

On 4 July 1981, the first Death by a Robot was recorded; Kenji Uda was an Engineer at Kawasaki Heavy Industries Plant. He entered into a restricted area of manufacturing line to perform some maintenance work on the robot. Kenji failed to completely shut down the Robot. Robot detected him as an obstacle and pushed him into an adjacent machine from its Hydraulic arm, killing him instantly.¹ And unfortunately, the present laws are inefficient to efficiently tackle such instances. Robots and Artificial Intelligence add a whole new dimension to

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¹Paul S. Edwards, ‘Killer robot: Japanese worker first victim of technological revolution’ *Deseret News*, Salt Lake City, (8 December 1981) 1.

our world, the growth in the technological world is rapid, and the Robots are becoming an integral part of our life.

In the present World, the Robots are just inanimate objects like any ordinary tool with no Legal liability or Duties which means Kenji who died from the hands of a Robot was not murdered by the robot. Then legal aspect of the scenario is who should be held Liable? What if a self-driving Car accidently kills a person who suddenly came in front of the Car? The legal system will have to evolve to be compatible with the dynamic technological world. Therefore, the question arises that how the Technological growth of the artificial intelligence should be made subject to Legal Social Control. This Article tries to work on the Legal solutions to the problems arising from the increasing influence of the artificial intelligence in our society.

The Research on this problem began since the early 1950s by Isaac Asimov. In his Science fiction “Robot,” Isaac Asimov propounded three Fundamental Principles for Artificial Intelligence and Robots: The *First* Law states that Robot should not injure a Human being or allow a Human being to come to any harm. The *Second* law directs the Robot to obey the orders given to it by the human beings, except where such orders would conflict with the First Law. And the *Third* law states that a Robot must protect its own existence, but in the case of any conflict among Third law and First law, the priority should be given to the above-mentioned laws.² Though, these fundamental principles are not compatible with the present artificially intelligent beings. The application of artificial intelligence is becoming more complex, the interaction of Humans with Robots is observed almost in every field. Isaac Asimov Principles are not sufficient to Cope-up with this whole new dimension of our Society. What if a military drone is ordered to attack a terrorist or what if a person orders a Robot to hit a person in Good Faith? In such cases, these Principles have no real Legal significance.

²Isaac Asimov, *I ROBOT*^{1st}edn, Gnome press (1950)124.

Futurologists have propounded the evolution of a new species which they termed as ‘machina sapiens’³ which will share the earth as an intelligent creature with humans. Robots and Artificial Intelligence are emerging as a transformative technology that has capacities of Humans and I won’t be wrong if I say some of these are more capable than humans. From our home appliances to most dangerous war weapons like a drone, humans are in interaction with Robots and for making these interactions beneficial we need to regulate our interactions by properly established Laws.

The Robots are innocent with lack of ability to understand the nature of norms and laws of society like a small child, therefore, they can be used as a Crime machine by people, since Robots function on the directions and they can therefore, be misused. Another scenario which could be faced by the world in coming future is that Robots develop and evolve to a level where they can make self-decisions and can formulate intentions. This could be more dangerous to society than the biggest Hydrogen Bomb that could possibly be made. A picture of which has been shown in numerous movies like “A Space Odyssey” (2001), “The Matrix” (1999, 2003) and many more where the Robots evolve to a level that they take over the world and start eliminating humanity from the face of our world. Though these are fictions but this could possibly be the future of our world.

The Main question arises how we can check such misuse of artificial intelligence simultaneously by not imposing restrictions on the technological growth in this field. In order to Cope-up with this problem, the Artificial Intelligence entities must be made subject to Legal control. The new technology no doubt can improve Human lives but at the same time, can cause Human suffering likewise is also possible. Therefore, the new technological growth compels the adjustment of Legal orders. Though the artificial intelligence may not qualify for rights and

³Gunkel David J, *The Machine Question: Critical Perspectives on AI, Robots, and Ethics* 1stedn, The MIT press (2012) 47.

laws for Natural persons and may not be covered by constitutional provisions like a Natural person, but making Artificial Intelligence subject to law not only saves the innocent people from the Criminal liability arising from the acts of such entities, but also subjects Artificial Intelligence to Legal Social Control that checks the misuse of the artificially intelligent beings.

Now, the question here arises is that what type of Laws are suitable and how can an artificial intelligence entity be subject to these laws since they are mere objects in the scope of the Law. The Criminal Law is the most effective way towards social controlling of our Human Civilization and can be used as an efficient tool for checking the negative impact of artificial intelligence on our society.

Subjecting Artificial intelligence to Criminal laws creates an interesting dispute in the provisions that is based on the approach of society towards them, because Artificial intelligence thought forms a new dimension in the Technological world that is merely a computer programme based product in the Law. The solution to this problem is identifying artificially intelligent beings as Legal or Juristic persons in Law.

LEGAL PERSONHOOD OF ARTIFICIAL INTELLIGENCE

Artificial intelligence entities should be treated as legal persons, just as Corporations are Legal persons under the law. It is pertinent to note that the initial reasoning behind this, according to corporate legal personhood was to promote commercial activity and also to remove corporate liability from individual shoulders. In the same vein, artificial intelligence should be accorded basic Constitutional Freedoms in line with those accorded to corporates. The primary objective behind this is that as artificial intelligence develops and begins to think that Civil and Criminal liability arising from their actions will not be the solely attributable to their programmer or owner. Like, the Autopilot is based on the artificial intelligence Technology. What if a developer of a Warfare Aircraft makes an Auto pilot programme, which itself eliminates any obstacles on its mission and in one of the mission the pilot of the aircraft aborts the mission due

to bad weather but the Autopilot recognizes pilot as an obstacle and ejects the pilot out of the cabin which kills the pilot. Now the developer didn't had any intention to kill the pilot but the current laws consider them liable. The correct option would be to impose Criminal Liability on the auto pilot and correct the algorithms of its programming. This not only saves the developers of artificial intelligence and the owners from criminal liability for acts they never intended but also prohibits demoralization of developers to bring more innovations into the technological field.

At the same time, as Robots get sentient, they too shall start demanding basic Rights in line with their needs to facilitate their well-being. After developing artificially intelligent beings Scientists are designing machines with emotional intelligence and other capabilities that will diminish the line of difference between humans and machines.⁴It is fundamentally in the benefit of human beings to ensure that our interactions with these artificially intelligent beings are beneficial and occur as intended. In furtherance of the same, we need to grant legal personhood to these types of technology.

Though, this could make artificial intelligence a tool to commit crimes. The crime perpetrator can easily take shelter behind artificial intelligent beings and use legal personality of the artificial intelligence entity as a Statutory Privilege to commit Crimes. In the case of a Corporation if any person uses legal personality of the Corporation for his fraudulent or dishonest purposes then he is not allowed to take shelter behind the legal personality of the corporation and the Court lifts the Corporate Veil of the corporation and takes action against the perpetrator as there is not corporate personality. The Corporate Veil is lifted only if a person relies on the corporate personality of the corporation to shield it wrong doings.⁵ In the same vein, the scenario of artificial intelligence can be treated. If a perpetrator of any fraud or crime is found taking shelter behind the

⁴ Rafael A. Calvo, Sidney K. D'Mello, Jonathan Gratch&ArvidKappas, *The oxford handbook of affective computing*, 1stedn, Oxford (2015) 176.

⁵ BSN (UK) Ltd. v. Janardan Mohandas Rajan Pillai [1996] 86 Com Cases 371 (Bom).

legal personality of the robot he should be treated by a Court as if there was no legal personality.

Many precedents of which are being slowly established like the case of “*computer raped by telephone*” which was widely reported in which a programmer used a telephone link to invade the privacy of the computer. During the course of the Investigation the questions arose as to whether issue a search warrant to the Computer to fetch Evidences. This was the first time when the world saw any Computer being treated as a person and a search warrant was issued to the Computer.⁶ The Auto-pilot legislation is leading in establishing the precedents in this field. In *Klein v. U.S.*,⁷ the pilot used the autopilot to land the plane while the guidelines strictly prohibit the use of auto pilot during landing. There was an error on the part of the autopilot during the landing and which lead to a bad landing causing damage to the plane. The pilot was held liable as there was negligence on his part rather than considering auto-pilot liable for error on its part. In U.S four states have passed to legalize self-driving cars by Google,⁸ Nevada being the first state to do so.⁹ These cars treated as the traditional drivers in the perspective of law.

APPLICABILITY OF CRIMINAL LAW ON ARTIFICIALLY INTELLIGENT BEINGS

The applicability of Criminal law on artificial intelligence gives rise to another question of Criminal liability of the artificial intelligence. The Criminal liability is based on the presence of two factors, *Men-Rea* and *Actus-Reus*. In the light of English Criminal Law, the criminal liability doesn't arise until both the factors are present.¹⁰ It is said that *Actus Non Facit Reum, Nisi Mens Sit Rea* which states that

⁶ Ward v. Superior Court of California [1972] 3 C.L.S.R. 206

⁷[1975] 13 Av.Cas. 18137

⁸ Thomas Halleck, 'Google Inc. Says Self-Driving Car Will Be Ready By 2020' *International Business Times*, (15 January 2015) <<http://www.ibtimes.com/google-inc-says-self-driving-car-will-be-ready-2020-1784150>> accessed 12 February 2016

⁹ Alex Knapp, 'Nevada Passes Law Authorizing Driverless Cars' *Forbes*, (22 June 2011) <<http://www.forbes.com/sites/alexknapp/2011/06/22/nevada-passes-law-authorizing-driverless-cars/#17c7344a5b73>> accessed 12 February 2016

¹⁰Ratanlal&Dhirajlal, *The Indian Penal Code* by Ratanlal&Dhirajlal(32ndedn, LexisNexis 2011) 16

the intent and the act both must concur to constitute the crime. *Actus-Reus* is the material outcome of the act or the deed¹¹ and is an essential element to constitute the crime.¹² The main problem arises in detecting the presence of *Mens-Rea* which means the presence of criminal intention.

To prove the criminal liability of the Robot the presence of both the factors is essential. The *Actus Reus* can be detected by the Acts or Omissions of Robots. But there is no such yardstick that can measure the presence of *Mens-rea* or the omission of the same in a Robot. It is the mental element of the person doing any offence such as, the knowledge of the outcome or result of the act or the ability to understand the nature of the act which are accompanied by the most important factor which is the intention to perform the particular act.

TURING TEST

The challenge to detect the *Mens-Rea* in the acts of the robots can be tackled by the application of *Turing test*. In 1950, **Alan Turing** introduced the concept of *Turing Test* to test the ability of a machine to formulate intents for its actions or to exhibit intelligence.¹³ Turing test is a game in which a machine imitates being a human against a human opponent. After a series of questions the Questioner who is completely unaware of which competitor is human and which one is a Computer, guesses which of them is Human. Turing test basically tests the ability of a machine to exhibit human nature. If the machine is successful in convincing the questioner that it is human, it passes the test and is believed to have capabilities to act as a human. The applicability of the Turing test on every particular artificial intelligence entity can be Cumbersome for the Courts. Therefore, the government can lay down norms for manufacturers or developers of these entities to subject them to Turing test or any other test as the government deems fit before the public offering of these entities.

¹¹Stanhope Kenny & J.W.C. Turner, *Kenny's outline of criminal law*(19thedn,Cambridge University Press 1966) 17

¹²R v. White[1910] 2 KB 124

¹³Alan Turing, 'Computing Machinery and Intelligence' [1950] LIX 236

CHINESE BOX TEST THEORY BY JOHN SEARLE

John Searle criticized the Turing test theory by his *Chinese box test*. He stated that Turing test on a robot is similar to giving instructions to a man locked in a room in Chinese, who has no knowledge of the language. But when he is given a rule book that consists translation of Chinese into symbols, he will be able to understand the instructions. The people outside the room will be convinced that the person inside the room understands Chinese. But actually, the person doesn't understand Chinese but acts on the basis of instructions. The John Searle conveys by this experiment that the machines act on the basis of algorithms and programmes which are manipulated on the basis of the inputs.¹⁴The Artificial intelligence entity actually doesn't thinks or formulates intention but acts on the basis of programmes that function on the given input.

Criticism of Chinese Box Experiment

It is a Hypothetical approach that the programmes help the artificially intelligent beings to convince the questioner that it is human. Though the programme of the Artificial Intelligence which is like a symbol manual that helps understand the inputs but it definitely doesn't provide consciousness required to give human like responses and to convince the questioner that it is a human.

PUNISHMENT FOR CRIMINALLY LIABLE ARTIFICIAL INTELLIGENCE

The question arises what should be done after an artificially intelligent being is held criminally liable and what punishments should be inflicted or measures should be taken. After conviction, what punishment should be sentenced to the artificial intelligence entity by the court? What are the matters in which they can be held liable? Similar questions arose when the issue of criminal liability of Corporations was discussed as to how the companies and corporations will be

¹⁴Peter Kugel, 'The Chinese Room Is A Trick' (2004) Computer Science Department Boston College, Chestnut Hill, USA <<http://www.cs.bc.edu/~kugel/Publications/Searle%206.pdf>> accessed 14 February 2016.

made subject to Laws implicated on the natural persons.¹⁵ The present corporation laws perfectly display how these questions were answered. The corporations when are imposed fines by the court, they are bound to pay them in a similar way like natural persons. In the same analogy, punishments can be granted to the artificial intelligence. Though there is a need for adjustments in the implication of these punishments for artificial entities but this doesn't negate the nature and principal behind these punishments when related to humans.

There are few factors that must be taken into consideration while implication of punishment on the artificial intelligence including-¹⁶

- a. The fundamental principles of the particular punishment.
- b. Effects of the punishment on the artificially intelligent beings.
- c. The practical achievements by the specific punishment.

The most important factor among which that must be taken into consideration is what the achievements are from the specific punishment. Most of the punishments imposed on the human offenders like the Death Penalty, Life Imprisonment, Imprisonment, serving society and fines. But even the most severe punishments like the Death Penalty or Life Imprisonment are impractical for artificial intelligence entities. The fundamental principal behind these punishments is to make offenders incapable of committing any other crime in future.¹⁷ The death penalty is awarded to deprive the human of its life. But the term life is abstract for artificial intelligence. Artificial intelligence can be tangible like robots; computers but sometimes artificial intelligence entities have no physical existence like software, mobile applications. The death penalty is awarded to a human in case of grave and serious offences or when the offender

¹⁵Gerard E. Lynch, 'The Role of Criminal Law in Policing Corporate Misconduct' (1997) 60(3) Law and Contemporary Problems <Available at: <http://scholarship.law.duke.edu/lcp/vol60/iss3/3>> accessed 14 February 2016.

¹⁶Gabriel Hallevy, 'The Criminal Liability of Artificial Intelligence Entities' (2010) SSRN <<http://ssrn.com/abstract=1564096>> accessed at 19 January 2016.

¹⁷Robert M. Bohm, *Deathquest: An introduction to the theory and practice of death penalty in the United States*, 4thedn, Routledge (1999) 74.

possess danger to the society in the future in the same vein in case if an artificial intelligence entity is found to possess danger to society the punishments of similar consequence can be awarded which bars the entity from causing any further harm to the society like by deletion of the software or banning the production and development of the concerned entity or in case of an entity with physical existence it can be dismantled or destroyed. In the case of less serious offences or petty offences where the humans are awarded imprisonment or other punishments like society service with the fundamental object of bringing Reformation in the person so that the particular person can serve the society in future and live as a part of society. The same Principle can be applied to the artificial intelligence where there is a possibility of reformation in the artificial intelligence measures can be taken for bringing about reformative changes in the artificial intelligence entity by making necessary technical or programming changes or by alteration of algorithms. Fines can be imposed on the artificial entities for petty offences but in maximum cases, these entities are incapable of paying Fine as they don't have Money or Property of their own. In such cases, *finer can be realized by imposing punishment of community service.* The punishment of community service is most appropriate in terms of practicality and achievements for artificial intelligence.

Many legal systems recognize community service as the better substitute for short term sentences because of its productive nature.¹⁸ Community Service Punishment is also awarded in case where the offender is incapable of paying the fine that is imposed for the offence he committed. The objective of such punishments is the contribution of labour service by the offenders towards society. Therefore, the punishment of community service can be appropriately imposed on artificial intelligence where the entity can work for the welfare of the community by giving the contribution of labour.

¹⁸ John Harding, *The development of the community service , alternative strategies for coping with crime*, 1stedn, Norman Tutt(1978) 164.

CONCLUSION

Artificially intelligent beings add a whole new dimension to our society. The rapid development in the technological world warrants the adaptive reforms in the current legal system to find solutions to the emerging Legal problems through artificial intelligence in our society. The Criminal liability can be imposed on the artificial intelligence if all the requirements of *Actus-Reus* and *Mens-Rea* are met. The dynamic technological world possessess trong danger to humanity and in order to protect our society, we need to subject artificial intelligence to Law especially criminal law as it is the most effective way to social control. In the initial phase of corporate development, people were afraid of corporations but since corporations have been treated as legal persons subject to Criminal and Corporate laws the goal of social control on corporations has been achieved. Corporations since the fourteenth century have appeared in modern form.¹⁹ It took many centuries to subject corporations to the laws.

Artificial intelligence has become an important part of our society which is likely to get more influential in the future with the changes in the technological world. The society has already started facing problems due to lack of legal enactments on artificial intelligence. There are a huge number of crimes already been committed by the artificially intelligent beings. Therefore, there is a strong need that the society starts taking steps towards the development of legal system for dealing with such problems. Not subjecting artificial intelligence to laws especially criminal law would be outrageous. Human laws can be imposed on the artificial intelligence in the same manner in which they are imposed on other legal entities like Corporations.

¹⁹William Searle, Holdsworth, *A history of English law*, 1stedn, Sweet & Maxwell Ltd (1969)471

CELEBRITY RIGHTS: AN INTELLECTUAL PROPERTY RIGHTS APPROACH

- Niharika Behl*

ABSTRACT

Every individual has certain rights or the others, especially a public figure or a celebrity who has the capacity to ascertain certain monetary benefits attached with his personality, name, and likeness. There are instances where celebrities work for someone with their consent but there are others where their personality rights are infringed i.e. where their name, likeness and identity is used by others without their consent and they are denied their monetary benefits while their rights like right to publicity, right to privacy, morality rights, performers rights, trademark, passing off rights are infringed. India has tried to incorporate these celebrity rights but still by throwing a light at the current scenario it can be seen that there is a dire need to strengthen these rights in order to come at par with other countries that have recognized these rights.

INTRODUCTION

India is a land of celebrities ranging from the Bollywood actors, politicians, sports persons, TV actors, reality show stars, businessmen etc. Every individual who has a public identity or in other words is recognized by public at large is a celebrity. The word celebrity comes from the French word ‘*celebrité*’ which means celebration or it directly comes from the Latin word ‘*celebritatem*’ which means condition of being famous. The word celebrity has not been defined in the Indian Copyright Act but inculcates the word performer in the Section 2(qq)¹ of the act which defines a performer. As per the act, a performer includes an actor, singer, musician, dancer, acrobat, juggler, conjurer, snake charmer, a person delivering a lecture or any other person who makes a performance. The two words cannot be used interchangeably always as a performer need not be a celebrity and vice-versa. In the case of *Martin Luther King, Jr., Center for Social Change v. American Heritage Products, Inc.*², it was observed that the term ‘celebrity’ should be interpreted broadly to encompass more than the traditional categories

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¹Indian Copyright Act 1957, s 2.

²*Martin Luther King, Jr., Center for Social Change v. American Heritage Products, Inc* [1983] F.2d 674.

of movie idols, rock stars and ball players. So, it is clear from this that any individual who is widely recognized by public and can claim certain commercial benefits attached with his personality is entitled to these celebrity rights. It is pertinent to note that only celebrities have the sole right to exploit the value of being a celebrity.³

RIGHTS ENJOYABLE BY A CELEBRITY

A celebrity has a variety of rights attached to his identity. They include performer's rights, morality rights, publicity rights, personality rights, trademark and passing off rights.

Morality rights

Moral rights are the rights of attribution and integrity over the works performed.⁴In India moral rights is a contravention from the Berne convention. Moral rights flow from the fact that a literary or artistic work reflects the personality of the creator, just as much as the economic rights reflect the author's need to keep body and soul together.⁵ In *Amarnath Sehgal v. Union of India*⁶ it was observed by the Delhi High court that "In the material world, laws are geared to protect the right to equitable remuneration. But life is beyond the material. It is temporal as well. Many of us believe in soul. Moral rights of the author are the soul of his works. The author has a right to preserve, protect and nurture his creations through his moral rights. Prior to the amendment of 2012, the Copyright Act did not provide moral rights to the performers. The copyright amendment at, 2012 inserted a new section 38B⁷ which is similar to the section 57⁸ which provides moral rights to the author. The reason to provide moral rights to the performers is to bring copyright act 1957 in conformity with the

³[1993] U.S. App 1512.

⁴Sterling J *World Copyright Law* (Sweet and Maxwell 1998)55.

⁵ Stephen M. Stewart *International Copyright and Neighboring Rights* (Butterworths 1983)59.

⁶[2005] PTC 253.

⁷ Indian Copyright Act 1957, s 38(B).

⁸ Indian Copyright Act 1957, s 57.

provisions of WIPO Performances and Phonograms Treaty, 1996. Section 38B provides two moral rights to the performer of a performance. They include-

1. The right to be identified as the performer of his performance except where omission is dictated by the manner of the use of the performance
2. The right to restrain or claim damages in respect of any distortion, mutilation or other modification of his performance that would be pre-judicial to his reputation.

The importance of moral rights was seen in the case of *Manisha Koirala v. Shashilal Nair*⁹ where in the movie *Ek Choti Si Love Story*, 4 intimate scenes were performed by a double which Manisha Koirala contended were performed without her consent. The actresses' contentions were purely based on defamation but there was no remedy available to her on the basis of her moral rights.

Actors add a sense of personal touch in the movies performed by them. Their sense of delivery of dialogues, screenplay is individual in nature. Morality holds jurisprudential value and hence needs to be protected.

Performer's Rights

Prior to the Copyright (second amendment) Act of 1994, the Copyright Act, 1957 did not confer any rights on the performer. Copyright subsisted in translation or abridgement but it did not subsist in performance of a performer which might be a live performance over a radio or a television, or before the public, or a performance fixed in a cinematograph film, or a performance recorded in a sound record. The question whether copyright subsisted in the performance of a performer was decided by the Bombay High court in negative in the case of *Fortune Film International v. DevAnand*¹⁰. Following conclusion of Uruguay Round of Multilateral Trade Negotiation, the parliament enacted the Copyright Act in 1994 to bring the Copyright Act, 1957 in conformity with the

⁹ [2003] Bom Cr 136.

¹⁰ [1979] Bom 17.

TRIPs Agreement came into force in 1995. The main aim of the act was to extend protection to all performers by means of a special right to be known as performer's right. The definition of a performance in Section 2(q)¹¹ of the Copyright Act is: 'performance', in relation to performer's right, means any visual or acoustic presentation made live by one or more performers. The definition of a 'performer' in Section 2(qq)¹² of the existing Act was amended by the 2012 Act. Under the existing Act, the Section contained an inclusive definition which stated that a performer 'includes an actor, singer, musician, dancer, acrobat, juggler, conjurer, snake charmer, a person delivering a lecture or any other person who makes a performance'. The 2012 Act amended this definition by appending a Proviso to the Section which would disable those performers not mentioned in a film's credits (including film 'extras') from being able to claim all but one of the rights granted to performers by the Act. This Proviso states: *Provided that in a cinematograph film a person whose performance is casual or incidental in nature and, in the normal course of practice of the industry, is not acknowledged anywhere including in the credits of the film, shall not be treated as a performer except for the purpose of clause (b) of section 38B.* Section 38A¹³ of the act which was inserted by the amendment of 2012 provides exclusive rights to the performer. Once a person has consented to perform in a cinematographic film, he cannot claim his performer's rights on the same¹⁴.

Privacy Rights

People treat the personal life of celebrities as a scoop due to which their personal freedom and right to privacy gets hampered. The Article 21 of the Constitution grants right to privacy to all individuals which is extended towards these celebrities as well. The celebrities tend to protect their personal information from flowing out as it has a tendency to tarnish their image. Perhaps the most salient Indian case discussing the right of informational privacy as a constitutional right

¹¹Indian Copyright Act 1957, s 2(q).

¹²Indian Copyright Act 1957, s 2(q) .

¹³Indian Copyright Act 1957, s 38(A).

¹⁴Indian Copyright Act 1957, s 38(A)(2).

is *Raj Gopal v. State of Tamil Nadu*¹⁵ which held that the citizen has the right (also described as the 'right to be let alone') to safeguard the privacy of his own, his family, marriage, procreation, child-bearing and education among others and that nothing concerning these could be published without consent, except if a person voluntarily thrusts himself into a controversy or any of these matters becomes part of public records. In the case of *Kharak Singh v. State of UP*¹⁶, the majority bench referring to *Munn v. Illinois*¹⁷ held that though our Constitution did not refer to the right to privacy expressly, yet it can be traced from the right to 'life' in Article 21. It is a known fact that the right to privacy was first coined in 1890 in an article by Samuel D. Warren and supreme court justice Louis D. Brandeis. It was the Supreme Court of Georgia which first accepted the right to privacy doctrine in the landmark judgment in *Pavesich v. New England Life Ins. Co.*¹⁸ where it was held that Pavesich had a rightful claim against New England Life for alleged wrongful use of his picture in an advertisement for the defendant's insurance products. In *Michaels v. Internet Entertainment Group Inc.*¹⁹, the singer, Bret Michaels and Pamela Anderson Lee sought to restrain the defendants from disseminating on the internet a tape of a recording of the two engaged in a sexual act on the ground of violation of privacy and publicity. The court held that this video tape was a violation of right to privacy. In *Coben v. Herbal Concepts Inc.*²⁰ a picture of the plaintiff and her daughter was used on the label of a cosmetic product without her consent. In the instant case, the court granted damages in the favor of the plaintiff on the ground of infringement of right to privacy. In the case of *Barber v. Times Inc.*²¹, photographs were taken of Dorothy Barber during her delivery by a photographer. She succeeded in her suit of invasion of privacy against Times Inc.

¹⁵ [1994] 6 SCC 632. ¶ 28.

¹⁶ [1963] SC 1295.

¹⁷ [1948] 338 US 25.

¹⁸ [1931] All ER Rep 131.

¹⁹ [1987] Supp 2d 823 at p.840.

²⁰ [1984] 63 NY.2d 379.

²¹ [1942] 159 S.W.

Therefore in such cases relief is available to the complainant for invasion of privacy.

Publicity Rights

This right is often referred to as merchandising right and is available to an individual to claim monetary benefits arising out the use of his name, likeness, voice and fame. The first case to explicitly recognize that a celebrity's name or likeness has value beyond a right of privacy was *Haelan Laboratories Inc. v. Topps Chewing Gum, Inc.*²², a case involving baseball players who licensed their statistics and images for use on baseball cards. In coining the term 'right of publicity', the court stated: "*We think that, in addition to and independent of that right of privacy (which in New York derives from statute), a man has a right in the publicity value of his photograph, i.e., the right to grant the exclusive privilege of publishing his picture, and that such a grant may validly be made 'in gross,' i.e., without an accompanying transfer of a business or of anything else.*"²³In US Supreme Court's pronouncement in *Zacchini v. Scripps-Howard Broadcasting Co.*²⁴, it was observed that the right of publicity not only exists on an independent footing but in appropriate instances can be of sufficient force and effect to subordinate the strong countervailing right of the media, guaranteed by both the First Amendment and the Fourteenth Amendment, to report on newsworthy matters in the public interest. The Wisconsin Supreme Court in *Hirsch v. S.C. Johnson & Son, Inc.*,²⁵ which involved football star Elroy Hirsch, ruled that the nickname 'Crazylegs', by which he was known to a large segment of the public, was sufficient to identify him and thus was protectable under the right of publicity. The court articulated the underlying principle by which the need for protection should be defined: "All that is required is that the name

²²[1963] 346 U.S. 816.

²³*Haelan Laboratories Inc. v. Topps Chewing Gum, Inc* 868 (applying New York common law. The court further stated, "Whether it be labeled a 'property' right is immaterial; for here, as often elsewhere, the tag 'property' simply symbolizes the fact that courts enforce a claim which has pecuniary worth." This right raises issues including whether it is descendible, possible tax issues, marital property issues, and so on.)

²⁴[1977] 433 U.S. 562.

²⁵[1979]280 N.W.2d 129.

clearly identifies the wronged person." The court found that the moniker 'Crazylegs' was sufficient to identify Hirsch despite the fact that it was the press and public that had so dubbed him.²⁶In *Irvine v. Talksport*²⁷, a successful Formula 1 driver, Irvine's image was used without his consent by a radio station for advertising. The court observed that his right was infringed and he was entitled for compensation. In *Midler v. Ford Motor Co. and ors.*,²⁸ the Ford Co. wanted to use Ms. Midler's version of a song for a commercial for which she didn't give her consent. The Co. appointed Ms. Hedwig, a singer who was a backup vocalist for Midler and made it appear as it was Midler's version of the song. The court identified it as infringement of right to publicity.

The right of publicity and the right of privacy are still in their nurturing stage especially in India. It is pertinent to note that right of publicity is distinct from the right of privacy. Right of publicity gives the celebrity the sole control over the commercial exploitation of his name voice and likeness.

Trademark and Passing off Rights

The protection which the celebrities can obtain from the Trademark law has a very limited scope. Section 2(1) of Indian Trademarks Act²⁹ allows registration of any 'sign capable of distinguishing goods and services of one person from another, any word (including personal names, design, numeral, and shape of goods or their packaging' as trademark. Courts in India have accorded protection to film titles, characters and names under trademark law. In *Re: Elvis Presley Trade Marks*,³⁰Elvis Presley Enterprises, Inc. wanted to register 'Elvis Presley' in the United Kingdom, and another British company that used the name Elvis in its mark contested the registration. The court held that the name Elvis could not be registered because it was well known by the public and therefore, was not distinctive. When Elvis Presley Enterprises claimed that the public would be

²⁶[1979] 280 N.W.2d 129.

²⁷ [2003] EWCA Civ. 423.

²⁸ [1988] 849 F.2d 460.

²⁹Indian Trademarks Act 2000, s (2).

³⁰13 R.P.C. 543 (Eng. Ch. 1997), aff'd, 16 R.P.C. 567 (Eng. C.A. 1999).

confused, the court stated that "*when a fan buys a poster or a cup bearing an image of his star, he is buying a likeness, not a product from a particular source.*"³¹ Furthermore, the court stated, "*When people buy a toy of a well-known character because it depicts that character, I have no reason to believe that they care who made, sold or licensed it.*"³²

From this it can be seen that famous celebrities can attain trademark rights over their names.

The action of passing off is used when the name, personality, likeness of an individual is misused by someone else. It is a remedy against the loss of reputation or misappropriation of personality or defamation of an individual. Passing off, in the publicity rights context, occurs when an advertisement uses a celebrity's image in a way that will lead the public to believe that the celebrity is either associated with the subject of the advertisement, or is endorsing the subject of the advertisement. Furthermore, the alleged association or endorsement must cause a loss of income to the celebrity.³³ In the case of *Hallinwell v. Panini*³⁴, Panini was producing a sticker collection of the Spice Girls that it called the 'Fab Five'. The Spice Girls, who were negotiating a deal with Topps Inc. to produce a sticker set, claimed that the absence of a 'non-official' declaration on the set would lead their fans to believe that it was the Spice Girls and not Panini that were producing the set. The court disagreed, rejected the Spice Girls' request for a preliminary injunction and Justice Lightman stated: "*I shall only say that I am far from satisfied that the absence of any disavowal of authorization by the plaintiffs can reasonably lead members of the public to buy the defendants' product on the basis or in the belief that it was authorized by the plaintiffs.*"³⁵ In the case of *Mirage Studios v. Counter Feat Case*³⁶, it was observed that passing off action lies when the public is misled with regard to feature or quality of goods sold. In this case the first

³¹13 R.P.C. 543 (Eng. Ch. 1997), aff'd, 16 R.P.C. 567 (Eng. C.A. 1999).

³²13 R.P.C. 543 (Eng. Ch. 1997), aff'd, 16 R.P.C. 567 (Eng. C.A. 1999).

³³Hayley Stallard, *The Right of Publicity in the United Kingdom*[1998] L.A. ENT.L.J.567.

³⁴[1997] LEXIS.

³⁵*Hallinwell v. Panini*[1997] LEXIS.

³⁶[1991] FSR 145.

plaintiff was the owner of the copyright of drawing of fictitious character called 'Teenage Mutant Ninja Turtles' which was copied by the defendant No.1. In this case injunction was granted by the court against the defendant no.1.³⁷

INDIAN SCENARIO

In India the concept of celebrity rights is still evolving. The requisite amount of case laws and a strict legislation to adhere to is still not present. But still there are few ways in which the law has managed to evolve.

Actors are considered as performers within the purview of section 2qq of the Indian copyright act, 1957 which entitles them to claim performer's right which includes economic, moral and non-tangible rights. Non-tangible rights include the right over the persona of the performer, the right against use of likeness³⁸ or name of the performer³⁹. Personality is a means by which one individual is recognized by another. In the internet era, manipulated images of the celebrities can be used for commercial purposes and can cause defamation.⁴⁰ In the case of *ICC Development (International) Ltd. v. Arvee Enterprise*⁴¹, it was observed that the right of publicity has evolved from the right of privacy and can inhere only in an individual for any indicia of an individual's personality like his name, personality trait, signature, voice etc. This right vests in an individual and he alone is entitled to profit from it. In the case of *Titan Industries Ltd. v. Ramkumar Jewellers*⁴², Delhi High Court recognized an enforceable right in the identity or persona of a human being. So also, Madras High Court in the case of *Shivaji Rao Gaikwad v. Varsha Productions*⁴³ accepted the proposition that personality right vests in persons, who have attained the status of a celebrity. Any infringement of such

³⁷*Mirage Studios v. Counter Feat Case* [1991] FSR 145.

³⁸*Onassis v. Christian Dior*, [1984] 122 Misc.2d 603.

³⁹*Pressley v. Russen*, [1981] 513 F.Supp. 1339.

⁴⁰Monika Verma "Actors in India Asking for Their Morality Rights"(2014) <<http://www.manupatra.co.in/newsline/articles/Upload/65D12761-88D2-45EA-8DDF-00E328058849.pdf>> accessed 31 August 2016

⁴¹*ICC Development (International) Ltd. v. Arvee Enterprise* [2003] 26 PTC 245.

⁴²[2012] 2382.

⁴³[2015] 1 LW 701.

right of publicity requires no proof of falsity, confusion, or deception, especially when the celebrity is identifiable and no one can make an unauthorized use of the persona or any indicia of the individual's personality.⁴⁴ Further it was observed in *Star India (P.) Ltd. v. Leo Burnett (India) Pvt. Ltd.*,⁴⁵ that it was necessary for character merchandizing that the characters to be merchandized must gain some public recognition that is, a form of independent life or public recognition for itself independently of the original product or independently of the milieu/area in which it appears.

In India, the moral rights extend towards famous personalities like Mahatma Gandhi, Phoolan Devi, Rajnikanth, etc. Thus, within a basic framework, celebrities can protect their name and image in India and this right can be claimed by their legal heirs, when the image and reputation of the deceased is at stake.⁴⁶

CONCLUSION

The field of intellectual property is growing day by day. The celebrity rights as a part of IPR is basically to protect the identity of a celebrity from commercial exploitation. It is basically to maintain a balance between the interests of the celebrity and those of society.

It is only through various case laws that the problem of exploitation that subsists due to the lack of strict legislation can be curtailed. Judiciary in its various judgments has tried to recognize these rights but now the ball is in the legislature's Court to statutorily recognize these rights. In order to appreciate the hard work that is put in by these celebrities, it is very important to enforce these celebrity rights.

⁴⁴*Shivaji Rao Gaikwad v. Varsha Productions*[2015] 1 LW 701.

⁴⁵[2003] 27 PTC 81.

⁴⁶Kumari "T V Celebrity Rights as A form of Merchandise Protection Under the Intellectual Property Rights", *Journal of Intellectual Property Rights*, (2004) 134.

RIGHTS OF AN AUTHOR: ARE THEY REALLY PROTECTED UNDER COPYRIGHTS LAWS OF INDIA

-Raghuveer Singh Meena *

ABSTRACT

The Protection of Copyright is given for a work which has originality, i.e. there should be an author of the work and certain amount of creativity should be involved. The author is the real creator of the work and hence he is the one who has the first right over the copyright. Even Indian law establishes that first owner of the copyright is the author. The definition of the term “ownership” is inclusive where it can even include assignee and a legal entity, irrespective of it being defined under law. Whereas in Bern Convention, there is no specific definition of the term “Author”, instead it implies that it is not necessary that the person who creates the work should always be the owner. However, the term “Author” is defined under Indian Copyright Act with respect to different works but it has lot of ambiguities.⁴⁷

The attempt through this paper is to analyze the provisions relating to the ownership and assignment of copyright regarding a Cinematograph Film and in the context of changing mode of communication technologies how it tackled the problems emerged in ownership, assignment and license of copyright, the adequacy of these provisions in effectively protecting the rights of the author and performer & tries to balance the rights of the owner of copyright vis-à-vis public interest and also the role of judiciary in effectively protecting their rights.

The hypothesis of this paper is that having certain changes in law through amendment (Copyright Amendment Act, 2012) will not lead to anything unless implementation is improved through mechanisms and for the same Judiciary will have to play an important role.

INTRODUCTION

The definition of the term “ownership” is inclusive where it can even include assignee and a legal entity, irrespective of it being defined under law. In the Bern Convention, there is no specific definition of the term “Author”, instead it implies that it is not necessary that the person who creates the work should always be the owner. However, the term “Author” is defined under Indian Copyright Act with respect to different works but it has a lot of ambiguities.⁴⁸ When new technologies emerge, different mode of communication simultaneously arise and the exploitation of the copyright by way of assignment & licensing will add economic benefits to the

*B.A.L.L.B. (Hons.), National Law School of India, Bangalore.

⁴⁷ Julian Rodriguez, COPYRIGHT AND MULTIMEDIA, 120 (4th edn., 2010).

⁴⁸ Julian Rodriguez, COPYRIGHT AND MULTIMEDIA, [2010] (4th edn.,)120.

copyright owner and the provisions of assignment and licensing become crucial. Indian Copyright Act has tried to take care of such provisions by way of amendments, but still leaving lacunae at several places. The role of judiciary becomes crucial in interpreting such provisions for effectively protecting the rights of the authors.⁴⁹

OVERVIEW OF ASSIGNMENT AND LICENSING

Assignments of copyright and copyright license are two forms of contract involved in the exploitation of copyright work by a third party. A license is an authorization of an act which without authorization would be an infringement. Licensing usually involves licensing of some of the rights and not the whole. Licenses can be exclusive or non exclusive. An assignment involves the disposal of the copyright.⁵⁰

The author (assigner) assigns the copyright to another person (assignee) or transfer of ownership of the copyright. In the case of license, only specified interest in Intellectual Property (hereafter “IP”) is transferred and the ownership is not transferred to the licensee. A license normally does not confer any right to licensee against licensor or third party but exclusive licensee has substantial rights against the licensor, even to sue the licensor. And by S.30 if the licensee in the case of future work dies before the work comes in to existence his legal representatives shall be entitled to such works, in the absence of any provision to the contrary.⁵¹

Unless he joins the owner of copyrights as a party to the infringement action, he cannot take an action for infringement against third party but a purchaser can in good faith and for value of the proprietors interest without notice of previous licensee is unaffected by it. The licensee can however, sue the assignor for damages for breach of contract if the latter does not protect his interest. A licensee has a right to make alterations except in so far as his license expressly or impliedly

⁴⁹ Ishita Chatterjee, COPYRIGHT LAW, [2011] (1st edn.)144.

⁵⁰ Robert W. Gomulkiewicz *et al*, LICENSING INTELLECTUAL PROPERTY: LAW AND APPLICATION, [2011] (2nd edn) 96.

⁵¹ Jayadevan S. Nair, *Who is the author from among them all? - Film authorship in India*, [2004] COCHIN UNIVERSITY LAW REVIEW 119, 196.

restricts the right. A failure to pay royalties enables the licensor to revoke the license. But in the case of assignment it is not possible. But if there are any harsh terms, which affect the author, they can lead to revocation if a complaint is made to the copyright Board. Both assignee and assignor will be treated as owners of the copyright once the rights are assigned with respect to their own separate rights which are assigned and which are kept by assignor with himself.⁵²

The term “assignee” includes legal representatives of the assignee with respect to assignment of copyright in future work in case assignee dies before the completion of the work. The owner of the copyright has the power to assign his entire rights or assign only some of the rights. In case the rights are split up there is only partial assignment. Assignee will be the owner of the copyright as regard rights so assigned, the owner will be the owner of the copyright of remaining rights. The assignment could be for whole duration of the copyright or for a short duration.⁵³

MODE OF ASSIGNMENT

No assignment of the copyright in any work shall be valid unless it is in writing signed by the assignor or by his duly authorized agent. It shall identify such work; specify the rights assigned, duration, territorial extent of such assignment, amount of royalty payable to the author. If the period is not stated it shall be deemed to be five years and territorial extent shall be presumed to extend within India. If the assignee does not exercise such rights within one year from the date of such assignment it shall be deemed to have lapsed unless otherwise specified in the assignment.⁵⁴

ASSIGNMENT OF FUTURE RIGHTS

⁵² Mira T. Sundara Rajan, *COPYRIGHT AND CREATIVE FREEDOM: A STUDY OF POST-SOCIALIST LAW REFORM*, [2006] 48.

⁵³ Shemaroo Entertainment Ltd v. Amrit Sharma and Ors., FAO (OS) No.292/2012.

⁵⁴ Vinay Ganesh Sitapati, *Conferring moral rights on Actors: Copyright act and Manisha Koirala case*, [2003] ECONOMIC AND POLITICAL REVIEW 1359, 1361.

The copyright in any work can be transferred either wholly or partially or with certain limitations by the owner of the copyright in any existing work or the owner of copyright in any future work.⁵⁵ Whereas if it's the issue of assignment of copyright in a work which has yet to come into existence then it can be effective only when the work comes into existence. When new rights are granted by the legislature on existing works due to the technological development, problem arises as to the ownership of the new rights, whether the assignor who assigned already all the existing rights on the work or the assignee is the owner of the future rights.⁵⁶

ASSIGNMENT AND LICENSING OF RIGHTS OF A CINEMATOGRAPH FILM

Generally, the “the first owner” of the copyright is the “author” of the work with respect to his creation.⁵⁷ However, there are certain circumstances in the Copyright Act where it is said otherwise.⁵⁸ In 2012 Amendment Act, the definition of the author especially of the producer of the cinematograph film was kept unchanged.⁵⁹

This is in stark contrast to the contractual practice in India as per which the writer or the lyricist of a work has no right to royalties which may accrue owing to the subsequent use of a sound recording or a musical work with all profits being accepted by the producers once a contract of assignment has been entered into. This practice is based on the decision given in the landmark case of the *Indian Performing Rights Society Ltd v. Eastern India Motion Pictures Association* (IPRS case)⁶⁰. In the aforementioned matter, the Copyright Board initially held that composers⁶¹ of lyrics and music retained copyright in their musical works incorporated in sound tracks of cinematograph films and could collect fees, royalties and charges in respect

⁵⁵ Indian Performing Right Society v. Aditya Pandey & Ors., FAO (OS) No.423-424/2011.

⁵⁶ Sindhura Chakravarty, *Importance of Assignment Agreements under Intellectual Property Laws in India*, Vol. 14 JOURNAL OF INTELLECTUAL PROPERTY RIGHTS, [2009] 522.

⁵⁷ The Copyright Act, 1957, Section 17

⁵⁸ The Copyright Act, 1957, Section 2 (uu)

⁵⁹ Pascal Kamina. *FILM COPYRIGHT IN EUROPEAN UNION*, [2012] 215.

⁶⁰ *Performing Rights Society Ltd v. Eastern India Motion Pictures Association*, [1977] SCR (3) 206.

⁶¹ The Copyright Act, 1957, Section 2 (ffa).

of those films. An appeal was preferred to the High Court which set aside the decision of the Board.

The Court, in its decision interpreted Section 17(b) and (c) in relation to Section 13(4) of the Act to mean that the rights of a music composer or lyricist can be defeated by the producer of a cinematographic film as a film producer becomes the first owner of the copyright and no copyright subsists in the composer or lyricist, unless there is a contract to the contrary. Once the author of a lyrical or musical work transfers his rights in the work to a producer for the Cinematograph film then later he cannot claim the infringement of his rights. Moreover, the owner of the cinematographic film, namely, the producer cannot be wrongfully said to appropriate anything which belongs to the composer of the lyric or musical work.⁶²

The Calcutta High Court in case of *Eastern Motion Pictures v. Performing Rights Society*⁶³ decided that a producer of a cinematograph film will be considered as the first owner of the work created by a composer of music or a lyricist, if there was certain consideration or reward given by the producer to such creator. By incorporating certain changes through clause (2) (d) of the 2012 Amendment Act, economic interests of the creators of such works have been tried to be protected. Other provisions to protect the economic interests of the author of the work are sub-section (8), sub-sections (9)⁶⁴ and (10)⁶⁵ of Section 19.

These new provisions protect the economic rights of the authors of the work irrespective of whether they are paid consideration by the producer for producing that work. The proviso inserted to sub-section (1) of Section 18 protects those authors who are in vulnerable position so that they cannot assign or waive the right

⁶² Christopher M. Newman, *An Exclusive License is not an Assignment: Disentangling Divisibility and Transferability of Ownership in Copyright*, LOUISIANA LAW REVIEW [2013]59, 115.

⁶³ *Eastern Motion Pictures v. Performing Rights Society* [1978] Cal 477.

⁶⁴ The Copyright Act, 1957, Section 19(9).

⁶⁵ The Copyright Act, 1957, Section 19(10).

to receive royalties for his creation in any form other than when it is communicated to the public with a cinematograph film in a cinema hall.⁶⁶

In addition, if the work of an author of literary or musical work is used for the sound recording but is not included in the cinematograph film, then these authors of the work are protected by provisions in the Copyright Act which prohibits them from assigning or waiving their right to receive the royalty for their work (Section 34 and 35 of the Copyright Act, 1957).⁶⁷

In India, the Copyright Act, 1957 protects an author of the copyright work by giving them right of protection against all kinds of unauthorized infringement. These rights extend to economic and moral rights of an author under copyright law. The rapid changes in technology have undermined the economic rights of an author, as there are increasing incidents of piracy of the copyright work. It is becoming necessary that the protection should not be only within a certain jurisdiction but it should be extended to foreign jurisdictions also.⁶⁸

Copyright law not only protects the economic rights of an author but it extends to even protecting the reputation and personality of an author against all kinds of mutilations, modifications or distortions of their work. Judiciary has played an important role in interpreting these rights so that the implementation can be proper in its real sense. In spite of providing so many rights on the paper, there is a long way to go to protect these authors against the unauthorized infringement of their work available on the internet.⁶⁹

PRESENT POSITION AFTER THE 2012 AMENDMENTS

While the 2012 amendments to the Act extended the rights of the performers and broadcasting organizations, the major thrust of amendments was on eliminating unequal treatment meted out to lyricists and music composers of copyrighted works

⁶⁶ Sreenivasulu N. S., *LAW RELATING TO INTELLECTUAL PROPERTY*, [2013], 154.

⁶⁷ *Id.* at 154.

⁶⁸ Indian Performing Right Society v. Mr. Vishwanathan & Anr., CS (OS) No.2423/2007.

⁶⁹ Radio Today Broadcasting Ltd. v. Indian Performing Rights Society, [2007] (34) PTC 174 Cal.

incorporated in cinematograph film owing to the contractual practice in Indian entertainment industry.⁷⁰ As per the industry practice, lyricists and music composers were assigning all rights in the work to the producer of the film for a lump-sum payment.⁷¹ This meant that lyricists and music composers had no further right to any royalty accruing from their work even if the work was being utilized in mediums other than the cinematograph film.⁷² As expected, the amendments have not gone down too well with the producers of the cinematograph film and major music companies of the country who buy the music rights of the film,⁷³ and a number of writ petitions⁷⁴ challenging the constitutional validity of the amendments have been filed before the Delhi High Court.⁷⁵

Surprisingly a category of songwriters and composers (in whose favor amendments are claimed to be), are also not very pleased with the amendments and have challenged their constitutionality.⁷⁶ These songwriters and composers belonging to a regional language fraternity have challenged the second proviso to section 33(1) which compulsorily requires them to transact licensing business through a copyright society, on the ground that it restricts their right to license their work and forces them to join a copyright society which in view of the limited popularity of that regional language music harms their commercial interests as they would have no say in determining the distribution scheme of the royalties collected by the Copyright Society.⁷⁷ While these writs are yet to be decided it has been widely reported that producers of the cinematograph film are already devising ingenious ways to create instruments preserving their broad interests.⁷⁸ The Government had assured that it would set up a permanent Copyright Board and also a Copyright Enforcement

⁷⁰ T. R. Srinivasa Iyengar's *The Copyright Act, 1957*[2013] (10th edn., 2013) 178

⁷¹ *Id.*, at 178.

⁷² Newman, *supra* note 16, at 110.

⁷³ Super Cassettes Industries v. Union of India, W.P. (C)-2316/2013).

⁷⁴ Venus Worldwide Entertainment Pvt. Ltd v. Union of India, W.P. (C)-2318/2013.

⁷⁵ Bharat Anand v. Union of India, W.P. (C) – 2321/2013.

⁷⁶ Devender Dev v. Union of India, W.P. (C)-2959/2013).

⁷⁷ Dr. Navdeep Kour Sasan, *Rights of the Author: Possible Extensions under Copyright Law in India*, 02(02) INTERNATIONAL JOURNAL OF INNOVATION AND APPLIED STUDIES 104, 112 (2013).

⁷⁸ Goldmines Telefilms Pvt. Ltd v. Reliance Big Entertainment, APPEAL (L) NO.458 OF 2014, Bombay High Court (2014).

Agency Council to ensure compliance with the provisions of the Amendment Act; concrete steps toward this goal are yet to be taken.⁷⁹

PARLIAMENTARY STANDING COMMITTEE ON COPYRIGHT AMENDMENT BILL, 2010

The purpose behind providing the assignment of rights to copyright societies is also flawed. The Parliamentary Standing Committee perceived that such a restriction on assignment of rights would ensure that the administration of copyright societies was not taken over by film producers and control of such societies was retained with the authors⁸⁰. However, unless there is greater participation of the authors in the administration of the copyright societies so as to record a significant increase in their collective bargaining power, the amendment shall be in vain with producers continuing to strong-arm the terms and conditions of the licensing agreement.⁸¹ As put forth in the Report⁸²

“The system of institutionalized societies needs to be strengthened as everybody may not be in a position to negotiate contracts with equity”.

The absence of any collective bargaining power, unlike the presence of strong unions in other nations, will have a substantial effect on the enforcement of royalty rights.⁸³ Moreover, the proposed amendments are seemingly directed towards serving the interests of the composers and lyricists alone as the protection offered is only in relation to underlying works other than in conjunction with the cinematographic film, thereby conveniently ignoring the concerns of other contributors such as scriptwriters.

⁷⁹ Mrs. M. Padmini v. Raj Television Network Limited, Original Application No.763 of 2013, Madras High Court (2015).

⁸⁰ Parliamentary Standing Committee on Copyright Amendment Bill, 2010, Paragraph 10.3

⁸¹ Sholay Media And Entertainment v. Ajit Sippy And Others, CS(OS) No. 1691/2008, Delhi High Court (2010).

⁸²Parliamentary Standing Committee on Copyright Amendment Bill, 2010, Paragraph 9.20

⁸³ 227th Report by the Department- Related Parliamentary Standing Committee on Human Resource Development on the Copyright (Amendment) Bill,2010, available at:< <http://rajyasabha.nic.in> >(Last accessed on 10th May, 2015).

CONCLUSION

There is little doubt that the 2010 Bill intended to implement extensive structural changes in Indian copyright law, and that this intention remained in the 2012 Act. However, the amendments contained in the 2012 Act are themselves at times unclear, while at other times, it is the rationale underlying them which is unclear. And at virtually all times, the likely effect of the amendments is open to debate.

If at all the copyright statute was to be used to regulate copyright contracts and *inter se* relations in the film and music industry, such regulation should ideally have been made in a manner which was not quite as susceptible to misinterpretation as appears to be the case. Instead of creating (relatively) clear-cut provisions which would benefit the authors of underlying works, the 2012 Act appears, in places, to create an extremely confusing situation which is most likely to benefit those who focus on interpreting the law, and not those to whom the law would apply. Most of the producers indulge in rent seeking behaviour which makes position vulnerable for those who in weaker position in terms of bargaining.

Furthermore, no effective remedy has been advanced to tackle the problems arising out of the retrospective operation of the amendments and the copyrights already assigned to producers. It is logistically difficult to alter all payments already made based on existing agreements. There also exists ambiguity with respect to the recipient of payments to be made by third parties such as music companies and whether such payment is to be made directly to authors or will be taken care of by the producers.

The fundamental problem with the Indian Copyright Law is not so much of it being flawed but the fact that it is not always followed as such. That the 2012 Act is well-intentioned is not debatable. It covers a range of issues relating to the film and music industry, and clearly intends to alleviate the condition of “non-powerful” individuals working in the industry by strengthening their position. Whether it will achieve this aim without their first being a deluge of litigation to interpret the provisions of the 2012 Act is an open question.

DEVELOPMENT OF FORENSIC SCIENCE AND CRIMINAL PROSECUTION IN INDIA

-Meenal Choudhary*

ABSTRACT

The old Indian practices represent and acknowledges the use of forensics. The custom of using fingerprints in place of signatures by the people who were not literates is indeed the reflection of the way we use today to solve civil and criminal mysteries. Kautilya's Arthashastra which is approximately 2300 years old give reference as to the use of finger prints. This signifies that the application of forensics might be new but its existence is not the new. The article throws light on the development of forensic science as well its use today in judicial determining of the cases brought before the honorable judiciary. The article gives logic and reasoning for each thought which the article mentions. This article would help to understand the power of judiciary and the forensics blended in such a way as to complement each other. And the start of modern era to determine the case and even narrows the chance of wrongdoer to escape.

HISTORY

The early times lacked uniform methods of forensic practices. The older method of Criminal Investigation implied confessions which were not voluntarily, but were one which were forced to confess. This practice of forcing to confess gave birth to unlawful practices as the use of force to makes someone to confess which is not considered to be lawful. The concept of forensics is not new in India, though its usage in solving crimes is comparatively very low than to developed countries.

Sir William Herschel, an officer in Indian Civil Services during pre-independence was the foremost officer who advocated in favor of using finger-prints in identification of crime suspects. During 1858 he was the one who started to use thumbprints for securing the measures to avoid the frauds. Following this, in year 1977 he initialized using the finger prints in Lawful Contracts and other legally enforceable deeds in order to avoid the frauds. The basic Aim for the same was to avoid the fraud, then caused by the relatives in drawing pensioner's

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money fraudulently during their lifetime or continues drawing money after their deaths. He started to take and preserve the finger-prints of the prisoners so as to put a check on their escape and to prevent any possible frauds¹.

Approximately 20 years later In 1897 Kolkata witnessed the establishment of finger-print Bureau which was result of the approval of a committee report by Council of Governor General. The reports contained the proposal of classifying the Criminal Records on the basis of finger-prints. Sir Edward Richard Henry was the First scientist to devise a systematized finger-print system which was later co-devised by Azizul Hague and Hem Chandra Bose. England and Wales were among the first to accept this co-devised system. The system is known as Henry Classification System named after Sir Henry who primary devised this system. On the other hand, Scotland witnessed the establishment of first finger-print bureau in Britain².

After independence in 1968 the government of India through the Ministry of Home Affairs established the First Forensic Science laboratory of Independent India in Delhi for assisting Delhi police and Central Bureau of Investigation that were left under the control of Central Bureau of Investigation. At present this oldest Forensic Science laboratory of Independent India provides expert opinions in Crime related cases. Its assistance is not only limited to Delhi police and CBI but also extends to State Forensic Science Laboratories, Defense Forces, Government Undertakings, Universities, and Banks etc.

In 19th century a Startling discovery was made which supported the positive advocacy of using finger-prints in certain criminal matters that was finger contains its own oily substance. The fingers whenever comes in contact with any surface lefts an impression so called Latent Mark that could be traced by using various methods(e.g., using of fine power over such surface where one is

¹ Herschel, William James ,*Skin Furrows of the hand*. Nature 23(578): 1880,76.

² Sodhi J.S.; Kaur, asjeed, *The Forgotten Indian Pioneers Of Fingerprint Sciencel*. 2005 Current Science 88 (1): 185.

suspected to find the finger-print). Not long after this, in 1894 while moving towards the end of the century Home Secretary in England established a committee called the Troup Committee. The main aim for the establishment of this committee was to determine the best way of personal identification. The committee accepted the fact that no two individual could have same finger-print that is, finger-prints make two individual different. Although, still much reliance were not paid to this findings until 1900 when Argentine court first accepted the finger-print evidence in determining the case. Following this England adopted such finger-print Evidence in 1902, which encouraged other countries also to use this type of evidence³. British government before Independence gifted India several such laboratories which forms the base of Indian Forensic System today. These system include Anthropometric Bureau (1892), Finger Print Bureau (1897), Inspectorate of Explosives (1898), Office of Government Handwriting Expert (1904), Serology Department (1910), Foot Print Section (1915), Note Forgery Section (1917), Ballistics Laboratory (1930) and Scientific Section (1936).

Having subsequently undergone clubbing / regrouping / spreading, as of now, there are 28 State / Union Territory Forensic Science Laboratories (State / UT FSLs) along with their Regional FSLs (32 RFSLs) and Mobile FSLs (144 MFSLs); they are mostly with the respective Home Department either directly or through police establishment⁴.

PRESENT DAY

Various prominent Jurists in older and present era has made an attempt to define the crime in some of the best possible way they could, some of such definitions are as-

³EncyclopediaBritannica, 'Crime'

<http://www.britannica.com/EBchecked/topic/142953/crime/53437/The-role-of-forensic-science>.

⁴ Dr. Gopal Ji. Misra & Dr. C. Damodaran, *Perspective Plan For Indian Forensics*l, Final Report presented to the Ministry of Home Affairs Government of India.

- In his 'Commentaries on Law of England', Sir William Blackstone defined Crime as "an act committed or omitted in violation of Public Law forbidding or commanding it".
- Sir James Stephen defined, "Crime is an act forbidden by law and revolting to the moral sentiments of the society".
- Kenny defined "Crimes are wrongs whose sanction is punitive and in no way remissible by a private person, but is remissible by the Crown alone, if remissible at all".

Thus, DNA analysis is just like identifying the individual's characteristics. Where characteristics, nature, behavior, likes, dislikes of two individual do not match in the same DNA of each individual differ from other individual in one or the other form. The DNA analysis thus, is also called DNA Finger-Print. There is no doubt that the various sciences have given many Tools to us to analyze the Forensic Evidences and determine the fate of the case. It would not be incorrect to state that the most powerful among them is DNA analysis, the material responsible for making the genetic code of each and every individual. DNA finger-print or DNA typing or DNA profiling analyses the DNA from the Physical Evidence and match it with the blood, hair etc of the person, if the two matches exactly to each other then it simply means that the person was either involved, present, assisting in any Criminal or Civil issue. The DNA analysis is of great use not only in criminal, but also in civil cases.

In simple words, it would not be wrong to say that it is modern way to Investigate the case whether Civil or Criminal, the technique have ability to give answers to those questions which could not be answered through ordinary way of Investigation. It not only helps to deliver more precise judgments, but also provide such merits including that there could be narrower or we could say that no change of the wrongdoer to escape through any way. The case starts with the Investigation of the case; the experts collect the material Evidences. Each of such evidences is so unique in their own way, that there arises a need to examine

them and analyze them separately. Sometimes cases are so complex that the evidences so collected needs more than one expert to analyze those collected Evidence.

At present more than 30 million cases are still pending in the Courts of India. Not only the Courts are over-burdened, but also the Justice is delayed to those who every day waits for it. With the help of Forensics we not only help the Victims, but also emphasize the Court to speed-up the Justice system and to reduce the burden over-lying them.

SUB-DIVISIONS

There are certain Sub-divisions that include:

- a. **Forensic Accounting**, which is a method of using accounting skills for investigating crime combined with analyzing the financial condition with the aim to use this in legal proceedings.
- b. **Forensic Aerial Photography** also called as forensic imaging, is the recreation of crime scene in front of Investigators and analyzers through photographs, in order to carefully scrutinize it. This aids the Investigation and also is regarded as evidence which could be produced in court.
- c. **Computational Forensics**, this branch of forensics is concerned with algorithms development and software development to assist in forensic examination.
- d. **Criminalistics**, is the amalgamation of various sciences in order to compare and examine Biological evidences, Ballistic evidences, Finger-prints etc. these evidences are scrutinized and processed in lab to reach a result which either correlates it to the wrong done or otherwise.
- e. **Forensic Dactloscopy** is a science of studying, analyzing finger-prints.
- f. **Digital Forensics** is a science to recover the data from Electronic and Digital media (e.g., search history of a particular computer used by the accused).

g. Forensic Document Examination is the forensic examination of the disputed document. The most common and known under this category is the Handwriting Examination. Handwriting Examination is the one where Examiner address concerns in relation to a particular authorship.

Therefore, the main objective of this paper is to trace and understand the evolution of forensics in India and to explain its meaning. The paper contains a genuine effort to explain how this branch of science known as forensics became and un-severable and important limb of justice delivery system

ANALYSIS

Forensics is a Science with the aim to answer the questions of Legal importance. Forensics aims to interpret the Evidences of crime scene, with the objective to use the same in Investigation. People from various Academic backgrounds such as Chemistry, Life-Sciences and Law Enforcement contribute to this field as Forensic Scientists or Technicians. NABL (National Accreditation Board for Testing and Calibration Laboratories) enshrines four objectives defining the purpose and nature of the program.

- To improve the quality of laboratory services provided to criminal justice system.
- To develop and maintain criteria which can be used by a laboratory to assess its level of
- Performance and to strengthen its operations.

- To provide an independent, impartial and objective system by which laboratories can be
- Benefited through a total operational review.
- To offer to the general public and users of the laboratory services a means of identifying those laboratories which have demonstrated that they meet established standards.

International forensic science (organization), forensic laboratories etc. are some of those which are legally identifiable. The Forensic Science laboratories must meet the requirements of accreditation. Field works are also covered under the work ambit of these laboratories.

The labs must ensure the following standards:

- The laboratory does not engage in any activities that might diminish trust in its competence, impartiality, judgment or operational integrity, and
- The laboratory personnel are free from commercial, financial or any other pressure that might adversely affect the quality of their work⁵.

FORENSIC SCIENCE AND OTHER STATUTES

Civil and Criminal cases in India are guided by the similar Law of Evidence, though the degree of proof differs in both the cases. But as far as mode of presenting such evidence is concerned, the mode remains the same in Criminal as well as in civil cases. As per the Indian practice the expert opinion as to a particular matter is only admitted when such expert gives the evidence orally and administer oath in regard to his findings. The following are the exception to this rule:

- When evidence has already been admitted in a lower Court;
- Expert opinions expressed in a Treatise
- Evidence given in a previous Judicial proceeding;
- Expert cannot be called as Witness;⁶

The common perception Indians have in their minds are that the birth/death certificates as well as recording the discharge and admission of the patients in the Hospital consumes time. In fact, not only this Medical Practitioners often hesitate

⁵IFS Education Department Ifs –International Forensic Science
www.ifs.edu.in/IFS.EDU.BROCHURE.pdf 14 August 2016.

⁶Arindam Datta, —*Forensic Evidence: The Legal Scenario*”, Dept. of Law, University of Calcutta,
<http://www.legalserviceindia.com/article/1153-Forensic-Evidence.html>.

to be the part of the case which is of Medico-Legal nature. Some of the possible reasons for the same could be as follows-

- Undue time consumption;
- Repeated adjournments;

India is a rich land in terms of law. India has almost a law on each and every subject. In regard to the Criminal cases the Code of Criminal Procedure (CrPC) along with Indian Evidence Act are the parent laws in governing the Criminal cases in India. Code of Criminal procedure prescribes the method of admitting and the procedure thereafter to be followed throughout the Trial of the case while. On the other hand the Indian evidence Act prescribes that how evidence in the Criminal Trial has to be admitted as well as to what extent it has to be admitted, the relevancy of the evidence etc.

If in a case accused fails to answer any of the most important and relevant question during the trial under Section 313 of CrPC then the same must be amended as to enforce against him for DNA test. This could provide the law enforcers opportunity and convenience for investigating the crime as well as to bring the truth from back row to the front and make it wrong done visible.

The principle of *Onus Probandi* has been recognized as the important principle in each and every Criminal trial. The meaning of the principle is that, every person should be presumed innocent until proven guilty. The proving of such guilty should not be simply just proving this; but also the guilt of the person should be proved beyond reasonable doubt. This principle of *Onus Probandi* has been recognised under the Indian Evidence Act and thus it forbids the use of Forensics in Criminal trials. In older times, the forensic findings could be doubted about the findings but with the evolution of modern techniques which are definitely more advanced than the older ones the results and the tests could be more accurate and reliable.

FORENSIC SCIENCE AND CRIMINAL PROSECUTION

Scene of Occurrence

A scene of occurrence in simple words means the place where one or more person assembles to commit an act which has been prohibited by any law for the time being in force. While the crime is committed the traces are exchanged between the persons committing the crime, between the crime scenes and the culprits etc. these traces are usually transported by the human as well as other agencies which helps to Investigate the crime and the crime scene to find out the untold story of, how crime happened?, when does it happened?, etc. the information, traces so collected are useful to:

- Establish Corpus Delicti
- Provide link between the criminal, the victims and the scene of occurrence;
and
- Evaluate the patterns of events.

Some of the evidences are of such a nature that they perish soon and there remains only one or no chance of examining them. Such evidences have to be fully exploited to secure the full opportunity of putting the culprit behind the bars. (For example, if the crime scene was a beach there are high chances that before the foot-print traces could be examined and taken to any expert they would be perished and available no more.)⁷

CASES SOLVED USING FORENSIC SCIENCE

*In Marachalil Chandra Tukaram Talekar v. State of Gujrat.*⁸

In the particular case it was argued in Sessions as well as High court over the trail of blood found from front door to the Vakil's corridor door respectively marked as H and H-1. The plea of the defense was that the victim was stabbed somewhere else, as the serious stabbed person cannot move from the front door

⁷ RK Tewari, KV Ravikumar *History and development of forensic science in India* (2000) Volume 46 Issue 4 <http://www.jpgmonline.com/article.asp?issn=0022-3859;year=2000;volume=46;issue=4;spage=303;epage=8;aulast=Tewari> 15 August 2016.

⁸ [1980]Cri. L.J.5 Guj.

to the corridor and hence the victim was stabbed somewhere else and brought to the house in question. The High court took the view that doctor had come to the conclusion that it was possible for the deceased victim to cross the door and come to corridor after he had received the stabs and hence, the High court concluded on the materials placed on record that there arises no seed of doubt, the place where the deceased victim received injuries was the same room and not anywhere outside, after which he was carried from there while the breathe still had hold the life. With this, the fact that the blood was still dripping outside the body is supported and Hence the deceased victim was alive at that moment.

***Vasu v. Santha 1975 (Kerala)*⁹**

The court in the respective case laid down certain guidelines to be followed whenever the forensic Evidence has to be taken and admitted to ascertain the lineage of the child.

- As a matter of course the blood tests could not be ordered by the Indian Courts
- There should be a *Prima Facie* case and a strong ground from which court could render the Non-access so as to eliminate the Presumption under Section 112 of the Indian Evidence act.
- Before blood test could be ordered the Court should ascertain in advance, the consequences of such order.
- No one could be compelled for giving samples for the purpose of Analysis. And also no adverse conclusion to be drawn on the refusal of the person for giving blood samples.

Tandoor Murder Case (1995) Delhi¹⁰

This case was the first case in the history of Indian case laws that has been solved with the help of powerful Forensic Science. In this particular case Susheel Sharma murdered his wife Naina Sahni whom he suspected of having love affair

⁹ [1986] 57, M.P.

¹⁰ [1996] CriLJ 3944.

with his old fellow classmate and then congress worker Matloob Karim. In heat of his anger and suspicion he killed his wife Naina by shooting her on head three times with his revolver. Susheel Kumar drove the dead body of his deceased wife to a restaurant and with the help of restaurant manager he burnt her body in the Tandoor. Later police got the blood stained clothes and revolver from the custody of the accused (Susheel kumar) and sent it to Lodhi road laboratory for collecting the blood samples from the weapon and the clothes. The blood samples from the cloth and revolver matched with the blood samples collected from Naina's biological parents Jasawant Kaur and Harbhajan Singh. Thus, the conclusion that was drawn was that the charred body remains that were recovered from the Tandoor were that of Naina Sahni and therefore, Susheel Kumar was found guilty.

CHANGES REQUIRED

- Though there are tons of Legislations in India, but a need to systematize and regulate the Forensic Science could be felt clearly by looking at the plight that India still is far behind other countries in application of Forensics for solving the Cases.
- The lack of work culture in this field could be traced with the help of the thing that there is hardly any forensic data available and recorded.
- Medico-Legal Experts should also be encouraged. Experts should be encouraged to work in field of forensics.
- A National Database system for keeping and maintaining DNA should be designed like the Americans have CODIS (combined DNA index system) where DNA of all the persons who are accused and suspected to involve in any crime could be recorded and kept in the Database. This system would also help to control and detect the serial criminals as well as terrorists.

CONCLUSION

With the help of this article at least a shallow knowledge could be gained that medical's forensic branch plays a very important role in legal system to determine

and punish the crime. The Medical Experts must be encouraged to join and research on this field and to make this branch stronger and helps the forensics to grow. There is acute necessity to include more and more professionals trained in forensic to enlarge the scope in India. With this it could be said no doubt that the more the forensics will grow the less changes would be left for the criminal to escape from any sorts of loop holes and avoid the crimes and make justice live longer, bringing happiness to the people.

SPACE LAW: A BRAVE NEW WORLD

- Nikhil Dubey*

ABSTRACT

Space Law is an actively growing field and the literature relating to it is gaining more definitions, clarifications and detailed interpretations every day. The purpose of this text is to give a brief description of the Space Race; which raised numerous legal questions, the birth of formal 'Space Law' in the form of the Outer Space Treaty, and finally the challenges in Space which will have to be overcome in the not-so-distant future of mankind. This article first traces the history of Space Law and its drastic evolution, starting around the time of the launch of the first artificial satellite by the USSR in 1957, which ignited the space rivalry of USA and the Soviets. The launch of Sputnik I grabbed headlines all over the world and started a fresh discussion of law relating to Space exploration and exploitation, which ultimately led to the Outer Space Treaty of 1967. The article then describes the important provisions of the Treaty and how they answered the initial concerns the public had, regarding the militarization, exploration and usage of Space and its resources. The text in addition succinctly deals with a few problems associated with an increase in Space research and exploration, namely, usage of resources in space, commercial space-tourism and space debris mitigation and remediation. The absence of footnotes is because the author has tried to write in a manner which will be easy to grasp by any person, and does not wish to impose upon the reader a need to dwell into more writings and unnecessary details. Hence, this article is an attempt to bring some familiarity to the general reader with Space and its legal nuances, while describing the meaning of some provisions constituting Space Law and the complications they bring or try to avoid.

INTRODUCTION

“Each of us is a tiny being, permitted to ride on the outermost skin of one of the smaller planets for a few trips around the local star.”

- Carl Sagan

The above statement made by one of the most eminent scientists of the world reminds us of how small and insignificant we are in comparison to the grandeur of the universe which we try to understand. Gifted with intelligence and imagination, we as a species have managed to gain insight into something beyond the pale blue dot we call home. We have broken the final frontier and launched ourselves into Space, into a never-ending quest for knowledge and truth.

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Discovering a branch of knowledge which transcends Earth itself brings enormous challenges. This particular challenge of creating laws governing Space exploration and research will prove to be one of the most difficult to overcome, not only because it is technical and unique, but because it involves regions unexplored, promises resources in abundance, threatens to disturb the balance of powers with new technology, and is a matter of pride for countries trying to make their mark and scale new heights of progress and development. All these aspects imply a change in the way nations cooperate with respect to Space, a change in the way governments and space organizations function, and most importantly, a change in the way we think about this world of ours and our place in it.

THE SPACE RACE

A new chapter in history began, and the birth of 'Space Law', in a form which was later expanded upon, took place, when the Soviets launched the world's first artificial satellite – Sputnik I. The Sputnik launch on October 4, 1957, was a single incident which marked the start of the space rivalry of the US and the USSR.

No bigger than a beach ball and weighing just 84 kgs, the shiny sphere named Sputnik caught the world's attention and became a great cause of worry for the Americans, who viewed the satellite as an invasion of their sovereign airspace. It raised legal questions like “Where does outer space begin?”, “Who owns the moon?” and “If the Soviets can launch a satellite and keep it in space, can they do the same with nuclear arms?”. It also raised doubts regarding the American space plans, as the size of the Sputnik was more impressive than America's Naval Research Lab's 'Vanguard' rocket.

The USSR struck again on November 3, 1957, with the launch of Sputnik II, which had a much bigger payload, including a dog named Laika, the first animal to be put in Earth orbit. The signals from the Sputnik satellite were strong

constant beeps, and simple enough to be detected by any child with a radio set at the right frequency.

The tide turned on January 31, 1958, when the US successfully launched Explorer I, using which the magnetic radiation belts around the Earth were discovered. The Explorer series continued to be a successful program of lightweight, scientifically useful spacecrafts.

The Space Race finally came to a still-debated-and-talked-about end when Neil Armstrong took the “giant leap for mankind” and landed on the moon on July 20, 1969. The race started by the USSR and ended by the USA took the world by storm and captured the imagination of a generation. It opened up a plethora of legal questions – “How high up was the territory of a nation?”, “Who will decide which satellite is to be kept at what height?”, “Can I make my own rocket and launch it from my backyard?”. The Space Race opened a wide new branch of law involving the atmosphere, the Moon and everything beyond, which is today referred to as 'Space Law'.

THE BIRTH OF SPACE LAW: OUTER SPACE TREATY

The Outer Space Treaty is an excellent example of common sense and reason prevailing over greed and conflict, in which nations often find them in today's time. It follows the example of the Antarctic Treaty, which makes the Antarctic a no-man's land and makes it accessible only for scientific research. The Outer Space Treaty also took help from previously held opinions like that of the American Bar Association and other experts, and ultimately gained the form of a basic set principles to be followed regarding matters of space exploration, rocket launches, jurisdiction of space objects, damage caused by space debris, protection of astronauts and their safe return to Earth.

Shortly after the launch of Sputnik I, the UN established an ad-hoc Committee On the Peaceful Uses of Outer Space (COPUOS) to facilitate cooperation of nations and international agencies for preservation of space and its resources for

peaceful uses only. COPOUS had two sub-committees – Technical and Legal. In 1959, the Committee was made a permanent body and comprised of 24 members, which has increased to 77 as of now. The Outer Space Treaty was adopted by the UN General Assembly in Resolution 2222 (XXI), after it was considered by the Legal Sub-committee in 1966. The final treaty had its foundation in Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies, which had been adopted by the General Assembly in 1963. The Outer Space Treaty of 1967 lays down the framework of international space law and adheres to the provisions of the UN Charter. Currently, 104 countries, including India, are parties to this treaty.

The principles of the Outer Space Treaty exhibit the will of nations to maintain peace and security in Space, without hindering the pursuit of science and exploration of Space and celestial bodies.

Article I of the treaty states that exploration and use of outer space will be carried out for '*benefit of all countries*' irrespective of their degree of economic and scientific development. It also continues to specify that the Moon and other celestial bodies are open for exploration and use to all States without discrimination and there shall be freedom of scientific research in outer space. Article II of the Space Treaty put an end to the question of ownership of moon and other celestial bodies by stating clearly that no nation can claim sovereignty over any celestial body by any means whatsoever.

The Outer Space Treaty also deals with perhaps the most crucial question arising after the Space Race – militarization of space. Article IV, in clear words, affirms that no State party to the Treaty can place weapons of mass destruction or any object carrying nuclear weapons in orbit or install such weapons or military bases on celestial bodies. The Treaty also prohibits any military installations and weapons testing in outer space. Though the phrase “weapons of mass destruction” is not defined, the provisions emphasize the usage of outer space

exclusively for peaceful purposes, and hence allow Article IV to be extended to any kind of weapons system.

The Treaty also lays down responsibilities and liabilities for State parties and their activities in space. It is declared in Article VI that State parties shall bear international responsibility for national activities in space, whether such activities are carried out by governmental agencies or non-governmental agencies. Countries are also liable for damage caused to another State party to the Treaty by their objects in air space or outer space, as per Article VII. Although there is no provision for demarcating air space and outer space, the start of outer space is considered to be 100 km from sea level (Karman Line). Countries also retain jurisdiction of their objects and any personnel thereof in space and after return of the object and the personnel to Earth, according to Article VIII.

The main objective of the Outer Space Treaty is to ensure equal access to space and its resources, while maintain peace and cooperation among nations. It promotes mutual assistance and has been successful in addressing the growing concerns of space exploration, exploitation and research till now. The provisions of the Treaty have been supplemented by various other agreements like Agreement on the Rescue of Astronauts, Agreement Governing the Activities of State on the Moon and other Celestial Bodies, Convention on Registration of Objects Launched into Outer Space, etc. All these agreements lay down basic principles and guidelines to be followed by nations in outer space. However, with the exponential increase of interest in space exploration and the rising number of satellites and rocket launches, there has been a rise in the problems associated with space research and a fresh look at the challenges ahead is needed. As is true with any law, there has to be a change in the responsibilities of the parties involved according to the changing need of the society.

SOME OF THE CHALLENGES AHEAD

Industrialization and commercialization of space is confronting Space Law with complications that will change the manner of cooperation among nations and

shape new legal principles which have a much wider scope than anyone had ever imagined. It remains a troublesome question whether the five UN treaties and agreements regarding space exploration will be sufficient to respond to the changing dimensions in and challenges of Space activities.

USING SPACE RESOURCES

Mining and Property Rights in Space

The Moon Agreement of 1979 is the last in the series of the five UN Space Law Treaties, and is the one which addresses the issue of usage of resources on the Moon and other celestial bodies, although ineffectively.

The Moon Agreement declares in Article XI that the moon and its natural resources are the common heritage of mankind, and not subject to national appropriation. The problem arises when this is read with Article IV, which allows States to freely use the resources of the Moon without explaining what '*use of the Moon*' includes. There is no agreement as to what the phrase means and whether it implicitly allows free mining and exploitation of minerals. Moreover, Article VI allows State parties to collect samples of minerals from the Moon, without saying what quantity is small enough to qualify as a "sample". What the Moon Agreement does say is that State parties have to take care that the balance of the Moon's environment is not disturbed and allows private players "*to keep title to any private property which they might bring to the Moon.*"

This acceptance of lunar exploration and usage of resources was made subject to a proposed "*international regime*" to govern the exploitation of natural resources of the Moon by Article XI. This became one of the reasons of the failure of the Moon Agreement. It did not allow for significant exploitation of resources of the Moon, like Helium-3 which is used for fusion research, and also made the setting up of an "international regime" a mandatory condition, which many countries opposed. The opposition was based on the notion that nations without a Space Agency would make unwise decisions and may support inapt proposals because

they have no risk to face. An example would be taxation of space activities, as the non-space-faring countries won't have to pay any tax, but will still receive revenue out of it. Thus, the Moon Agreement remained a failed concept with only 11 signatories.

In a nutshell, the Moon Agreement allows free use and exploration of the Moon and its resources, by State parties and private players, provided there is no harm to the environment and no use of force, and the exploitation of resources - not enough to be of any profit - is governed by the yet-to-be-established "international regime".

What remains to be seen is how the regime functions, if ever established, and to what extent it allows exploitation of and profiteering from lunar resources. A detailed interpretation of the provisions of the Agreement coupled with a much wider acceptance by nations will surely be needed in the coming years. But as of now, no further Treaties have been enacted which attempt to solve this issue of private property in Outer Space, which is not a good sign.

SPACE TOURISM

Commercial Spacecrafts and Their Regulation

Private space flight was always coming; even Hollywood knew that. Now that the industry has started developing and companies like SpaceX already have a flight plan, there is a need to revisit the laws governing such commercial activities in Space to ensure peace in Space and protection of consumers of this industry.

The Outer Space Treaty had already anticipated private participation in space to an extent, and hence had made the State responsible for their activities. In order to fulfill their international responsibility, a few States had started introducing - from 1980s onward - National space laws, licensing systems, registration procedures and other supervisory methods to ensure that private companies come under legal control of the Government, though such steps haven't had much impact and are all on-paper only.

One of the main issues is a definitional one. The question is whether sub-orbital (a trajectory not completing one round around the Earth) flights are to be regarded as a space activity or an aviation activity. This question is important as space law and air law differ in their nature and application. If such flights are considered an aviation activity, there is no lack of laws as the regime of aviation is very specific. But in the other case, sub-orbital flights will be treated as outer space travel and will face many legal gaps, as space law is far less detailed. It is interesting to note that the FAA (Federal Aviation Administration) of USA gives the status of an astronaut to anyone crossing 80 km mark from sea level. However, Australia amended its Space Activities Act in 2002 so as to assert its territorial jurisdiction up to the 100 km mark. At a glance, it seems like any flight above the 100 km vertical mark will be treated as a space flight because it is a more widely accepted standard, though the exact legal status is yet to be determined.

Also important is to differentiate between an astronaut and a “space tourist” as the concept of people taking tours in Space is gaining momentum every day. From a legal point of view, the training required, the objective of going into Space and the altitude of the person's destination are the main factors which will help in the differentiation. Such a demarcation is required to clearly lay down the liabilities of a private company and the government and also to protect the space-flight “participants”.

Another complication regarding Space tourism is that of authorization. By virtue of Article VI, States are required to authorize and supervise their national space activities. This requirement can be best complied with only by enacting national space legislations in accordance with international space and aviation treaties, which will lay down specific registration and license requirements for companies sending private citizens to heights which qualify as outer space. Regarding specific regulations and laying down liabilities of State and private companies,

there is none, albeit the recent US regulations providing some minimal guidelines and procedures to be followed.

The current space regime was made keeping in mind mainly governmental use of Space, and did not explore the idea of Space tourism, which gained momentum after Dennis Tito, an American businessman, funded his own private trip to space in 2001. The backbone of the current system is too inflexible to incorporate a private space industry and an international convention dedicated solely to commercial space-flights should be considered.

SPACE DEBRIS

Mitigation and Remediation

Space debris has not been expressly defined in the Outer Space Treaty, though the International Law Association's International Instrument on Space Debris made the initial attempt of defining space debris as “man-made objects in outer space, other than useful satellites.” Further guidelines and legislations have developed upon this basic description of space debris, and now the definition covers any and all man-made objects in Space, including fragments of those objects, which are not functional anymore.

The problem is that even with this loose definition, there is no law or agreement which obligates States to clean up their non-functional equipment in space. Moreover, there is no right of salvage, similar to the right provided in maritime law, so there is no clear incentive for any country or private company to come up with technology for remediation of space junk.

Article VIII of the Outer Space Treaty makes States responsible for their 'space objects' and gives them jurisdiction over it, but forgets to hold States responsible in case their non-functional equipment and gadgets are not removed from the path of useful ones. The issue is further complicated because the Outer Space Treaty treats every fragment of a space object as a distinct object *in itself*, and there are more than 20,000 such untracked objects whirling around the Earth at

speeds of 16,000 miles per hour. No wonder the International Space Station has to perform at least one debris-avoidance maneuver every year.

Cleaning up defunct space objects requires the consent of the owner-State, whether it is a screw or a satellite. Such a requirement will take a lot of time to fulfill, and another challenge will be to clean up space objects which the owner-State may deem as confidential. Many countries would not prefer to leave their technology in the hands of others, and hence would not give their consent for remediation of their intellectual property junk floating around.

Add to all this yet another complexity. The process of removal of space debris entails a lot of risk, of both life and property, and as mentioned before, Article VI of Outer Space Treaty makes the State responsible for all its space activities, whether it is governmental or non-governmental. This further dissuades any nation from initiating any activity of cleaning up of Space, as they will be held responsible for any accident that might occur during the process.

There is an immediate need to come up with provisions that prohibit further cluttering of Space and to make sure that States are bound by liability terms when objects under their ownership cause damage to other space objects. Novel ideas like the e.DeOrbit mission, which grabs the debris with a net or a robotic arm, and CleanSpace One, a self-destructing satellite which attaches itself to the debris and falls into the atmosphere, may provide a viable solution for cleanup of Space. But for now, we have a long way to go before such ideas are put into action.

CONCLUSION

Space Law is a field which will gain immense importance in the coming years. Increasing interest in the resources Space has to offer and the idea of making interstellar travel and Mars Colonies come true is sure to make Space Law an enthralling branch of law and the one which will change the lives of our future generations the most. The present system dealing with Space exploration and

research is in its nascent stage, and requires years of polishing and modification. But we have a strong foundation to improve upon, and no room is bigger than the room for improvement. The Outer Space Treaty, its contemporary Agreements and Conventions, and the new National Space Policies of countries like USA and Australia are all heading towards the right direction.

There will be a need of stricter definitions and interpretations of the existing Treaties, Conventions and National Space Policies, which protect the realms we have been endowed with, while promoting the pursuit of knowledge, which is not a choice, but an imperative for mankind. There will be hurdles to cross and conflicts to resolve, but we will find a way. As Jonathan Nolan rightly reminds us-

“We are still pioneers and we've barely begun. And our greatest accomplishments cannot be behind us, because our destiny lies above us.”

THE VIRUS STUXNET: AN INDIAN PERSPECTIVE

-Annie Mampilly*

ABSTRACT

The wars with gun, bomb and missiles are now outdated. Cyber warfare and bio warfare has now stepped into the scene. Stuxnet is an icon that depicts cyber warfare. Stuxnet is a virus which is capable to sabotage a country's entire computer facility. For example, if it enters one system in the nuclear facility of a country, the entire network shall be its prey. This was a kind of cyber warfare which took many people to bust their chops and tackle the issue. Finally, it was Mr. Serget Ulasen who found the virus and unraveled the mystery. Think of this virus affecting the Indian systems. Why will be the result? What is the law? What is the punishment and remedy?

This paper makes a scrutiny of the subsisting law in India to protect the nation from its vulnerability towards such cyber threats with special reference to the Information Technology Act 2000. It is this legislation that embraces the Technology Law in India in this regard. The paper analyses the various offences under the aforementioned statute for which the perpetrators would be held liable in the instance of stuxnet being hit in the Indian Computer systems. This is encompassed of the offences inter alia identity theft, cheating by personation, tampering with source documents and unauthorized access to computers.

This is followed by unveiling the contours of the various International instruments and the national laws in about thirty-eight countries. In India, the laws to prevent these offences are still in the cradle. It still needs to be revived to bring it out from the four walls of defectives and deficiency to the spectrum of effectiveness and efficiency.

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THE VIRUS STUXNET: AN INDIAN PERSPECTIVE

The wars with gun, bomb and missiles are now outdated. Cyber warfare and bio warfare has now stepped into the scene. Stuxnet is an icon that depicts cyber warfare. Stuxnet was a worm which was a threat to the Programmable Logic Controllers of Siemens Company. This was a kind of cyber warfare which took many people to bust their chops and tackle the issue. Let us assume if this was affecting the Indian systems. Why will be the result? What is the law? What is the punishment and remedy? This paper makes a scrutiny of the Indian Penal provisions and the provisions in the Technology law of India which clarifies the kinds of offences which are created by such a virus. Let us have glimpse at the various offences for which the perpetrators would be held liable in the instance of stuxnet being hit in the Indian Computer systems.

INFORMATION TECHNOLOGY ACT 2000 & STUXNET

In the case of waging a cyber-war by the use of a virus, the perpetrator shall be liable for the charges under Sections 43, 43A, 65, 66, 66B, 66C, 66D and 66F of the Information Technology Act 2000 (*hereafter referred to as IT Act 2000*). Any criminal activity that uses a computer either as an instrumentality target or a means for perpetuating further crimes comes within the ambit of cyber-crime. Thus cyber-crimes demand a technologically excellent person or an organized group of technocrats for its execution.

Generally, the installation and implementation of the malware is a highly insider job. Exploring a few instances, it is evident that the attack of a virus like Stuxnet is completed through three different stages, installation of the root kit, infection of the malware, and propagation through the interconnected computers. With the cyber forensics we now have it evident and provable that the first stage of operation mandatorily requires a physical access to the computer.¹

¹ Kim Zetter, 'How Digital Detectives Deciphered Stuxnet, the most Managing Malware in the History'(2011) <<http://www.wired.com/threatlevel/>>Last accessed 31 August 2016.

It was well settled in *Abhinav Gupta v. State of Haryana*², that it is the employees/insiders that commit eighty percent of the attacks on computer systems. The rationale for this high degree insider cyber attacks is that they have deep knowledge about the target computer that allows them unrestricted access to cause damage to the system or steal data. The case of *United States of America v. Sergey Aleynikov*, popularly known as the *Goldman Sachs Trader Case*³ and *A. Shankar S/o Achimuthu v. State represented by Deputy Superintendent of Police, Cyber Crime Cell* also affirm the aforementioned facets.

UNAUTHORIZED ACCESS

By the injection of a virus, the perpetrator makes an unauthorized access to the network as stated under Sec. 43(a) of the IT Act. A rootkit is a collection of tools (programs) that enable administrator-level access to a computer or computer network. It is designed to hide the existence of certain processes or programs from normal methods of detection. Once the root kit is installed, it allows the attacker to mask intrusion and gain root or privileged access to the computer and, possibly, other machines on the network.⁴ Thus through the installation of the root kit the perpetrator becomes successful in obtaining an unauthorized access to the computer network of the facility whereby they commits the offence of unauthorized access to computer network, as affirmed by a long line of National Courts⁵ and Foreign Courts.⁶

Introduction of a virus also amounts to an offence under Section 43(c). A computer virus cannot operate without a host computer system to affect.⁷ A rootkit is a stealthy type of malicious software (malware) designed to hide the existence of certain processes or programs from normal methods of detection

²2008 CriLJ 4536.

³10 Cr. 96 (DLC).

⁴Nicolas Falliere, 'Stuxnet Introduces the First known Rootkit for ICS', (2010) <<http://www.symantec.com/>>

⁵*Syed Asifuddin and Ors. v. State of Andhra Pradesh and Ors.*, 2006 (1) ALD Cri. 96.

⁶*United States v. Kevin Mitnick*, 145 F.3d 1342 (9th Cir. 1998).

⁷Dr. R. K. Chaubey, *An Introduction to Cyber Crime and Cyber Law* (1stEdn. 2009) pg. 284.

and enables continued privileged access to a computer. Thus act of the installation of a root kit accounts to introduction of a virus into a computer. In line with the decisions of *United States v. Smith*⁸, popularly known as the *Melissa Virus Case* and the *Flora Infotech Private Ltd. v. National Insurance Co. Ltd.*⁹, it was explicated that the introduction of virus into a system is a criminal offence.

The next offence is that the perpetrator caused to be damaged the computer network as elucidated under Sec.43 (d) by incorporating the malware into the systems. Computer viruses make the programmers out of use¹⁰ and causes loss of data.¹¹ Moving on to the case at hand, the malware remotely seize control, intercepts, reads and writes to the computers that supervise the PLCs that controls the operations of the facility. After gaining the control over the supervisory computers it can reprogram the external PLCs with erroneous codes and at the same time hide the changes from being detected by the operators in the facility that may result in the sabotage of the total facility.¹² A reference to page 51613 of the ICTY precedent of *The Prosecutor v. Prlic et al*¹³, makes it apparent that apart from the national verdicts, even in the International scenario it is an undisputed fact that a virus, on entering a computer causes damage to the host¹⁴.

As a result of the above acts, the perpetrator also provides assistance to a third party to access the computer network in contravention of the IT Act as explicated under Sec.43(g) By the installation of the rootkit of the virus, exploiting their privilege to physically access the computers in the facility, the perpetrator enabled the hackers to access the computer network and control

⁸CR-No. 99-730(JAG).

⁹IV (2005) CPJ 35 NC.

¹⁰*Business Information Processing v. Assistant Commissioner Of Income Tax*, 2000 73 ITD 304 JP.

¹¹*Assistant Commissioner Of Income Tax v. Smt. Rasila S. Mehta And Anr.*, 2002 82 ITD 27 Mum.

¹² Gregg Keizer, 'Is Stuxnet the 'best' malware ever?' (2010) <<http://www.computerworld.com/s/article/9185919>>

¹³IT-04-74-T.

¹⁴*Commissioner Of Customs v. Hewlett Packard India Ltd.*, 2006 (107) ECC 49; *Flora Infotech Private Ltd. v. National Insurance Co. Ltd.*, IV (2005) CPJ 35 NC.

them from a location remote to the facility.¹⁵ In *British Gas Trading Ltd. v. Data Protection Registrar*¹⁶, where an analogous question was raised, the accused Company was prosecuted for proving assistance for unauthorized access of data to a third party.

To add further, the perpetrator has even altered and destroyed information from the compromised computers under Sec.43 (i) and caused a third party to steal the same Sec. 43(j). Stuxnet intercepts commands going from the ICS of the impetus to the PLC and replace them with its own malicious commands. Rootkit of the malware also enabled the remotely located hacker to steal crucial data like the basic system information¹⁷, design documents etc from the infected computers. The technical analysis of the code of Stuxnet gives the following results.

1. Embedded in the stuxnet's code was a dossier detailing the specific technical configuration of the facility it sought.
2. One small section of the code appears designed to send commands to a very specific no. of systems in cascade whose no. is a plant secret.
3. The code of Stuxnet also contains portion searching the ID no. of specific components used in the target facility alone.
4. The code also searched for the product ID of the frequency converters used specifically in its target facilities
5. As it communicates with different domains right from the time of installation of the rootkit it is clearly a "man in the middle" attack.¹⁸

These factors points to the fact that Stuxnet wasn't aimed at attacking a specific type controller rather it was a precision weapon bent on sabotaging a specific facility. The analysis establishes that the people behind Stuxnet were well aware

¹⁵*supra note 14.*

¹⁶UKIT DA98-3492 (24 March 1998) : The case is popularly known as the *British Gas Case*.

¹⁷ 'The Man who found Stuxnet – Serget Ulasen in the Spotlight', (2nd Nov 2011) <http://eugene.kaspersky.com/> (*Expert opinion*)

¹⁸*ibid*

of both hardware and software specifications of the plant components along with other secret plant parameters.

The offence that trails is the offence of tampering with computer source documents as stated under Section 65. With the help of the rootkit installed, which provided administrator levels access to the command and control servers of the system, Stuxnet replaces that library it makes use of with its own version. Stuxnet's version intercepts reads and writes to the PLC and changes the source code¹⁹ at this point. This enabled Stuxnet to intercept commands going from the ICS software to the PLC and replace them with its own malicious commands.

To quote, in the *Goldman Sachs Trader Case*²⁰ and in *Kensoft Infotech Ltd. v. Sundaram Bnp Paribas Home*²¹, it was the insiders or the employees that hacked the source codes and replaced them with a tampered source code. Further, the role of the accused was established beyond reasonable doubt in the aforesaid cases and was prosecuted.

STOLEN PROPERTY AND IDENTITY THEFT

Availing of data in this manner also amounts to dishonestly receiving stolen computer resource explicated in Sec.66B. It has been well established in *Nirav Navibhai Shah v. State of Gujarat and Anr.*²² That stealing of computer resource is criminal in nature and the offenders are liable to be prosecuted under Sec.66B of the IT Act, 2000. Paraphrasing the case of *USA v. Sergey Aleynikov*²³, it is evident that the Foreign Court have also affirmed the same to be an offence.

The offence of Identity Theft under Section 66C also falls here. Ever since Indian had its first cybercrime conviction in the SONY.SAMBANDH.COM

¹⁹*Syed Asifuddin and Ors. v. State of Andhra Pradesh and Anr.*, 2005 Cri. L. J. 4314

²⁰*United States of America v. Sergey Aleynikov*, 10 Cr. 96 (DLC)

²¹Madras High Court, O.S.A.Nos.431 to 433 of 2009; <<http://indiankanoon.org/doc/834744/>>

²²MANU/GJ/8458/2006.

²³10 Cr. 96 (DLC)

Case to the latest verdict delivered on 9th January 2012 in the *Sang-Hyun Park's Case*²⁴, identity theft is tagged as the fastest growing white collar crime²⁵.

In the present scenario, the driver files of the virus used valid or legitimate signed certificates in order to fool the systems and the workers of the facility, who monitors the PLCs, into thinking that the malware was a trusted program from the authentic companies whose certificates the perpetrator had obtained through illegal means. All these actions were done with an intention to physically sabotage the facility. The actions mentioned above made use of another individual's personal information like digital signature for fraudulent purposes.²⁶ This piece of fact establishes that the offence of identity theft. Paraphrasing the most controversial cases inter alia *USA v. Gary McKinnon*²⁷, *Sarah Palin Email Hack Case*²⁸, *Cynthia Michelle Odom's Case*²⁹, *Kenneth Joseph Lucas' Case*³⁰ and a long line of Indian cases³¹, it is apparently evident that the said offence have always incurred higher gravity of punishments.

CHEATING BY PERSONATION

The next is the offence under Section 66D for cheating by personation using computer resource. By the installation of the malware into the computer network in the facility, the attacker virtually assumes the role of the operator in the facility with whom the authority to control or alter the input parameters and commands to the PLCs controlling the critical operations in the facility is vested with. And the attacker had introduced malicious input parameters and the commands to the PLCs with an intention for sabotaging the facility with

²⁴District of New Jersey

²⁵Chris Jay Hoofnagle, '*Identity Theft: Making the known unknowns known*',(2007) Harvard Journal of Law and Technology, Vol.21, No.1, pg.98

²⁶*Supra no.34*

²⁷*McKinnon v. Government of the United States of America*, [2008] UKHL 59

²⁸*United States v. Mitnick*, 145 F.3d 1342 (9th Cir. 1998)

²⁹ US Dpt. Of Justice, Federal Grand Jury Criminal Indictments announcement, 4th June 2008

³⁰US Attorney's Office June 27 2011, Central District of California (213) 894-2434

³¹*Crl. P. No. 2976 of 2009*

the help of this fake identity.³² This amounts to 'knowingly substituting one person for another' thus constituting cheating by personation as defined under Sec.416 of the IPC. Since a computer resource is used for the same, the attackers are liable to be punished under Sec.66D of the IT Act, 2000 for cheating by personation by using computer resource.

CYBER TERRORISM

Finally, the perpetrators are liable for cyber terrorism under Sec.66F. Through the installation of the malware Stuxnet the perpetrator had an attempt to penetrate or access a computer resource without authorization. Stuxnet being a malware, is also the introduction of a contaminant into a computer resource with an intention to physically sabotage a facility.³³ This piece of fact establishes the intent to cause terror as explicated by the Apex Court of Indian in its landmark decision of *Rajeev Gandhi Assassination Case*³⁴ to the recent 2011 verdict of *Manjit @ Mange v. CBI, through its S.P.*³⁵ and like judgements³⁶. By the installation of Stuxnet into the systems of the nuclear enrichment facility the perpetrators can access the database of a nation which is being protected due to the reasons of national security and foreign relations. The *Bazee.com Case* is an excellent example in this regard.

Also, the precedent of *State (NCT of Delhi) v. Navjot Sandhu @ Afsan*³⁷ and 2011 decision of this Hon'ble Supreme Court in *Mohd. Arif @ Ashfaq v. State of NCT of Delhi*³⁸ envisaged 'the challenge to unity, integrity and sovereignty of India by the acts of terrorists and conspirators can only be compensated by giving maximum punishment to the person who is proved to be the

³² William Jackson, 'Researchers Investigating Stuxnet and Duqu Variants', (2012) <<http://redmondmag.com/articles/>> Last accessed 31 August 2016

³³ 'US and Israel were behind Stuxnet claims researcher', BBC News, (2011) <<http://www.bbc.co.uk/news/technology-12633240>> Last accessed 2 September 2016

³⁴ *State through Superintendent of Police, CBI/SIT v. Nalini and Ors.*, (1995) 5 SCC 253

³⁵ *Om Prakash Shrivastava @ Babloo v. State of U.P. through S.P., CBI*, (2011) SC 806

³⁶ *Zameer Ahmed Latifur Rehman Sheikh v. State of Maharashtra and Ors.*, and *Arbar Ahmed Gulam Ahmed v. State of Maharashtra*, (2010) SC 2633

³⁷ 2011(8)SCALE328

³⁸ 2005 (11) SCC 600

conspirator in that treacherous act. Such acts even incur a potential to cause huge damage as in the *Ethiopia Water Drilling Case*.³⁹

THE INTERNATIONAL INSTRUMENTS

The acts of introduction of a malware to sabotage the facilities of a nation are an infringement of various International instruments. At the putset, the Principles of UDHR is violated. Article 17 of the Universal Declaration of Human Rights embodies a right to own property. Computer Hacking is considered to be its violation. Article 6 of the ICCPR is analogous with Article 3 of UDHR and thus Cyber terrorism is a violation of the same. The EU Convention of Cybercrime, Wurzburg Conference, ASEAN, APEC are also violated. The EU convention, Wurzburg Conference, AMMTC of ASEAN, and the APEC meeting of 2002 has put forth various measures to protect the threat of cyber crimes and the introduction of Stuxnet violates the same. However, India is not a signatory to the aforementioned instruments.

CONCLUSION

At this juncture, it would be pertinent to note that offences discussed in this paper are universally accepted as punishable offences. To quote, these offences are underlined as grave offences by approximately 38 countries of the World Panorama including India,⁴⁰ UK,⁴¹ USA,⁴² Australia,⁴³ Belgium,⁴⁴ Brazil,⁴⁵ Canada,⁴⁶ Chile,⁴⁷ People's Republic of China,⁴⁸ Honkong,⁴⁹ Czech Republic,⁵⁰

³⁹ Dr. R. K. Chaubey, *An Introduction to Cyber Crime and Cyber Law* (2009)

⁴⁰ Information Technology Act 2000, Indian Penal Code 1860

⁴¹ Computer Misuse Act, 1990(chapter 18-Unauthorized access to computer material)

⁴² Federal Legislation :United States Code

⁴³Commonwealth Laws, Crimes Act 1914 (*Part IV A Offences Relating to Computers: 76B & 76D*)

⁴⁴Belgium Criminal Code 2000 (*Part IV Computer Hacking: Art.550(3)*)

⁴⁵ Law No. 9,983 of July 2000 (*Art.313: Entry of False Data into the Information System*)

⁴⁶ Canadian Criminal Code (*Sec. 342.1*)

⁴⁷ Law on Automated Data Processing Crimes No. 19.223, Published June 7th 1993 (*Art.2*)

⁴⁸ Decree No. 147 of The State Council of the People's Republic of China, Feb 18th , 1994 (*Chapter IV*)

⁴⁹Telecommunication Ordinance, (*Sec.27A-Unauthorized access to computer by telecommunication, Sec.161-Access to computer with criminal or dishonest intent*)

⁵⁰ Criminal Code, (*Sec.182 -Impairing and endangering the operation of public utility facilities,Sec.249-Unauthorized use of other people's articles,Sec.257a-Damaging and misusing records in information stores*)

Denmark,⁵¹ Estonia,⁵² Finland,⁵³ France,⁵⁴ Germany,⁵⁵ Greece,⁵⁶ Hungary,⁵⁷ Ireland,⁵⁸ Iceland,⁵⁹ Israel,⁶⁰ Italy,⁶¹ Japan,⁶² Latvia,⁶³ Luxemburg,⁶⁴ Malaysia,⁶⁵ Malta,⁶⁶ Mauritius,⁶⁷ The Netherlands,⁶⁸ New Zealand,⁶⁹ Norway,⁷⁰ Poland,⁷¹ Portugal,⁷² Philippines,⁷³ Singapore,⁷⁴ Sweden,⁷⁵ Switzerland⁷⁶ and Turkey.⁷⁷

To wind up, it is thus clear that in today's dynamic society, the wars with guns and bombs are slowly vanishing. New means are adhered to. Cyber-warfare is one such deadly means of waging war. It garners momentum day by day. The

⁵¹ Penal Code, (*Sec.263*)

⁵² Estonian Criminal Code, (*Sec.269-Destruction of Programs and data in a computer, Sec.270-Computer Sabotage, Sec.271-Unauthorized use of computers, computer systems and networks, Sec.272-Damaging or interferes with computer network connections, Sec.273-Spreading of computer viruses*)

⁵³ Penal Code, (*Chapter 38 Sec.8-data trespass*)

⁵⁴ The New Penal Code, March 1 1993, (*Chapter iii-Attacks on systems for automated data processing, Art.- 323-1,323-2,323-3,323-4*)

⁵⁵ Penal Code, (*Sec.202a-Data Espionage, Sec.303a-Alteration of Data, Sec.303b-Computer Sabotage*)

⁵⁶ Criminal Code, (*Art .370C Sec.2*)

⁵⁷ Penal Code (*Sec.300C-Computer Fraud*)

⁵⁸ Criminal Damage Act, 1991, (*Sec.5*)

⁵⁹ Penal Code, (*Sec.228 section 1*)

⁶⁰ The Computer Law of 1995, (*Sec.4*)

⁶¹ Penal Code, (*Art 615-Unauthorized access into a computer or telecommunication systems, Art .615 quarter-Illegal Possession and diffusion of Access codes to Computer or Telecommunication systems, Art.615mquinquies-Diffusion of Programs Aimed to Damage or to Interrupt a Computer System*)

⁶² Unauthorized Computer Access Law, (*Law no. 128 –Prohibition of acts of unauthorized computer laws*)

⁶³ The Criminal Law, (*Sec.241-Arbitrarily Accessing Computer Systems*)

⁶⁴ The Act of July 15th 1993, relating to the reinforcement of the fight against financial crime and computer crime (*Sec.VI- concerning certain infractions in computer material, Art.509-1*)

⁶⁵ Computer Crimes Act 1997

⁶⁶ Chapter 426 Electronic Commerce Act, (*part VII, computer misuse-Unlawful access to, or use of, information*)

⁶⁷ The Information Technology (Miscellaneous Provision) Act ,1998 (Act No 18 of 1998), Penal Code, (*Sec.369A-Computer misuse*)

⁶⁸ Criminal Code (*Article 138.A*)

⁶⁹ Crimes Amendment Bill, (*Sec.305 ZE-accessing a computer system for dishonest purpose*)

⁷⁰ Penal Code (*Sec.145, Sec.151b, Sec.261, Sec.291*)

⁷¹ The Penal Code, (*Art.267-Sec.1, Sec.2, Sec.3, Sec.4; Art.268-Sec.1, Sec.2, Sec.3; Art.269-Sec.1, Sec.2*)

⁷² Criminal Information law of August 17 1991, (*Chapter 1 Art.7*)

⁷³ Republic Act No.8792 (*An act providing for the recognition and use of electronic commercial and non-commercial trans-electronic commercial and non-commercial transactions, penalties for unlawful use thereof, and other purposes*)

⁷⁴ Chapter 50A: Computer Misuse Act, (*Sec.3-unauthorised access to computer material, Sec.4-Access with intent to commit or facilitate commission of offense*)

⁷⁵ The Data Act of 1973, (*Sec.2f*)

⁷⁶ Penal Code, (*Art.143bis-Unauthorized access to Data processing system*)

⁷⁷ Penal Code (*Sec.525/a*)

laws to prevent these offences are still in the cradle. It still needs to be revived to bring it out from the four walls of defectives and deficiency to the spectrum of effectiveness and efficiency.

SOFTWARE PATENTS: HISTORY, APPLICABILITY AND VALIDITY

- Nisruta Bohidar & Pallavi Panda*

ABSTRACT

Modern society relies heavily on computer technology. Without software, a computer cannot operate. Software and hardware work in tandem in today's information society. So it is no wonder that intellectual property protection of software is crucial not only for the software industry, but for other businesses as well.

This paper aims at describing the beginning of software patenting in various countries and how with increasing technology, various countries took various stands on the issue of patentability of software patents and computer programs.

One of the things that make protecting computer related inventions tricky is that first you have to define the invention, and defining the invention is not something that is altogether easy when the invention is a computer process or relates to software. Sure, it is easy enough to define a list of desired functionality, and if you have some computer programming skills it is easy enough (after investing the requisite time) to write the code that will enable the functionality, but that which can be protected via patent lies somewhere between the desired functionality and the code, making the defining of the invention rather elusive for some, particularly those who are new to the patent arena.

It does not clarify all the questions with regard to the issue of patentability, but it has taken the reference of various international treaties, conventions to debate as to what the status of software patents is in the present scenario.

This paper describes about various landmark cases on software patents in the light of it's history. They have existed for more than five hundred years now, but still no country gives protection to all kinds of software patents.

A patent is an exclusive right granted to a person who has invented a new or useful article or an improvement of an existing article or a new process of making an article. The exclusive right is to manufacture the new article invented or manufacture an article according to the invented process for a limited period.¹ It is a form of industrial property or as it is now called an intellectual property. A patent is a creation of statute and is therefore territorial in extent.

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¹ P. Narayanan, *Patent Law*, (4th edn, Eastern Law House).

The word patent as used in this title denotes a monopoly right in respect of an invention.² The object of granting patent is the encouragement and development of new technology and industry in the State.

The theory upon which the patent system is based is that the opportunity of acquiring exclusive rights in an invention stimulated technical progress in four ways-

- First, that it encourages research and invention;
- Second, that it induces an inventor to disclose his discoveries instead of keeping them as a trade secret.
- Third, it offers a reward for the expenses of developing inventions to the stage at which they are commercially practicable.
- Fourth, it provides an inducement to invest capital in new lines of production which might not appear profitable if many competing producers embarked on them simultaneously.³

The patent system tends to encourage and maintain a continuous flow of inventions. Inventions breed inventions and thus, the pace of inventive activity is accelerated. New product and processes are created, industry encouraged to manufacture new and better products and an expansion of the industry based upon the inventions takes place. Thus, employment national wealth and a higher level standard are created.⁴

Patents can be traced far back into history. It came into origin five hundred years ago. Their introduction was a means to encourage (especially foreign) entrepreneurs to start up industries based on the technological progress in the state issuing the patent.⁵ The Venetian senate passed the first known written law directed to the grant of patents and their enforcement as a means of protection

² *Halsbury's Laws of England*, (4th edn) vol 35, para 303

³ *Ayyangar's report* (1959), para17.

⁴ *Ayyangar's report* (1959), paras 19-20.

⁵ Daniel Closa, Alex Gardiner, Falk Giemsa, Jorg Macheck, *Patent Laws for Computer Scientists*, (Springer-Verlag Berlin Heidelberg).

on 19th March, 1474.⁶ It recognized the public interest in innovation, and formulated the philosophical foundation of patent law as an incentive for innovation, with exclusive rights being granted for a limited period in exchange for full disclosure of the invention.⁷

As early as 1331, special security was granted to John Kemp of Flanders and indeed to any cloth worker who came to England upon invitation of the king. In the reign of Edward III, it had become evident that there was something going wrong with the competitiveness of the English cloth trade. To remedy defects in the native cloth production methods, foreign experts were actively encouraged to settle in the country and develop these methods using their skills.

Incidentally, similar to Venice and England, also in Japan the patent system that evolved in the 20th century had the aim of fostering the introduction of foreign technology in the country. The second industrial revolution led to the development of steam powered ships and to technological and economic progress through a first wave of globalisation.

The wish, even the need to protect intellectual property on a more international level became more pronounced and expressed itself in an international treaty, the Paris Convention for the Protection of Industrial Property, signed in the year 1883. By the 1950s, a uniform patent classification system was created at the instigation at the Council of Europe. This proved to be so successful that it was incorporated in to the Paris Convention in 1971.⁸

In 1965, President Johnson, by executive order, commissioned a comprehensive study of the United States Patent system. It did not permit patents on Computer programs because of the lack of a classification technique and the requisite search files tremendous volume of prior art was being generated which in turn would be tantamount to mere registration and the presumption of validity would

⁶ *ibid*

⁷ *ibid*

⁸ The Strasbourg Agreement was negotiated in 1971 and entered into force in 1975.

be all but nonexistent.⁹ Congress formed a National Commission on New Technological uses of Copyrighted Works. It was formed to evaluate the adequacy of copyright law regarding computer based information systems. One of the Software Committee's mandates was to consider whether some hybrid form of protection should be created for protecting software. Such hybrid proposals generally combine elements of patents and copyrights.¹⁰ Among the Hybrid Proposals were those presented to the WIPO at Kolle.¹¹ The Sub Committee was found to have various defects with regard to the patents. The availability of Patent Protection for programs was unclear. It had a rigid standards of novelty and non obviousness as required by Title 35 of United states. The first problem identified by the Software Subcommittee stems directly from then existing uncertainties over what subject matter the Courts considered patentable in the lower court interpretation of the Supreme Court decision in *Gottschalk v. Benson*.¹²

In the winter of 1994, the Patent Office of the US held public hearings on software patents in San Jose, California and in Washington D.C. It produced a much interesting testimony. With a few notable exceptions, most large corporate software developers and computer manufacturers favoured software patents. Microsoft, for e.g., supported software patents even though it was engaged in a software patent infringement action in *Stac Electronics v. Microsoft*.¹³

From the day that the first UNIVAC was delivered to the United States Bureau of Census in 1951, until the mid 1960s, software was not thought as a product that could be bought and sold apart from the computer. Software was "bundled" with the computer, meaning that the software was furnished "free" with the

⁹ E.B. Lipscomb, *Lipscomb's Walker On Patents* (3rd edn. 1984)

¹⁰ Kindermann, *Special Protection Sys. for Computer Programs*, Quarterly (1976) 301

¹¹ Kolle, *Computer Software Protection - Present Situation and Future Protection - Present Situation and Future Prospects* (1977) 72

¹² 409 U.S. [1972]

¹³ Cal. [1994]

purchase with the purchase of a computer. Before 1955 computers were coded in machine language.¹⁴

Between 1955 and 1962, computer owners started learning how to program their own computers. Computer owners formed users' groups to help each other and to provide the additional level of support, which the computer manufacturers were not able to provide. Once, such notable group was SHARE which was formed by IBM Computer Users to share programming information and software. While share members were busy distributing software for free, by the mid 1960s, software houses also entered the market place and began selling software products that competed with IBM's unpriced offerings because of which IBM faced trouble. It was in a dilemma whether to bundle or unbundle. During the anti-trust litigation, IBM presented testimony that, in 1965, it was stated within IBM that "an overriding factor against unbundling [certain programming] is our present inability to protect the proprietary use of our programming systems." Finally, IBM decided to unbundle.

At the turn of twentieth century the Supreme Court favored free market competition and disfavored legal monopolies. Many patents were struck down. The Supreme Court of U.S. feared that the Congress would, like the sovereign in England remove existing knowledge from the public domain or might restrict free access to materials already available. Thus, even though the Patent Act of 1952 had codified non-obviousness requirement of patentability, the Supreme Court made it clear that:

"The Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose. Nor may it enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby. Moreover, Congress may not authorize the issuance of

¹⁴ Bruce W Arden, Computer Science & Engineering Research Study (COSARS), *What can be Automated?* (110 edn. 1980).

patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available."¹⁵

It was further stated that "Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must promote the progress of useful arts"¹⁶

Although the family tree of patent decisions traces its root back to the 1840's, the Supreme Court first ruled on a modern software patent in the 1972 decision of *Gottschalk v. Benson*. This is an extremely important case in the law of software patents , for it is largely the reason most did not even consider filing software patent applications until the 1980s. In this case the Court struck down the claims as being non-statutory subject matter, holding:

"It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting BCD numerals to pure binary numerals were patented in this case. The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself." From all the above discussions, some concluded that computer programs were not patentable , despite express statement that this was not a prohibition on computer programs.

The fate of software patents took a temporary turn for the worse in 1978 when *Parker v. Flook*¹⁷ was decided. In this case , it was held that an improved method of calculation, even when tied to a specific end use, is non-patentable subject matter.

¹⁵ *Graham v. John Deere*, [1966] U.S. 383

¹⁶ *ibid*

¹⁷ [1978] 437 U.S. 584

The European Patent Office (EPO) had a different view from US legislature in terms of software patents. Article 52, paragraph 2 of the European Patent Convention (EPC) excludes from patentable matter:

- (a) Discoveries, scientific theories and mathematical methods;
- (b) Aesthetic creations;
- (c) Schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;
- (d) Presentations of information.

Paragraph (3) of Article 52 states “Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.”

The use of “as such” in paragraph (3) of Article 52 adds a degree of ambiguity to its interpretation. Due to this it can be interpreted in a number of ways. The interpretation followed by the Technical Board of Appeal of the EPO states that programs for computers may be patented if:

- They have technical character and solve a technical problem.
- They are new.
- They involve an inventive technical contribution to the prior art .

Thus, according to above interpretation, we can state in other words that the EPO grants patents for computer implemented inventions and computer programs only if they provide a “further technical contribution” over existing technology, subject to the other patentability requirements, such as novelty and inventive step.

As an example, a patent application for an Internet auction system was not granted by the EPO because the system used conventional computer technology and computer networks - which meant it made no further technical contribution to the level of existing technology. Although the system provided business

advancement to its users, it was not considered as providing a technical solution to a technical problem by the EPO.

In another example, the problem of improving signal strengths between mobile phones is considered as a technical problem. And even if it is solved by modifications to the phone software rather than its hardware, it will be considered as providing a technical solution to the technical problem. Such an invention would obtain a patent, provided that the solution also meets the requirements of novelty and inventive step.¹⁸

The Japan Patent Office (JPO), much like the USPTO has more of a pro-software patent stance when it comes to granting software patents. The main difference between the Japanese approach and the EPO's approach lies in the requirement for "technical contribution". While the JPO takes a cautious view of mathematical algorithms, a software-related invention incorporating a mathematical algorithm as an element may still qualify as a patentable invention if the claims taken as a whole are to a technical idea utilizing a natural law. The JPO recognizes software claims in the form of a process, product, or a computer-readable storage medium.¹⁹

Section 3 of the Indian Patent Act, 1970 by the Patents Amendment Act, 2002. This sub-section for the first time in India's patent history made patentable at least certain aspects or variations of computer program related inventions.

In 2005, the President of India moved an Ordinance to include computer software that was embedded in hardware like computer, mobile, televisions etc. and having industrial application under the definition of patentable inventions by amending Section 3(k) of the Indian Patent Act, 1970. The Ordinance split the Section 3(k) into two sub-sections (k) and (ka). The excluded subject matters as

¹⁸ IPpro Services (India) Pvt. Ltd., 'Software Patents', [2008]
<<http://www.ipproinc.com/admin/files/upload/48df91ce5af4e4e711c64fc23bcbdaa4.pdf>>
accessed on 10 September 2016.

¹⁹ Ibid

originally contained in Section 3(k) were provided in the new sub-section (ka). The sub-section (ka) now included as topics not patentable ‘a mathematical method or a business method or algorithms’. The amended Section 3(k) read as follows:

“a computer program per se other than its technical application to industry or a combination with hardware”.

The points of interest in the above proposed amendment were the addition of the “technical application” criteria and “combination with hardware”. The intention was to make clear that if an invention directed at computer software had technical application to industry or coupled to hardware – then it was patentable. This seems analogous to the EPO’s “further technical contribution” criteria.

However, stiff opposition to the above amendments caused the Indian Parliament to reject the Ordinance and not enact the same.

As a result, the law as it stands now has been reverted to the original position of excluding computer programs per se from patentability. The “per se” catch again introduced ambiguity to the law and as a result a number of applications relating to software inventions are filed in India every year by not claiming computer programs “per se” but attaching a hardware component to meet the statutory requirements.²⁰

The history of software patents is not final or complete. *Diamond v. Diehr*²¹ has shined the sunlight of *Diamond v. Chakrabarty*²² on software patents, and software patents will no doubt flourish. Yet, decisions like *Parker v. Flook*²³ remain and

²⁰IPpro Services (India) Pvt. Ltd., 'Software Patents', [2008]
<<http://www.ipproinc.com/admin/files/upload/48df91ce5af4e4e711c64fc23bcbdaa4.pdf>>
accessed on 10 September 2016.

²¹ 450 [1981] U.S. 175

²² 447 [1980] U.S. 303

²³ *Diamonds* (n.21)

will hold this growth in check, just as the Case of Monopolies did four hundred years ago.

European Commissioner Benita Ferrero-Waldner has pointed out that, despite the vote, 'patents for computer implemented inventions will continue to be issued by national patent offices and the European Patent Office under existing law'²⁴ This is an accurate statement: existing practice has led to a large number of European patents protecting processes found in computer software.²⁵ While the figures are far lower than in the United States,²⁶ the number of approved software patents is higher than would be expected in a region where computer programs are supposed to be excluded as patentable inventions.

In India, as per the new guidelines for examination of Computer Related Inventions (CRIs), issued from the Office of the Controller General of Patents, Designs and Trade Marks on February 19 2016, the examiners has to rely on three stage test in examining the CRI applications, starting with properly construing the claim and identifying the actual contribution. It says that if the contribution lies only in mathematical method, business method or algorithm, deny the claim. "If the contribution lies in the field of computer program, check whether it is claimed in conjunction with a novel hardware and proceed to other steps to determine patentability with respect to the invention. The computer program in itself is never patentable. If the contribution lies solely in the computer program, deny the claim. If the contribution lies in both the computer program as well as hardware, proceed to other steps of patentability."²⁷

²⁴European Parliament, Debate: Patentability of Computer-Implemented Inventions, <<http://tinyurl.com/8op7z>> accessed on 10 September 2016.

²⁵ United Kingdom Patent Office, <<http://www.patent.gov.uk/about/ippd/issues/cii-ukposition.html>> accessed on 12 September 2016.

²⁶ James Bessen & Robert M. Hunt, 'The Software Patent Experiment', [2004] <<http://www.researchoninnovation.org/softpat.pdf>> accessed on 14 September 2016.

²⁷Ravindra Chingale and Srikirishna Deva Rao, 'Software Patent in India: A Comparative Judicial and Empirical Overview' [2006], *Journal of Intellectual Property Rights*, 216.

Article 27.1 of TRIPS specifies that patent application is available for all kinds of invention in the field of technology. This clause does not explain the ambit of "invention".²⁸ However, it mentions about the patentability criteria as novelty, inventive step, and industrial application. It is nowhere mentioned under article 27 that computer programmes and software should be excluded from patentable subject matter.²⁹ Apart from this computer programmes are specifically protected under article 10 of TRIPS.³⁰ It is also mentioned that Berne Convention 1971 protects source code and object code under literary works.³¹

But according to Paragraph 2 of Article 52 of European Patent Convention (EPC) programmes for computers are not patentable inventions. However, its scope has been limited by paragraph 3 which states that the provision of paragraph 2 shall exclude patentability of subject matter or activities referred to therein only to the extent that an application or a patent relates to such subject matter as such. Their practice shows that computer programmes are included under EPC to some extent.³²

In US, as computer programs can be protected by both copyright and patent protection, Congress and the Supreme Court blurred the distinction traditionally made in the protection of computer related inventions.³³

The changing decision and criteria about software patents has affected the software industry all over the world. An empirical study conducted in 2004³⁴ on the patentability of computer programs in the USA has shown that there is no empirical evidence on the relation between the number of software patents and

²⁸ Article 27.1 of TRIPS

²⁹ *ibid*

³⁰ TRIPS 1998, Article 10

³¹ *ibid*

³² Patents for Software? European Law and Practice, European Patent Office, <<https://www.fc.ul.pt/sites/default/files/fcul/inovacao/PI-Pack-INPI-E-Patents-for-Software-EPO.pdf>> accessed on 12 September 2016.

³³ Weiser Philip J, *The Internet, Innovation, and Intellectual Property Policy*, Columbia Law Review (2003).

³⁴ James Bessen & Robert M. Hunt, 'The Software Patent Experiment', [2004] <<http://www.researchoninnovation.org/softpat.pdf>> accessed 14 on September 2016.

R&D investments. It reveals that that the patenting of software is not a useful way to stimulate innovation. This study undermines one of the major arguments in the support of the patent regime and the growth of software industry.

World Intellectual Property Office (WIPO) publishes World Intellectual Property Indicators in which the data relating to patent application relating to computer technology all over the world has been given. It is observed that every year around 1,30,000 applications are filed all over the world and it shows consistency from 2007 to 2011. In the recently published data on International IP filing figure of WIPO, computer technology is listed in the top five field of technology in PCT filings.³⁵

The software patentability issue is difficult to resolve, considering the astounding diversity of opinions about the mere nature software programs. This section of the paper tries to analyse the validity of some of the arguments for and against the patentability of software.

As an advantage, patenting of software provides recognition and also serves as a return on investment put into developing the software. It is beneficial for the society because it propagates generation of ideas. As a disadvantage, software patents may give control of the entire industry to a few key players which may lead to a monopolistic environment wherein the chance of threat or competition by small competitors may be completely negated. It would also discourage innovation and advancement of technology.

Opponents of software patents believe that the Copyright Act, 1957 provides for ample protection of software since copyright protection extends to all original literary works including dramatic, musical and artistic works. Since computer programs fall under 'literary works', they too are protected under copyright. However supporters of software patents believe that the patent would provide

³⁵ <http://www.wipo.int/pressroom/en/articles/2014/article_0002.html> accessed on 13 September 2016.

exclusive rights to the patentee and pre-empt anybody else from using the patented method.

But, again the question still remains that whether software patents should be patented or not. Various countries have various opinions on the said issue. It would be disingenuous to believe that the matter of software patents will be debated less in the coming years. If the practice is in favour of patentability, but legal definitions remain unclear, the time is ripe to question whether the patentability of software is itself beneficial.

THE HAPLESS CRIME VICTIMS: NEED FOR PROPER IMPLEMENTATION OF LAWS

-Ankitesh Ojha*

ABSTRACT

A declaration was made in the year 1985 by United Nations on the basic principles of justice for Crime Victims. Despite so much of care and protection given by the legislature to the victims, it is the victim who suffers. This article justifies that how the Criminal Justice System has failed in dealing with the victims and the plight of victims is becoming even more miserable and hapless. The first part of this paper is an introductory part. It explains the working of our Criminal Justice System and brings out major loopholes of CJS. It is very much appreciated that we give equal rights and fair treatment to the accused but, our Criminal Justice System completely sidelines the victims. The second part of this paper depicts that how the victims in India are the real sufferers. In this section, efforts are made to bring out the real plight of Crime Victims in India. The third part of this paper talks about various rights given to victims which include compensation, access to fair treatment and so on. These rights give a chance to victims to get compensation, feel more secure and look for closure. It also encourages guilty parties to take up the liability for their acts. Again, the biggest question that comes up is, has the Criminal Justice System succeeded in implementing these rights and other legislations properly? This very crucial question has been addressed in the next part of this paper. This section shows that there is no dearth of legislations relating to Crime Victims, but improper implementation of laws and exploitation of victims at many stages destroys the very purpose of these legislations and can even lead to Secondary Victimization. In the last and final part, suggestions are given for proper functioning of Justice System and for ensuring proper care and protection to the victims.

Keywords: *Criminal Justice System, Fair Treatment, Implementation, Secondary Victimization*

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INTRODUCTION

The Judicial System right from the very beginning is aimed at discovering the truth and then to vindicate the truth. Two of the most striking things ensured by the legal system are reasonable trial and equity to both the Crime Victim and the accused. When an offence is committed, the State catches or arrests the accused, after this he is brought to trial. If found guilty, then, the offender is convicted and punished. Is this the completion of the whole process of criminal justice? No, after this the main task of Criminal Justice System is to compensate the victims and ensure them fair treatment, but, unfortunately, our Criminal Justice System has failed to deliver the same. It is not sufficient that the criminal is caught and punished. According to the modern approach, the rights of Crime Victims should be addressed by providing them Restorative Justice. Restorative Justice is a developing reaction to the wrongdoings, and it regards the nobility and fairness of every individual, forms understanding, and advances social congruity. It is appreciated that the accused is given a fair and just trial as every party has right to fair treatment and access to justice. The job of the Criminal Justice System is to ensure equal and fair treatment to victims as well. The system has always been liberal to criminals. The condition of prisons is improving, new laws made by the legislature have a lenient approach toward criminals and victims are discarded every time. Criminal Justice System is just focused on giving humane treatment to the accused, and no efforts are made by the system to improve the hapless condition of victims, the situation of Crime Victims is still the same, they are still the sufferers, they suffer right from the offence is committed to the delivery of justice.

The status of a crime victim in the Criminal Justice System is very hapless. The victim is left to fend for himself with little or no support from the State machinery. Now, as we move towards international level the focus is about the identification of victim and the harm caused to him and it is the liability of state to compensate the crime victim. What happens in India is not the same, the

offender has to compensate the crime victim, and hence successful prosecution is necessary. Section 2(wa) of Criminal Procedure Code provides that “*victim*” means a person who has suffered any loss or injury caused by reason of the act or omission for which the accused person has been charged and the expression “*victim*” includes his or her guardian or legal heir. Use of the sentence “for which the accused person has been charged” in this definition makes the intention of legislature very clear. Law Commission for the first time recommended a comprehensive provision for compensation to victims in one of its reports¹. As a result, a Specific provision for compensation to victims of crime was inserted in section 357 of the Criminal Procedure Code. This provision states that “*Court may award compensation to Victims of crime at the time of passing of the judgment, if it considers it appropriate in a particular case, in the interest of justice*”.

A similar provision in The Probation of Offenders Act, 1958 is applied only in cases where offenders are ordered to be released on probation. However, this provision is not independent, awarding compensation under this provision is completely dependent on conviction of accused and we all know that rate of conviction in India is very low i.e., about ten percent only due to various reasons. The convictions are subject to appeals and revisions thus, section 357 CrPC or similar provision in Probation of Offenders Act is quite inadequate and fails to serve its purpose, the victims in most of the cases are unable to avail it as there is always delay due to the formalities involved and, this defeats the purpose of concerned legislation.

The assumption that by punishing the offender the victim receives ‘justice’ is of zero value today because successful investigations are continuously decreasing and the still smaller number of convictions in the Criminal Justice System². So, it is Important for the justice system to ensure restorative justice and compensation to the victims to receive justice in its truest sense. The other statutes in India

¹41st Report, Law Commission of India on Indian Penal Code, 1860 (1969)

²Vibhute, K.I., *Criminal Justice: A Human Rights Perspective of Criminal Justice in India*, [2004] 362

making provisions for compensation to victims are *Works Man Compensation Act, Fatal Accidents Act, Motor Vehicles Act and Domestic Violence Act*, which provides that wrongdoer or his master, should pay compensation to victims³. Insertion of S.357A in the Criminal Procedure Code with enforcement from 31st December in the year 2009 and the Bihar Victim Compensation Scheme 2011 are strong steps where the liability of the state for compensation and rehabilitation of victim irrespective of identification and prosecution of accused have been acknowledged.

PRESENT STATUS OF VICTIMS IN INDIA

The victim is that component of crime which is inseparable. It is almost impossible to explain the phenomena of crime without incorporating the victims of the crime. It is believed by many jurists that victim is the most disregarded participant of Criminal Justice System. Victims are the principal actors in Criminal Justice System, despite being such an important part of this system it remained a forgotten entity. The status of victims has been reduced to report crimes and appear as a witness in court of law⁴. It would be completely right to say that the predicament of Crime Victims has been overlooked in misplaced sympathy for criminals. It was precisely observed by Justice Krishna Iyer in a landmark case *Rattan Singh v. State of Punjab*⁵ that, "*It is a weakness of our jurisprudence that victims of crime and the distress of the dependents of the victim do not attract the attention of law. In fact, the victim reparation is still the vanishing point of our criminal law. This is the deficiency in the system, which must be rectified by the legislation.*"

In ancient civilizations, the victim of any crime used to be the main figure in any criminal setting. In matters of restitution and retribution the crime victim or the injured had a significant role to play in our own pre-modern polity. Gradually, as the administration has assumed the liability for dispensing justice, the guilty party

³Patil, Jaiprakashreddy, "*Victims of Crime : A need for justice*" <<http://www.lawyersclubindia.com/articles/Victims-of-Crimes-A-Need-for-Justice-5304>> Accessed on (January 18, 2015, 10:55 PM)

⁴Bajpai G.S., *Victim in Criminal Justice Process: Perspectives on Police and Judiciary*, [1997]. 08.

⁵*Rattan Singh v. State of Punjab*, [1979] (4) SCC 719.

has become the prima donna and the victim is totally forgotten. The role of a crime victim is restricted to that of a witness in a prosecution of an offence in Criminal Justice System. The essence of Victimology lies in lessening the pain of the victims it believes in restorative justice. Victimology must find fulfillment said the Court in a case⁶, not through barbarity, but rather by necessary recoupment by the wrongdoer of the harm perpetrated not by giving more agony to the guilty party but rather by diminishing the loss of the melancholy. Tragically, this is never followed in the genuine sense. Loss and pain suffered by the victims are addressed by Victimology, but it does not do anything to lessen the pains of the victims, which defeats the purpose of Victimology. As the injured enters into the gate of Criminal Justice System, he is hit hard by questions, delays, court appearances, loss of earnings, waste of time and frustration. Our Criminal Justice System states that it stands against the harassment of rights of victims, and gives additional rights to women, but the reality is something very painful and opposite to what this system promises to give. If the victim is women, her lot is even more, painful. It is very common these days for a victim to be harassed and humiliated in the trial and investigative procedures.

RIGHTS GIVEN TO VICTIMS

The adoption of the fundamental principle of justice for victims of crime and abuse of power by United Nations at its 96th on November 29 of 1985 constituted an important recognition of need to set norms and minimum standards of in international law for protection of rights of victims. The four major components of rights of victims declared by United Nations- Access to justice and fair treatment, Restitution, Compensation and assistance. However, payment of compensation to the Crime Victims is mainly focused by our justice system. The status of Crime Victims about access to justice and fair treatment may be properly appreciated concerning the four different stages of Criminal

⁶Maru Ram &Ors. v. Union of India and Ors [1981](1) SCC 107.

Justice System, which are- **1.** Right to mobilize the Criminal Justice System while action of lodging FIR or complaint. **2.** Right and status of a victim during investigation of a criminal case. **3.** Right and status of a victim during trial. **4.** Right and status after judgment in a criminal case.

Access to fair treatment

The victim, after the committal of crime, begins the mechanism of Criminal Justice System by giving information to the police in writing. There are instances when the police officer refuses to act upon the information, here victim can directly approach to the Superintendent of Police and can file a complaint, where the Superintendent of Police involves himself in direct investigation. The victim can also approach to the Magistrate, in case the Superintendent refuses to act upon the matter. When the victims happen to be women or children, they deserve more care and attention but unfortunately, our legal system fails to deliver the same. According to section 160 of Criminal Procedure Code, no male person under the age of 15 years or above the age of 65 years or a female person or a mentally or physically disabled person shall be required to attend at any place other than the place in which such male person or woman resides. This section aims at giving special rights to the special victims, but the main problem with this is it does not apply to a woman or a child who is picked up as a suspect⁷. The rape victims are kept in protective custody or women's shelter on the pretext that they are required for giving evidence⁸.

The need of victims is not properly heard and fulfilled by the Criminal Justice System, the predicament of assault casualties is far more atrocious, the amount of consideration and security given to them is not adequate. The predicament of assault and rape victims has been exacerbated by India's overburdened, moderate and under-financed Criminal Justice System. The greater part of the assault cases go unreported, due to cultural stigmas that could bring disrespect to victims and

⁷NandiniSatpathy v. P.L. Dani AIR (1978) 2 SCC 424

⁸Hussainara Khatoon v. State of Bihar AIR (1980) 1 SCC 93

their families. Those who do report cases often face a very bad experience. Human Rights groups have reported that a lack of specialized training of police and doctors often drives the problem. The response of law to the needs of victims has always been inadequate. The law fails to address the needs and rights of victims to be treated with dignity. Rehabilitative needs of victims of rape also go unaddressed by the Criminal Justice System, there is no statutory scheme regarding it. However, the efforts made by Supreme Court of India in assisting rape victims cannot be sidelined. The Supreme Court in *Delhi Domestic Working Women's Forum v. Union of India*⁹ indicated broad parameters for assisting the victims of rape. The parameters indicated by the Supreme Court of India are¹⁰:

1. The complainants in sexual assault cases should be provided with legal representation. The Supreme Court made not only legal representation mandatory but also prescribed various roles to the advocates of victims. The advocate should not only be to explain the nature of proceedings to the victims, to prepare her for the case, to assist her in the police station and in court but also to provide her guidance as to how she might obtain the help of different nature from different agencies.
2. When the victim of sexual assault approaches the police station, the victim might very well be in a distressed state and she needs to be handled with much care. Supreme Court stated that legal assistance should be provided at the police station to the victims of sexual assault.
3. Supreme Court stated that the police is under a duty to inform the victim of her right to legal representation. In other words, it is the duty of the police to tell the victim that she has the right to legal representation, before asking any question to the victim.
4. A list of those advocates who are willing to act in these cases should be prepared and kept in the police station for the victims whose own lawyer is

⁹Delhi Domestic Working Women's Forum v. Union of India [1995] (1) SCC 14.

¹⁰Muralidharan S, *Rights of Victims in the Indian Criminal Justice System*, National Human Right Commission Journal, [2004](vol. 1), 02.

unavailable or who do not have any particular lawyer in mind. It is the job of the court to appoint an advocate for the victim upon application by the police at the earliest convenient delay.

The emerging menace of intimidation of victims of witnesses during the pendency of the trial is not addressed by the Criminal Procedure Code. The few provisions that exist are ineffective and fail to deliver its purpose due to certain limitations. It is a serious concern for the justice system of India that conviction rate is declining, and the trials in most of the sensational cases do not start till the witnesses are won over.

Restitution

Statutory recognition has not yet been granted to this right of victims of crime. The criminal law of India is silent when it comes to restitution. Criminal Justice System recognizes only the direct victims of crime for compensation and financial assistance. However, there are other Crime Victims whose rights are yet to be considered by the justice system. Imagine the plight of a baby born as a result of rape with his biological mother. Merely conferring some limited civil rights of legitimacy and maintenance is not sufficient for the whole life sufferings of such child. He has no claim to search and charge his biological father or mother or both with crime and put them on trial.

The nation has recently witnessed a case where the long legal battle of one of such a person to prove he to be the biological son of a famous politician. Whether he can put that famous politician on trial, who not only criminally exploited his mother but also left him to live with stigma till whole life. Such persons are given no status or right in Criminal Justice System. These examples raise a huge question on our Criminal Justice System and bring out the incompetency of our system to retribute the victims of crime. The state and its agencies are expected to take action for the losses caused to public and private property under the principle of "Culpable Inaction". It is the court's duty to find

the state liable only where a definite failure on the part of the state and its agencies has resulted in losses.

The outbreak of riots due to the assassination of our Prime Minister in 1984 resulted in damages to the property of Sikh community in various places in India, Madras High court in *R. Gandhi v. Union of India*¹¹ acted on the report of the commissioner appointed by it, asses the losses and directed payment of varying amount of compensation for the losses of property of Sikh community.

Compensation and Assistance

“Compensation is anything given to make things equivalent, a thing given to make amends for loss, recompense, remuneration or pay”. This meaning of compensation was given by the Hon’ble Supreme Court of India¹². In Oxford dictionary compensation is defined as¹³, “Compensation means to provide something good to balance or reduce the bad effect of damage, loss, injury etc.” According to Black’s Law Dictionary¹⁴, “Compensation means payment of damages, or any other act that court orders to be done by a person who has caused injury to another and must therefore makes the other whole”. Granting compensation counterbalances the victim's pain suffered and loss that result from victimisation. Orissa high court in its judgment¹⁵ very rightly described the object of compensation, “*It is true that perfect compensation is hardly possible and money cannot renew a physique frame that has been battered and shattered, as state by Justice requires that it should be equal in value, although not alike in kind*”. The prime objective of providing compensation is to place the injured or claimant as far as possible in the same financial position, as he was before accident. Broadly speaking in the case of death, basis of compensation is loss of financial benefits to the dependents of the deceased which includes pecuniary loss, expenses, etc. and loss to estate. Compensation awarded should not be inadequate and should neither

¹¹*R. Gandhi v. Union of India* [1989] Mad 205

¹²*State of Gujarat v. Shantilal*, [1969] SC 634 at 644

¹³Oxford Advanced Learner’s Dictionary, Oxford University Press, [1996],5th Ed.

¹⁴Black’s Law Dictionary, 7th Ed., St. Paul, Minn., [1999]

¹⁵*Saraswate Parabhai v. Grid Corp. of Orissa* [2000] Ori 13

be unreasonable, excessive, or deficient. It should neither be punitive against whom claim is decreed nor it should be a source of profit of the person in whose favour it is awarded". There are some provisions in law, where it is the duty of the offender to compensate the victims of crime, like Section 357 of the Criminal Procedure Code, 1973 and Section 5 of the Probation of Offenders Act, 1959 and some other statutes. Section 5 of the Probation of Offenders Act enables a trial court, to arrange for 'sufficient compensation' to any person for the loss or injury caused to him by the offender who is released under Section 3 or Section 4 of the Act this order of court is discretionary in nature. The remedy of compensation is not a new concept; it is not the section 357 of criminal procedure code which originated this concept in India. Even Sections 545 and 546 of the Criminal Procedure Code, 1998 provided for compensating victims of crime. It was noted by the Law Commission of India in its 41st report that the sections 545 and 546 by courts as freely and liberally as they could be desired. The Commission favored payment of compensation out of fine imposed on the offender. Likewise, with a perspective to giving a substantive power to the trial court to this impact, it suggested insertion of a substantive provision for installment of remuneration to the casualty crime¹⁶. In the year 2013, two new sections were inserted in CrPC namely s.357 B and s.357 C. S.357 B provides the additional compensation to victims who come under s. 326 A, 376 D of the Indian Penal Code. S. 357 C is empowered to give directions to all the hospitals whether they run by government or by local authorities that they provide the free medical aid to the victims of ss. 326 A, 376 A, 376 B, 376 C, 376 D of Indian Penal Code.

PROPER IMPLEMENTATION OF LAWS: NEED OF THE HOUR

A recent incident in Mumbai in the year 2015 portrays that how victims suffer due to the incompetent Criminal Justice System and rightly describes that how this system fails to provide a fair treatment to victims. It raises fresh questions

¹⁶Haveripeth Prakash D., *Restorative Justice and Victims: Right to Compensation*, *International Research Journal of Social Sciences* [2013], (vol. 2), 44 .

about the treatment of rape victims during trials. In the wake of giving proof for over four hours in the trial of the men accused of gang-raping her, a photojournalist from Mumbai crumpled in court. The photojournalist was taken to a hospital and recovered well enough to continue giving evidence the next day. Lawyers said that judges need to do more to ensure that their courtrooms don't turn into hostile territory for the survivors of assaults. In the 1980s, Indian laws were amended to declare that trials for rape and child abuse should be conducted "in camera". When the photojournalist gave evidence about the attack on her in Mumbai, the hearing did not follow these rules. India's Apex Court said in a 2004 judgment¹⁷ that the victims of rape and child abuse must have sufficient breaks while they are giving evidence, and questions put to them in cross-examination should be lucid and not embarrassing.

A screen can be made available so that the victims or witnesses do not have to see the suspects. In this case, the photojournalist was not provided with the screen. It is also quite strange that a male public prosecutor was appointed in this case. Bombay High Court issued a notice that said only women should staff courts in Maharashtra state during Sexual Assault cases¹⁸. This case envisages that how victims who are women suffer during the trial due to improper care and attention. Supreme Court and High court have prescribed special rules to be followed when cases of rape and child abuse come up but, unfortunately, these rules are not followed. The problem with the implementation of law has emerged as one of the biggest hindrances for Criminal Justice System. It is a well-known fact that victim is an integral part of Criminal Justice System, and this system cannot function without the presence of victims and their cooperation. In the event that the victims come to see their treatment as uncalled for, twisting of reality or minimal worried with their own rights, feeling and intrigue or if the choices are made which are felt to be inadmissible, it might prompt Secondary

¹⁷*Sakshi v. Union of India* [2004] SC 3566

¹⁸Mustafa Plumber, *Mumbai: All-women staff in courts handling rape cases from March 8*, DNA <<http://www.dnaindia.com/mumbai/report-mumbai-all-women-staff-in-courts-handling-rape-cases-from-march-8-1808766>> (8thJanuary 2015, 9:45 AM)

Victimisation¹⁹, where the victim who is already going through the consequences of crime committed on him faces unfair treatment by the justice system. It is possible that this Secondary Victimisation by the system may lead to disinterest and future non-cooperation by the victim. At the point when the victim picks not to collaborate with the Criminal Justice System, it will crumple. The system without the participation of the key component cannot function. Renewal of emphasis and enhanced care and sensitivity to the rights of the victims is much needed to prevent the justice system from collapsing. As it is given, that the intent of legislature has always been to reduce the sufferings of crime victims in India but it is the Criminal Justice System which fails to implement these laws properly.

CONCLUSION

The brief audit of the current legal structure in connection to privileges of casualties of wrongdoing uncovers that expect in the region of giving remuneration, next to no has been done either statutorily or through plans to address the whole scope of issues confronted by Crime Victims. There is a need to investigate the position in which the Crime Victim is set in our Criminal Justice System.

The part of the Crime Victim our Criminal Justice System, which takes after the common law colonial tradition, is confined to that of a witness in the indictment of an offense. This stems from an adverse impression of the Crime Victim as a man who has "endured hurt, including physical or mental damage, enthusiastic enduring, and monetary misfortune or generous debilitation of their major rights." Resultantly, the Criminal Justice System gains a "vertical measurement" and turns into "a method for formal social control" by the state which assumes control over the arraignment of the guilty party to the prohibition of the casualty. It is described in this paper the consequences a victim of crime faces after the committal of crime by the wrongdoer. It presents the true picture of Criminal

¹⁹Gerd Ferdinand Kirchhof, "*Victimology- History and Basic Concepts*", [1994] 51.

Justice System, which has failed to protect the rights of Crime Victims. Despite the fact that the Malimath Committee has prescribed that "the casualty has the privilege to be represented by an advocate of his choice; provided that a lawyer should be given at the expense of the state if the casualty is not in a position to manage the cost of a legal advisor", this neglects to recognize that the current situation with execution of the statutory. This is one of the examples that, laws which are there for the betterment of Crime Victims are not implemented properly.

Efforts have been made to understand the value of compensation granted to the Crime Victims in this article. The primary purpose of Criminal Justice System is to safeguard the rights of the individuals and the state against the intentional invasion of the wrongdoers who disturb the peace and harmony of the society by violating societal rules and regulations. State agencies have always worked to protect the rights of the criminals and victim is not given any relief in the form of compensation. However, the idea of compensation to victim or injured is linked with the legal system in two ways; firstly, it is the duty of the legal system to regulate the relationship between the victim and the wrongdoer and secondly, it has to regulate the relationship between the victim and judicial administration. It becomes imperative to understand the basic concept of victim.

And therefore, the Apex Court in *Rattiram & Ors. V. State of M.P.*²⁰ has rightly emphasized on the protection of victims' rights: *"Criminal jurisprudence, with the passage of time, has laid on Victimology which fundamentally is a perception of a trial from the viewpoint of the criminal as well emphasis as the victim. Both are viewed in the social context. The view of the victim is given due regard and respect in certain countries. It is the duty of the court to see that the victims' right is protected"*.

²⁰Rattiram& Ors. V. State of M.P.AIR [2012] SC 1485

PROTECTION OF TRADITIONAL KNOWLEDGE

-Palak Nenwani & Shreya Jain*

ABSTRACT

From my grandmothers' tips on a clean skin to the remedies of a mosquito bite, it was all available in her kitchen. From agriculture sector to the cosmetic industry to plant based medicines all are thriving on the thrust of traditional knowledge. Traditional knowledge is the undermined part of the study of Intellectual property which though is the most significant aspect that a country needs to protect yet no specific laws exist that can give the much deserved protection to the indigenous community. It is practical common sense based on teachings and experiences passed on from generation to generation. The World Intellectual Property Organization has taken up an initiative to protect TK and advised the member states to form a digital library whereby all information can be stored. India also follows the same and is a party to Convention on Bio-diversity and has also taken up BONN guidelines. Kerala has taken up a progressive step by making draft legislation to bring TK at par with other IPRs in the country. Presently the bill is the only our country has to protect Traditional Knowledge of this golden bird. Traditional knowledge is a way of life that gave solutions before science stepped in, it is the cornerstone of cultural identity and a valuable passed in from generations to generations. Traditional knowledge can make significant contributions to sustainable development. This paper highlights the protection of traditional knowledge as an important part of the intellectual property law for the country and to also ensure a fair and equitable share of benefits for the indigenous communities arising from the use and application of their traditional knowledge.

INTRODUCTION

“There is a place for Indigenous Knowledge. It needs to be respected for what it is, a science, in its own right, that can work in concert with western science to solve the complex problems of the world. However, it must be respected and must be used to benefit the holders of this knowledge.”

Traditional Knowledge under the Law of Intellectual Property rights is not yet clearly defined and is still under development. However, the definition has been developing since ages through various judicial decisions and findings. It could mean public domain under the Copyright laws, fact known to the public before the patent application under the Patent Laws, customary use under the

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Trademark Laws and an invention not enhancing the efficacy of an already existing invention under the Patent Act 1970.¹ It is usually defined as, knowledge deeply embedded and rooted in traditions of culture of an indigenous community of a region. From what constitutes as Traditional Knowledge to whose interests are being served lays in the domain of IPR affecting global politics as well as the local indigenous communities. Traditional knowledge is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. While there is not yet an accepted definition of it at the international level, it can be said that: traditional knowledge in a general sense embraces the content of knowledge itself as well as traditional cultural expressions, including distinctive signs and symbols associated with it.

Traditional Knowledge in the narrow sense refers to knowledge as such, in particular the knowledge resulting from intellectual activity in a traditional context, and includes know-how, practices, skills, and innovations. Traditional knowledge can be found in a wide variety of contexts, including: agricultural, scientific, technical, ecological and medicinal knowledge as well as biodiversity-related knowledge. Traditional knowledge cannot be confined only to the knowledge of indigenous people. This traditional knowledge that was once considered as primitive and inferior and an obstacle in the path of progress and development is now being fought internationally and claimed by many. What was earlier studied as a part of social anthropology and cultural studies has now being debated upon in the field of intellectual property rights. Much work is being done in the UN (e.g. United Nations Conference on Trade and Development (UNCTAD), 2002) and by Indigenous groups (e.g. Aboriginal and Torres Strait Islander Commission's sponsorship of delegates to UN forums to lobby on Indigenous Australian interests). Nevertheless, regarding the protection of traditional knowledge and traditional cultural expressions and from the

¹ The patents act 1970, Section 3(d),

perspective of indigenous peoples and local communities, the “public domain” operates to exclude them from protection and can be used to justify their misappropriation.² Putting them into the public domain would violate the confidential character of many intangible, sacred and secret elements which belong to the living heritage and would accentuate the deterioration and illicit appropriation of cultural values.³ Indigenous and local communities cherish Traditional Knowledge as a part of their cultural identity.

PROTECTION

One reason for a lack of clarity about the rationale for protection stems from the different meanings given to the concept of protection. Some understand this concept in the context of IPRs, where protection essentially means to exclude the unauthorized use by third parties. The protection of TK is not an end by itself; it may provide the need to bring equity to today’s essentially asymmetric relations, and to preserve TK as a component of a strategy for sustainable human development, bearing in mind that there is also a human rights dimension to the protection of TK. The establishment of property or other rights is only a means and the protection of TK does not necessarily require the recognition of property rights. Protection may also have non-economic purposes, such as a moral recognition of the authorship. Authors are entitled to both economic and moral rights under authors’ rights systems that follow the Continental European approach.⁴ The TRIPS Agreement, however, allows Members not to comply with article 6 BIS of the Berne Convention which provides for the protection of moral rights. Moral rights have been enforced in some common-law countries as well. In the UK, for instance, moral rights were introduced in the 1988 Copyright Act. In the USA, copyright is classified as “personal” property and the authors enjoy personality protection, such as the rights of first publication. The Visual

² VAN CAENEGEM, W., “*The Public Domain: Scienta Nullius?*”, [2002] E.I.P.R., 324

³ World Intellectual Property Organizations, *Intergovernmental Committee On Intellectual Property And Genetic Resources, Traditional Knowledge And Folklore*, July 15,2003 <WIPO/GRTKF/IC/5/15>

⁴ Downes David, “*Using Intellectual Property as a Tool to Protect Traditional Knowledge: Recommendations for Next Steps*”,(1997) pp 4.

Artists Rights of 1990 provided protection for the paternity and integrity rights of certain graphic artists, sculptors and photographers. Such rights, which are recognized by the Universal Declaration of Human Rights⁵, generally relate to the paternity and integrity of a work. They are inalienable, although subject to waiver in particular circumstances. This kind of protection would provide traditional and indigenous communities with legal means to prevent any acts that distort the paternity or affect the integrity of TK. Moral rights, however, apply in the area of copyright which protects the original expression of ideas but not to other components of IPRs, such as patents. Certain acts that unduly take advantage of a competitors' reputation may be dealt with under the discipline of unfair competition which condemns dishonest commercial practices or, in common-law countries, under the doctrine of "passing-off" the wrong of misrepresenting one's business goods or services as another's, to the latter's injury, generally by using a confusing trademark or trade name. Applying these disciplines assumes, however, the existence of a competitive relationship, which may not exist when pieces of community's knowledge are imitated.

Defensive protection refers to a set of strategies to ensure that third parties do not gain illegitimate or unfounded IP rights over TK. These measures include the amendment of WIPO-administered patent systems (the International Patent Classification⁶ system and the Patent Cooperation Treaty Minimum Documentation). Some countries and communities are also developing TK databases that may be used as evidence of prior art to defeat a claim to a patent on such TK. The following legal frameworks can be adapted to protect traditional knowledge.

- International protection through treaties and conventions;

⁵ Universal Declaration of Human Rights, Article 27

⁶ WIPO, Strasbourg Agreement Concerning the International Patent Classification <<http://www.wipo.int/treaties/en/classification/strasbourg/>> Last accessed 31 January 2010

- National protection through national legislations controlling access to genetic material enacted in various countries, and national intellectual property legislations;
- Local protection through private contractual measures.

Indigenous peoples and local communities are holders of a substantial part of this knowledge and are demanding that it be protected against misappropriation but also against its use without their consent.

Protection is needed from *biopiracy*⁷ The practice of commercially exploiting naturally occurring biochemical or genetic material, especially by obtaining patents that restrict its future use, while failing to pay fair compensation to the community from which it originates.

SAN HOODIA CACTUS CASE AND ACCESS AND BENEFIT-SHARING, the San is an indigenous group in Botswana. The Sans use the Hoodia plant as a natural appetite suppressant and there has been documents by the anthropologists approving the same fact. However, the Sans were not acknowledged as the originators of the knowledge that led to the patents. The CSIR argued that it was difficult, if not impossible, to identify who the owner of the indigenous knowledge were when it is so widely shared. Following pressure, the CSIR and Sans negotiated a benefit-sharing agreement. The agreement included provisions of royalty from any successful commercialization, recognizing the rights of the indigenous groups.⁸

AVEDA AND OWNERSHIP OF 'THE WORD 'INDIGINOUS'', in 2006, Aveda Cosmetic Corporation released skin care products under the trade name 'indigenous'. It got it registered. This provoked a strong negative reaction from indigenous groups around the world on the grounds that such a significant word

⁷ "Biopiracy and traditional knowledge". The Hindu, [2001].

⁸ Kabir Bavikatte, Harry Jonas & Johanna von Braun, *Shifting Sands of ABS Best Practice: Hoodia from the Community Perspective* [2009], <http://www.unutki.org/default.php?doc_id=137> [last accessed 13 January 2010].

politically writes the history and cannot be used by a cosmetic company for economic profit. Aveda however, decided to drop the "indigenous" product line and discontinue trademark even though there were no legal obligation. They appreciated the fact that using such word for making profit was disrespectful to the feelings of such groups and for the protection of their rights. They then established a range of partnership with indigenous groups in Australia and America. In one instance this was a kind of benefit sharing agreement between these indigenous groups and the corporation. Aveda also established an NGO known as the Tribal Link foundation. This is an example where a community is paid for using land and knowledge to source the sandalwood for Aveda products.⁹

REGISTRATION OF BATIK DESIGN IN INDONESIA, the Indonesian Government has been working for development of their traditional art known as batik. It is considered to be a traditional art and practice because the designs and knowledge have been passed down from generation to generation and is not readily transferable to outsiders. In order to protect the art of batik, the Indonesian government has made efforts to make a new legislation. The local government has also developed a design patent program for traditional designs.¹⁰

INTERNATIONAL PATENT CLASSIFICATION

The Strasbourg Agreement establishes the International Patent Classification (IPC) which divides technology into eight sections with approximately 70,000 subdivisions. Each subdivision is denoted by a symbol consisting of Arabic numerals and letters of the Latin alphabet. The appropriate IPC symbols are indicated on patent documents (published patent applications and granted patents), of which over 2 million are issued each year. The appropriate symbols

⁹ discontinuation of 'Indigenous' product line and trademark. Press Release, Aveda, *Aveda Announces Discontinuation of Indigenous Product Collection*[2003], <<http://aveda.aveda.com/about/press/indigenous.asp>> [last accessed 13 January 2010].

¹⁰ Charles Knobloch & Dewi Savitri Reni, *Using Batikmark as a First Step to Extend Protection of Indonesian Javanese-batik Patterned Textile in Foreign Countries*, Arnold & Knobloch, L.L.P.,[2009] <http://www.usptclaw.com/pdfs/Batikmark_Article.pdf>[last accessed 13 January 2010].

are allotted by the national or regional industrial property office that publishes the patent document. For PCT applications, IPC symbols are allotted by the International Searching Authority. Classification is indispensable for the retrieval of patent documents in the search for "prior art". Such retrieval is needed by patent-issuing authorities, potential inventors, research and development units and others concerned with the application or development of technology. Although only 62 States are party to the Agreement, the IPC is used by the patent offices of more than 100 States, four regional offices and the Secretariat of WIPO in administering the Patent Cooperation Treaty (PCT) (1970). In order to keep the IPC up to date, it is continuously revised and a new edition is published each year on January 1. The revision of the IPC is carried out by the IPC Committee of Experts set up under the Agreement. All States party to the Agreement are members of the Committee of Experts. The Strasbourg Agreement created a Union, which has an Assembly. Every State that is a member of the Union is a member of the Assembly. Among the most important tasks of the Assembly is the adoption of the biennial program and budget of the Union. The Agreement – commonly referred to as the IPC Agreement – was concluded in 1971 and amended in 1979. It is open to States party to the Paris Convention for the Protection of Industrial Property (1883). Instruments of ratification or accession must be deposited with the Director General of WIPO. The scheme was conceived as an indexing system to organize patent documents from around the world based on the technical field of the invention. The basic structure of an IPC mark is a hierarchy with 8 major sections (A-H). These are:

Section A – Human Necessities

Section B – Performing Operations; Transporting

Section C – Chemistry; Metallurgy

Section D – Textiles; Paper

Section E – Fixed Constructions

Section F – Mechanical Engineering; Lighting; Heating; Weapons; Blasting

Section G – Physics

Section H – Electricity¹¹

GEOGRAPHICAL INDICATIONS: THE BASMATI CASE Basmati is a variety of rice from Punjab provinces in India and Pakistan. It is a major export crop for both the countries. The "Battle of Basmati" started in 1997 when US Company Ricetec Inc was awarded a patent relating to plants and seeds seeking a monopoly over various rice lines including Basmati. India requested a re-examination of this patent in 2000. The patentee in response withdrew a number of claims. The dispute further moved on to the misuse of the name "Basmati". Ricetec applied for registration of trademark 'Texmati' in UK claiming that "Basmati" was a generic term. It was successfully opposed by UK since it is the geographical conditions that help the Basmati to grow. But in 1998, the US Federation submitted that the term "Basmati" is generic and refers to a type of aromatic rice. In response, a collective of US and Indian civil society organization filed a petition seeking to prevent US grown rice from being advertised as Basmati. The US Department of Agriculture and the US Federal Trade Commission deemed "Basmati" to be a generic term and held that it is not misleading.

In 1992, the Convention on Biological Diversity (CBD) recognized the value of traditional knowledge in protecting species, ecosystems and landscapes, and incorporated language regulating access to it and its use. It was soon urged that implementing these provisions would require revision of international intellectual property agreements. the states who had ratified the CBD requested the World Intellectual Property Organization (WIPO) to investigate the relationship between intellectual property rights, biodiversity and traditional knowledge. WIPO began this work with a fact-finding mission in 1999. WIPO established the Intergovernmental Committee on Intellectual Property and Genetic

¹¹ International Patent Classification ,*Guide to the International Patent Classification*, [2015], [8th Edition], WIPO Publication No 560E.5/8, ISBN 92-805-1442-

Resources, Traditional Knowledge and Folklore (IGC-GRTKF).¹²In 2016, the Committee is requested to provide, for information only, a factual report to the General Assembly on its work up to that time, and in 2017, submit to the General Assembly the results of its work on an international legal instrument(s) relating to intellectual property which will ensure the balanced and effective protection of GRs, TK and TCEs. The General Assembly in 2017 will take stock of progress made, and decide on whether to convene a diplomatic conference or continue negotiations. It will also consider the need for additional meetings, taking account of the budgetary process.¹³

Article 27. 3(b) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) sets out certain conditions under which certain biological materials or intellectual innovations may be excluded from patenting. The Article also contains a requirement that Article 27 be reviewed. In the TRIPs-related Doha Declaration of 2001, Paragraph 19 expanded the review to a review of Article 27 and the rest of the TRIPs agreement to include the relationship between the TRIPS Agreement and the 1992 Convention on Biological Diversity (CBD) and the protection of traditional knowledge and folklore.

In 2002, State parties to Convention on Biological Diversity (the CBD) formally adopted the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization (the Bonn Guidelines).¹⁴the sixth session of the CBD Conference of the Parties (COP-6) at The Hague in April 2002 was attended by some 2000 governmental and non-governmental officials from 166 countries. Bonn Guidelines were developed to sustainably use genetic resources; governments also undertook to guarantee

¹² Turner, N. J., Ignace, M. B., & Ignace, R., *Traditional ecological knowledge and wisdom of aboriginal peoples in British Columbia. Ecological applications*, [2000]

¹³ Assemblies of Member States of WIPO Agenda Item 17 2
2(f), Fifty-Fifth Session, October 2015.

¹⁴ Convention on Biological Diversity (CBD), Conference of the Parties (COP), Decision VI/24 A (2002).

equitable benefit sharing.¹⁵ It is commonly believed that the CBD would help prevent these abuses by recognizing the rights of traditional people who will be consulted on the use of their resources and knowledge, mainly through Article 8(j). Article 8(j) states that: “Each Contracting Party shall, as far as possible and as appropriate, subject to its national legislation, respect, preserve, and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices, and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices.” 8(j) could be a good article, but it has serious flaws. The most obvious is the inclusion of the clause “subject to national legislation,” which appears throughout the text of the CBD (as well as other multilateral agricultural and environmental agreements). The clause leaves it up to each State to enforce the article, which, in many cases, renders it useless in its entirety. Although the Bonn Guidelines are not revolutionary in their content – as the main points were defined in the CBD – they do, in some cases, introduce alarming elements that will further facilitate and mainstream biopiracy. As the XI Conference of Parties (CoP) to the Convention on Biological Diversity is underway in Hyderabad, India, it is time to examine whether the negotiators are anyway closer to getting a meaningful treaty on a global methodology to determine how the benefits arising from the utilization of genetic resources are distributed among the beneficiaries in a fair and equitable manner. The new ABS rules means the multinational companies will now have to share their profits with the communities who had not only provided the genetic resource but also have made available the traditional knowledge associated with its use.¹⁶

¹⁵ Report of ‘*the sixth meeting of the COP to the CBD*’ The Hague Ministerial Declaration, (United Nations Doc UNEP/CBD/COP/6/20 2000).

¹⁶ The Convention on Biological Diversity (CBD).

The United Nations Conference on Trade and Development (UNCTAD) held on 30 October-1 November 2000, an “Expert Meeting on Systems and National Experiences for Protecting Traditional Knowledge, Innovations and Practices”. Over 250 people from 80 countries participated, including representatives of governments, indigenous groups, NGOs, Inter-Governmental Organizations (IGOs), academia, private companies, and international agencies and some 50 papers on country experiences were presented⁹⁰. The meeting’s outcome, which reflected the diversity of views of experts, was taken up in February 2001 by UNCTAD’s Commission on Trade in Goods and Services, and Commodities, which negotiated agreed recommendations to governments, to the international community, and to UNCTAD. Recommendations to governments included: to raise awareness about protection of TK, to support the innovation potential of local and indigenous communities, to facilitate the documentation of TK and to promote the commercialization of TK-based products.

INDIA

TRADITIONAL KNOWLEDGE AND BIKRAM YOGA The father of Bikram Yoga is Bikram Choudhury. To teach the technique of Bikram Yoga, instructors across US must obtain a license from him. Bikram Choudhury has aggressively enforced claims of Copyright and Trademark protection including Copyright in teaching of the asanas in classes. Objections regarding these aggressively enforced claims arose that these postures have been derived from Indian Traditional Knowledge and Practice. In 1979, Bikram registered Copyright for Bikram's Beginning Yoga Class and subsequently filed Copyright for various books and audiotapes. In 2002, he filed for a copyright for the sequence of the asanas itself on the grounds that US office itself recognizes his exclusive right for the yoga sequence itself. He recognized the fact that his asanas were already in public domain but the sequence of those asanas constitutes copyrightable compilation of material. He argued that this sequence constituted his skill and labor in selection and assemblage of asanas into specific form. In

2005, in the case of *Open Source Yoga Unity v. Bikram Choudhury*¹⁷, testing these claims, the US District Court for Northern California summarily denied the motions of both the parties, thus leaving questions for trademark invalidity and whether the sequence is in the public domain, its copyrightability, hence the matter remained unresolved. The matter then was settled by the parties with a non-disclosure regarding details of settlement. Bikram is still free to take legal actions against other yoga practitioners and trainers.

India the mother of *ayurveda* and *yoga* has since time immemorial possessed abundance of traditional knowledge in its deep rooted culture. We find the cure too many diseases as well as the art of living passed from generation to generation. These are available in public domain and accessible by all yet owned by none. India fought successfully for the revocation of turmeric and basmati patents granted by United States Patent and Trademark Office (USPTO) and neem patent granted by European Patent Office (EPO). As a sequel to this, in 1999, the Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy-(AYUSH), erstwhile Department of Indian System of Medicine and Homoeopathy (ISM&H) constituted an inter-disciplinary Task Force, for creating an approach paper on establishing a Traditional Knowledge Digital Library (TKDL). The project TKDL was initiated in the year 2001. Only prevents patenting of “traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components” and not patenting of any inventions based on TK.¹⁸

TURMERIC Turmeric (*Curcuma Longa*)¹⁹ has medicinal values. In 1995, two Indian nationals at the university of Mississippi Medical Center were granted US patent on turmeric in healing wounds. The CSIR however requested the US Patent and Trademark office to re-examine the patent. They argued that the use

¹⁷ [2005] WL 756558 (N.D. Cal.)

¹⁸ Indian Patents Act, 1970, Section 3(p)

¹⁹ US Patent No. 54015041

of turmeric has been in knowledge for years. Hence, it is traditional knowledge and the US Office revoked the patent.

Vinod Kumar Gupta, set up Traditional Knowledge Digital Library, devised a modern classification based on the structure of International Patent Classification (IPC) for India's traditional systems: Ayurveda, Unani, Siddha & Yoga. To prevent grant of wrong patents, TKDL provides for information on traditional knowledge existing in a country in collaboration with the Council of Scientific and Industrial Research (CSIR), Ministry of Science and Technology and Department of AYUSH, Ministry of Health and Family Welfare, and is being implemented at CSIR. An inter-disciplinary team of Traditional Medicine (Ayurveda, Unani, Siddha and Yoga) experts, patent examiners, IT experts, scientists and technical officers are involved in creation of TKDL for Indian Systems of Medicine. The project TKDL involves documentation of the traditional knowledge available in public domain in the form of existing literature related to Ayurveda, Unani, Siddha and Yoga, in digitized format in five international languages which are English, German, French, Japanese and Spanish. Traditional Knowledge Resource Classification (TKRC), an innovative structured classification system for the purpose of systematic arrangement, dissemination and retrieval has been evolved for about 25,000 subgroups against few subgroups that was available in earlier version of the International Patent Classification (IPC), related to medicinal plants, minerals, animal resources, effects and diseases, methods of preparations, mode of administration, etc. TKDL has signed access and non-disclosure agreements with the Indian and seven other global patent offices. This ensures near-foolproof security for our invaluable bioresources against piracy.

NEEM (*Azadirachia Indica*)²⁰ is a tree from India and has natural medicinal values. In 1994, EPO granted European patent to a US Corporation WR Grace and the USDA for a method for controlling fungi on plants by the aid of

²⁰ EPO Patent No. 436257

hydrophobic extracted neem oil. In 1995, a group of international NGO's and representatives of Indian farmers filed a legal opposition against the patent. They submitted that this property of neem has been known and is being used since centuries. The EPO in 1999 determined that this property of neem have been disclosed to public prior to the patent application, hence it does not involve any inventive step. The patent was revoked.

Council for scientific and industrial research (CSIR) Traditional Knowledge Digital Library (TKDL) is a pioneer initiative of India to prevent misappropriation of country's traditional medicinal knowledge at International Patent Offices on which healthcare needs of more than 70% population and livelihood of millions of people in India is dependent. Its genesis dates back to the Indian effort on revocation of patent on wound healing properties of turmeric at the USPTO. Besides, in 2005, the TKDL expert group estimated that about 2000 wrong patents concerning Indian systems of medicine were being granted every year at international level, mainly due to the fact that India's traditional medicinal knowledge which exists in local languages such as Sanskrit, Hindi, Arabic, Urdu, Tamil etc. is neither accessible nor comprehensible for patent examiners at the international patent offices. TKDL has identified 1,000 cases of biopiracy of India's TK in the last 3 years. In 105 cases, patent claims were withdrawn or cancelled by the patent offices. This is done at no cost to India and it takes very less time. All that is required is an e-mail to the relevant patent office.

At present, protection of traditional knowledge associated with the use of biological resources, is referred to in the Biological Diversity Act, 2002. State of Kerala has taken a step forward, by proposing the draft legislation to protect traditional knowledge in the state. A major issue for Kerala relates to the protection of Ayurveda. The principles of this medical science do not merely exist in books or minds, but are also contained in the practice by a large number of users, many of whom earn their livelihood, through its practice. But while the

science yields business to many, no legal property rights over such knowledge exist, which enhances the scope for its private misappropriation. The draft makes it obligatory for foreigners to seek the approval of the State Biodiversity Board for acquiring any biological resource present in the state or the "knowledge associated thereto". The draft also accords for certain specific cases to be included as exceptions. It also recommended a parallel sui generis system to be created ab novo for traditional knowledge falling out of the realm of the Biodiversity Act, in the absence of an analogous statute for other spheres of traditional knowledge. Prepared by a six-member committee headed by Dr. N.S. Gopalakrishnan, Director, Inter University Centre for IPR Studies, CUSAT, the draft Bill is understood to have proposed the constitution of people's trusts for protection of TK at the panchayat and district level, on the lines of the Biodiversity Management Committees. The Bill has been referred to the Law Department for verification. Kerala policy seeks to regulate "traditional knowledge" within the State of Kerala—by interalia providing for some form of "property rights" over this body of knowledge. Since such knowledge is by definition "old", it does not fit well within the traditional IP categories such as patents, copyrights etc, warranting the adoption of a new legal/policy instrument to protect it. The policy draws a distinction between "family owned" or community owned traditions (that more or less constitute "trade secrets", such as the Kottakal Arya Vaidya Sala "massages") and other kinds of traditional knowledge that are not specific to any community, but used within the length and breadth of Kerala given by Kerela State Biodiversity Board.

CONCLUSION

The protection of Traditional Knowledge not only raises a number of policy issues notably the objectives and modalities of such protection, and its impact and implications for its intended beneficiaries but extremely complex concerns of the rights of the local community and indigenous people. The issues relating to TK should be addressed in an holistic manner, including ethical, environmental and socio-economic concerns. There are, in addition, many still

unresolved technical issues such as the problem of collective ownership and the modes of enforcement of rights. The development of any regime for the protection of TK should be grounded on a model law defining TK but not restricting its usage and at the same time determining the rights of locals involved without anyone taking undue advantage. IPRs may be one of the tools to be used, but their limits and implications should be clearly understood. In particular, a balance should be obtained between the protection and the promotion of the use of such knowledge. It is unclear the extent to which the various proposals made for the protection of TK reflect the aims and cultural values of the traditional and indigenous communities they intend to serve. There is a risk of transferring to such community's concepts and paradigms which are not suited to their realities, or which may prove ineffective to solve the problems they are supposed to address. The consideration of TK protection should not overshadow the fact that the preservation and use of TK requires above all ensuring the survival and improvement of living conditions, in their environment and cultural of such communities. Given the lack of clarity about the objectives, nature, scope and implications of possible IPRs-based regimes for TK protection, it seems premature to promote the development of international standards in the framework of WTO and other regimes. A possible intermediate approach, until the outstanding issues are clarified, may be to develop global rules to prevent the misappropriation of TK and to undertake the other activities described for ODA.

Future action in this field may thus include:

- promoting the development, at the national level, of an holistic approach towards the protection of TK, including the resolution of underlying issues such as land rights and the need to respect and maintain the lifestyles of local and indigenous communities;
- considering the differing needs for the protection and promotion of TK in different areas, such as TM and plant genetic resources;
- implementing Farmers Rights at the national level;

- moving towards, in the short term, the establishment of a misappropriation regime;
- continuing work in WIPO, UNCTAD, WTO and in other fora in order to clarify the possible role, scope and content of systems of protection for TK;
- ensuring a broad and effective participation of representatives from local and indigenous communities in the definition and implementation of any system for the protection of TK.

