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## **IMPACT OF SCIENCE AND TECHNOLOGY ON LAW**

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### **Abstract :**

scholars in both anthropology and law have found the approaches and concepts in Science and Technology Studies (STS) useful to understand techno-scientific transformations of the world. Legal scholars recognized that new scientific discoveries and technology interfered in the processes of routinization of social practices, creating new norms and influencing law. In the legal approach to STS, however, the focus has been on the law of the state and/or law deriving from the production of global governance institutions. Meanwhile, the encounter between anthropology and law has always had to take into consideration normatively effective mechanisms of social ordering that were not conventionally identified as law. Thus, the adoption of an STS perspective in legal anthropology was more open to exploring the normative power invested in other domains, such as the built environment, technologies, and inventories of knowledge and convictions such as religion. While L and STS are viewed as mutually constitutive of modernity, anthropological studies of legal pluralism (LP) have focused in recent years on multiple normative orders generated by world-making initiatives, including the normative power of technology under the influence of neoliberalism. In this contribution, then, we bring together law, science and technology studies, and legal pluralism to explore how normative orders are affected by materiality, technology, and scientific knowledge. In discussing the intersection of these three knowledge regimes, we find particularly useful concepts coming out of Actor Network Theory such as co-production, translation, boundary objects, and infrastructure.

### **Introduction :**

Law plays an essential part in the regulation of science and technology and concerning the ethical consequences of scientific research along with modern technologies. This field of law, science, and technology attempts to study systematically the diverse ways in which law interacts with science and technology. It has been defined as “the discipline that deals with how our legal system can and must adjust to accommodate the problems created by the ever more urgent and ubiquitous impact of technology on society.”

With the growth of the internet, technology, genomics, telecommunications, etc. legal scholars and law schools emphasized on the intersection of the law with science and technology. The United States Supreme Court Justice, Stephen Breyer stated, “*scientific issues now permeate the law.*” There has been immense growth in the study of law, science, and technology interactions including the incorporation of the subject in the syllabus, courses, journals, conferences, etc. Apart from this, there has been a growing awareness of the importance of scientific and technological developments amongst legal scholars and practitioners.

### **Relationship between science, technology, and law :**

Law and science have a complicated relationship. Science is the systematic approach that builds and organizes knowledge in the form of testable explanations and predictions about the universe. Law, on the other hand, refers to the system of rules which have been laid down by the social institutions to regulate the actions of members and it may enforce such behaviour by the imposition of penalties. However, with the growth of scientific and technological advances, law, and science, the two disciplines became interdependent on each other. The legislature of various nations has laid down numerous laws to manage the impacts of science and technology on society. For example, in the era of the internet, the legislature has laid down laws and provisions which deal with cybercrimes. Law seeks to curb the impacts of science and technology which revolve around aspects such as risks, benefits, and ethical implications.

The judicial system also seeks to provide remedies to the aggrieved party that has been wronged due to the harmful implications of scientific and technological developments. Science on the flip side has aided the legal system with modern technologies such as polygraph tests, collection of evidence in a scientific manner, electronic recordings which can be used as evidence before the court, etc. Science also helps in the court proceedings with the admission of evidence, autopsy reports, etc. Therefore science and law are codependent on each other despite being two different disciplines in modern society with the advances in science and technology.

increasingly the law has to struggle in order to catch up with the changes brought about by new technologies, scoring only modest results when it comes to evaluate how the law handle effectively the problem that it meant to address. Since they pursue goals using the technologies available at the time when they have been conceived, legal rules are strongly intertwined with the technologies that have eased and made possible their initial conception. A change in technology may render obsolete both the rules conceived for the regulation of the old technology and the rules which were relying on the old technology in order to accomplish goals pursued by the law.

Because technologies are the product of the advancement of science, in order to deepen the understanding of the relationship between law and technology it is inevitable to establish a dialogue between law and other disciplines (biology, medicine, neuroscience, computer science, engineering, economics, statistics, philosophy, sociology, history). Consequences: it is important to build shared taxonomies, or at least to be aware of the peculiarities of the lexicons of the various sciences, others than that that one possesses; it is not possible to investigate the relationship between law and technology without trying to understand the logic and the ways in which the technology under examination works; it is essential to conceive instruments of knowledge representation designed to ease and quicken the understanding of the main features of one field of knowledge to laypersons and particularly to scholars and researchers who work in other scientific sectors; the education and training of a lawyer should encourage the acquisition of habits of mind which could advance the ability to master different knowledge and transversal disciplinary approaches, while the lawyer should refrain from assuming an implicit vantage point or aura of superiority when approaching or interacting with experts of other disciplines.

In the last decades, the different fields of knowledge have expanded tremendously in terms of quantity and quality: new disciplines have emerged while traditional disciplines have expanded enormously their knowledge base. The convergence of sciences has spurred the development of increasingly sophisticated technologies, for example, in medical diagnosis, the advent of machines such as the CAT scanners and ecographs was made possible by the joint work of physicians, physicists, computer scientists and engineers. Talking to each other is a *conditio sine qua non* among sciences. The law could serve as a “bridge” between different knowledge and disciplines. In many ways, lawyers are best equipped to promote a dialogue among different sciences and knowledge as a prerequisite to facilitate the production of new knowledge.

### **Effects of science and technology on law :**

Science and technology have substantive as well as the procedural effect on the law. On the substantive side, new scientific evidence and methodology can change the course of legal claims and their outcomes, i.e. forensic science has opened new avenues in criminal law while creating a myriad of legal, ethical, and social issues and on the procedural aspect of the law, it lays down how DNA samples should be collected and stored, how genetic information may be used, when are convicted criminals allowed to reopen their cases, etc.

In the early twenty-first century, digital evidence has improved the quality and availability of trial evidence while raising concerns about tampering and fabricating digital pieces of evidence. This

led to a massive change in the law.

Technology has changed the way we live our lives in pretty much every way imaginable. In the past, the common belief was that only manual work would be greatly affected by the rise of technology. However, service professions such as the legal profession have certainly seen a change as well. There are discussions what this will mean in the future and whether it will go beyond the current aiding role. If that is so, it could potentially change the current legal framework and question the role of lawyers themselves. There are also issues in relation to the protection of clients through data protection, confidentiality and accountability to look out for. This essay will focus on four main points. Firstly, it will discuss the overall impact of technology on the legal profession, while discussing the potential and feared threat of this. Secondly, exploring the lawyer's responsibility to offer quality and proper service while relating this to accountability of technology. Thirdly, it will discuss issues relating to confidentiality and the overall role of the lawyer to ensure confidentiality is kept a priority while balancing out the cost reducing and more efficient technologies. Lastly, it will discuss the educational position in relation to technology and the changes that need to happen to prepare future lawyers for their careers. The legal profession has been around for a long time, as it is one of the oldest information professions .

### **Science and tech. & relation with law :**

Clinical trials form an integral part of the drug discovery process worldwide. Clinical trials are the set of practices required to certify a new drug molecule as safe and efficacious for the market. Medical research, in general, is a good thing and absolutely necessary to cure number of chronic diseases. At present in India we have 40 million asthmatic patients, about 34 million diabetic patients, 8-10 million people with HIV, 8 million epileptic patients, 3 million cancer patients, more than 2 million cardiac-related deaths, 1.5 million people with Alzheimer's disease; 15% of the population is hypertensive, and 1% suffers from schizophrenia In order to give best treatment to above diseases research on humans is both necessary and desirable. A clinical trial is defined as "any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes." Interventions include not only drugs but also cells and other biological products, surgical procedures, radiological procedures, devices, behavioural treatments, process-of-care changes, preventive care, etc. A set of guidelines are already in place in India for the ethical conduct of studies to safeguard the interests of

patients or volunteers participating in the study. Research subjects' have long been controversial, even after decades of debate, experience, and Regulation. In this review, this paper aims at discuss the International and National Laws on Clinical Trials, ethics in clinical research, next it reviewed some current controversies on clinical trials and concludes with a discussion we need more standards and Legislations for future medical research on human subject.

### **Role of Technology in Legal Sector :<sup>1</sup>**

Technology has been playing a vital role in the legal industry. It has increased the efficiency of legal offices and productivity of clerical workers. With the advent of legal tech, there is greater transparency between legal firms and clients. Clients know how much fees they have to pay and can keep track of day-to-day progress of the lawyer on their case. Also, there is no doubt that technology, if used correctly, is fast and efficient – more than any human individual. This can prove to be of great assistance to any law firm.

#### **i. Automated processes**

Traditionally, all the in-house legal tasks are performed manually. While lawyers focus heavily on interacting with non-lawyers and other business professionals, they also have to invest some time in operating the associated tasks. Of which, **63%** are found to be fact-based and repeatable. Now, legal software like word processors and [eDiscovery software](#), in this case, takes over the tasks and perform automatically. This not solely enhances the pace of operations, but also gives attorneys enough time to focus on other productive tasks.

#### **ii. Ease of research**

Though legal professionals have become accustomed to the Internet and other such resources for their research method, they are still clung to the print products. They take a printout of everything including the revised laws and regulations and refer to them while working on each case. This adds to the time required for research work.

Legal research solutions, in this case, helps lawyers remain updated with each and every change in the regulations even when not at their desk. Besides, these platforms avail a vast range of tools and functionalities like 'search' that might not be available with print products.

#### **iii. Better resource management**

Earlier, junior attorneys were recruited to perform odd jobs like gathering, storing, managing, and

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<sup>1</sup> <https://supreme.justia.com/cases/federal/us/509/579/>

processing titles, or informing lawyers about their daily schedule. This not only makes them disinterested in the process, but also makes senior attorneys wonder how to use their potential in a better way. Something that legal tech solutions help with.

The legal title management and calendaring applications perform all the tasks associated with titles along with giving them quick insights of what all tasks they have to do on that particular day. This gives senior attorneys an opportunity to use the resources (here, junior attorneys) in a better and effective way. Consequently, resulting in better outcomes.

#### **iv. Decline in risk of errors**

Another importance of technology in law sector is that it cuts down the risk of errors that might be possible because of overlooking or misinterpretation of any fact and figure, ultimately bringing a drastic change in the judgment.

Here, the technological solutions eases the access to all the details. Also, it adds the facility to use the raw power of analytics in the processing, making it easier for legal practitioners to look at any fact/evidence from different angles and utilize it in a better and effective manner.

#### **v. Increased transparency**

Even today, many lawyers showcase the issues faced by clients in a complicated way to earn more profits. They do not disclose that the problem they are facing is as simple as using a DSLR. Besides, the law practices are also confined to offline sources. This makes clients doubt every lawyer they connect with.

However, this situation can be improved with the help of the finest legal practice management solutions and other such offers. These tech solutions can create a marketplace where clients can come across the profiles of the best legal professionals in the industry. They can chat with different attorneys and remain in touch in real-time, along with getting acquainted with the basic law requirements. This can further help them partner with the right professionals and enjoy higher perks, in addition to trustability and transparency in the process.

#### **vi. Higher convenience**

Legal-based mobile apps and software adds convenience to the processes in the law industry. On one side, these tech solutions help common users connect with the top law professionals even without stepping out of their home. While, on the other side, these software can provide lawyers an opportunity to maintain communication with other attorneys and clients, update them in real-time, perform research work efficiently, and more.

This, as a result, makes the complete legal ecosystem highly convenient for all.

**vii. Enhanced customer experience**

Gone are those days when offering the finest legal services was all required to gain limelight in the industry. Today, it has become equally important to keep your clients satisfied and happy.

In this case, [AI can enhance your customer experience strategy](#) by delivering customized services. It can gather heaps of consumer data in real-time and help you to know your clients better. It can also send personalized emails and other messages to keep them engaged all the time.

**viii. More collaboration among lawyers:**

One of the advantages of technology in law is that lawyers can now work together on important matters with productive tools like Slack, Google Docs, Microsoft Teams, etc. They no longer have to sit next to each other in order to draft a petition or discuss the important aspects of a case. Legal tech is enabling a culture of remote law firms. Lawyers and law firms can now serve more clients irrespective of geographical location.

**ix. Faster processing of information:**

The use of technology in legal profession, if used correctly, is fast and efficient.. This can prove to be of great assistance to any law firm. Using technology, a high level of analysis can be done in a matter of minutes. Complex calculations and error solving can be now done in a few seconds. This would previously take a large amount of time and was also quite a tedious clerical task that interested no one. However, as of now, legal technology can help in managing a high turnover of cases.

Now, while these are the benefits of legal technology, it is advisable for you to take a glimpse of the future prospect before taking a decision. So, taking the same thought forward, let's take a look at how the future of the legal technology market will appear.

**Division of the field into three primary standards :**

Despite the growing interests and awareness that states science and technology present a unique angle of law; different formulations exist for examining the law, science, and technology. There exist three primary standards of the division of the field.

1. The first concerns the role of the law in managing the impacts of science and technology which includes controlling the risks, promoting the benefits, and addressing ethical implications.
2. Secondly, the institutions of law and science examine how the law affects the practice of scientific research as well as the reciprocal relationship that determines how science and technology influence the law.

3. The third standard involves a more general inquiry into the problems and tensions which emerge from the intersection of law with science and technology.

### **The critical role played by law in managing the impacts of science and technology :<sup>2</sup>**

Law plays a crucial role in managing the impacts of science and technology on society. Law seeks to curb the impacts of science and technology which revolve around aspects such as risks, benefits, and ethical implications.

#### **1. Controlling risks of modern scientific technologies**

The law is the principal societal institution for controlling these risks through the legislature and the judiciary. Risk regulation involves two key aspects of scientific and legal interaction. Firstly, the part played by law in regulating risks from science and technology and secondly, the use of science by law to assess risk from new and existing technologies. The parliament of different nations tries to reduce risk before it imposes a greater threat to society. Most industrialized nations have comprehensive statutory or regulatory programmes which try to reduce potential risks from technologies such as industrial chemicals, pesticides, natural resource extraction, pharmaceutical, etc. These legislations predict potential harms and attempts to curb that.

Apart from major legislations law also tries to prevent risks through litigation and liability. Individuals who have been injured by technologies may bring tort or product liability lawsuits seeking compensation and science, on the other hand, plays the critical role of providing evidence of such cases.

In a leading case of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, it was stated by the court that federal courts are required to perform a gatekeeping function to affirm that scientific testimony is relevant and reliable before it can be admitted. This judgment has involved judges being proactive and knowledgeable in screening prospective scientific testimony and has also stimulated scientific organizations to seek and educate judges and also provide experts to aid in the proceedings which involve science and technology.

#### **2. Benefits of new technologies**

The law also plays an essential role in the development of innovation and promoting technologies through legal doctrines and mechanisms. The most important aspect relates to

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<sup>2</sup> <https://www.encyclopedia.com/science/encyclopedias-almanacs-transcripts-and-maps/science-technology-and-law>

intellectual property, by which the law gives the investors and creators a time-limited exclusive right to commercially exploit the output of the work of their workers. The main objective of protecting intellectual property is to promote innovation, by giving researchers, and authors economic incentives which will aid them to create new inventions and works. New technologies cause fundamental challenges to traditional doctrines.

For example, digital information might not be adequately protected by old traditional laws and it requires the copyright owner to bring a lawsuit alleging infringement. Because unlimited copies can be made by simply uploading material on the internet and thereafter, legislatures and courts have extended more copyright protection for digital data.

There also exist challenges in adapting patent law to genetic discoveries. Patenting genes have raised numerous scientific, legal, ethical, and practical complexities that established patent law is not equipped to address. Such as the traditional distinction between non-patentable products and patentable inventions and discoveries has been dimmed by technology.

### **3. Ethical implications of technology**

The law also seeks to resolve the ethical implications of technology on the society which arise due to modern inventions. Society heavily relies on legislatures and courts to develop and apply appropriate legal principles. The law attempts to resolve moral issues in a socially acceptable manner. In various cases, courts have considered their authority while giving a decision in ethical aspects of controversial technological developments. Even when courts exclude ethical considerations they often remain the primary reason for litigation which is fought before the court in socio-legal grounds.

### **4. Legal v. scientific standards**

A heated debate topic in the field of law, science, and technology states whether the law should apply scientific standards and methods of proof, or apply its standards to scientific evidence. An example is the concept of statistical significance, where the standard scientific convention is that a result will be considered statistically significant if the probability of the result being observed by chance alone is less than five percent. Legal experts argue that law should apply a more lenient standard in cases of civil litigation where the standard of proof is predominant of the evidence.

However, it is essential for the court to understand scientific methodologies while deciding on cases that involve science and technology. In the case, *Daubert v. Merrell Dow*

Pharmaceuticals, Inc., the United States Supreme Court held that courts must guarantee that scientific testimony must have grounding methods of science and procedures which have derived from scientific methods.

### **5. New technologies v. old laws**

Another issue on this aspect is whether new technologies require new legal frameworks or whether they can work within the ambit of old laws. This could be answered by the incorporation of eminent legislation in the legal framework of the society which addresses issues on the internet such as privacy, copyright, etc. These issues also arise in other technological contexts. Existing laws have generally been applied in the United States, while new enactments have been promulgated in Europe and other jurisdictions.

One of the examples; is patent law, where to date existing rules have been applied even in the case of new technologies in genes and other biomedical discoveries.

Some of the legal luminaries have argued that new laws, in particular new approaches that move away from the one-size-fits-all approach of current law, are needed to provide optimal patent protection for certain new and emerging technologies.

### **Conclusion :**

Law and science are codependent on each other despite being different disciplines. Law interacts with science and technology on different levels and diverse ways. These interactions proliferate in the future with advancing technologies that present risks, benefits, and ethical implications on society. The field of law, science, and technology attempt to bridge the gap between these two fields of study and also tries to tackle the challenges faced by law, science, and technology. It also seeks to provide a systematic treatment of the actions and problems that would eventually help these subjects evolve in parallel and at pace with subject matter.

Science and technology have had a profound impact on the field of law in several ways. These impacts include changes in legal practice, the evolution of legal norms and regulations, and the challenges and opportunities presented by emerging technologies. The digital age has transformed the way evidence is collected and presented in legal proceedings. E-discovery tools are now used to sift through vast amounts of digital data, such as emails and documents, to find relevant evidence. Courts and legal professionals have had to adapt to the challenges and complexities of handling digital evidence. Legal technology startups (LegalTech) are introducing innovative tools and platforms to assist lawyers in their work, improving efficiency and reducing

costs. These include case management software, contract analysis tools, and online legal services. science and technology have significantly impacted the field of law by necessitating new regulations, changing legal practice, and introducing novel challenges and opportunities. Legal professionals, policymakers, and society as a whole must continually adapt to these changes to ensure that the legal system remains relevant and effective in the modern world.

**Reference :**

1. Jasanoff, S. (1997). *Science at the bar: Law, science, and technology in America* (Vol. 9). Harvard University Press.
2. Lachs, M. (1992). Thoughts on Science, Technology and World Law. *American Journal of International Law*, 86(4), 673-699.
3. Gibbons, J. H. (2017). Science, technology and law in the third century of the constitution. In *Science and Technology Advice* (pp. 415-419). Routledge.
4. Goldberg, S. (1986). Reluctant Embrace: Law and Science in America, *The. Geo. LJ*, 75, 1341.
5. <https://supreme.justia.com/cases/federal/us/509/579/>

