

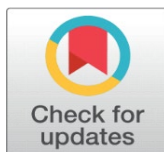
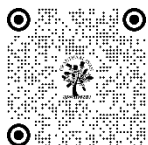
THE INTERSECTION OF TECHNOLOGY AND JUSTICE: MODERN INVESTIGATIVE TECHNIQUES

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ABSTRACT

“The keystone to Justice is the belief that the legal system treats all fairly”

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1. INTRODUCTION

Let's start with understanding the meaning of the above quotation which is, that to provide justice properly to the needy person few things should always be kept in mind the legal system (lawyers, justice, law officers) should always check the possible ways to provide justice to the needy person, no one should be kept away from the justice. For that, many lawyers should provide free legal aid to needy people who cannot afford the court and lawyer's fees. Now let us understand the basic meaning of the terms of the topic one by one. Let's start with the term investigation, it is a type of examination done to find some facts about the situation which may help further to provide justice because a single fact related to the case and even change the whole decision of the case can be done by some officially or unofficially by one who has the permission for it. Now, Justice means fair behavior with other people means they should be treated equally and no discrimination should be done on any basis, people around the world when they are struck in a case situation demand justice for them when they are innocent then the legal system must provide justice properly to the needy person.

Earlier there were different methods to investigate the case which we will discuss later but after the technological advancement, there was a drastic change in the methods or strategies used by the officers to investigate the case, with

the change in technology the methods to collect pieces of evidence, finding out DNA prints has become a lot easier for the officer doing the investigation.

2. HISTORY

When there was no technology in the field of the investigation then there were different ways to find out the accused and do the investigation. The following points mentioned tell about the methods used by the police to investigate the case-

- The investigation officers depend upon the eyewitness of the case to proceed further in the investigation but the memory of the person cannot be trusted due to the tendency of human beings to make mistakes in remembering the facts properly.
- The officers usually try to collect physical evidence like samples of blood, fingerprint but the methods for checking such pieces of evidence were limited and the results from such methods were also not proper or conclusive.
- The officers use photographs of the crime scenes to find out the suspect from the known criminal profiles.
- The officer tries to find out the truth by interrogating the suspect to extract the confession but in the absence of a legal advisor then the false confessions could be framed.

3. LIMITATION

- The process of investigating the case could take weeks or even months due to collection of evidence manually which could delay the process of providing justice.
- There were limited resources to solve the case and there was a heavy backlog of cases and unsolved crimes in forensic labs.
- Without the proper techniques and advanced technology like DNA analysis the proper identification of the suspects cannot be done properly and can lead to improper results or wrongful convictions.
- The sharing of information between different jurisdictions was very slow which could delay the process of investigation.

3.1. MODERN TECHNIQUES

The advanced investigative techniques have transformed the ways of investigation and law enforcement totally due to these advancements the speed and accuracy of investigation have been improved and the backlogs of cases pending have also been cleared. A few of the advancements in this field are mentioned below-

1) Forensic Science:

This is the branch of science that deals with the identification of evidence related to crime scenes. A few of its advancements are-

- DNA analysis has become the unique method to determine whether the person was involved in the crime or is the suspect at the crime scene.
- Digital Forensics has also evolved and has become an essential part of this. The investigation officer analyzes the computer and smartphone data to check the criminal activities.
- The technology was developed to identify firearms and other tool marks, and it also shares ballistic evidence across the jurisdiction to solve cases related to guns easily. This system is known as the Integrated Ballistic Identification System.

2) Predictive Policing:

This is the method used by the officers to use data analytics and other methods to forecast whether the crime is likely to occur, this is done just by analyzing previous criminal data and other factors. With the help of this method, the crime rate can be reduced because it can be detected before it happens.

3) Surveillance Technologies:

Now surveillance technology has been introduced in our country with the help of which the cameras are installed in the areas properly. This helps in tracking the human being by facial recognition through the cameras which help in identifying the suspects missing from the crime location. In this, the License plate recognition technique is also used to automatically read and store the vehicle record to easily track the vehicle that has been stolen or is involved in criminal activities. Surveillance is also done on the internet to monitor the communication of the suspected individual without their knowledge.

4) Advanced Techniques of Evidence Collection:

There is also some advancement in the collection of evidence which has increased the speed of investigation of the case. Now the officers have started using a fluorescent powder which allows for better visualization of fingerprints which makes it easier to collect and analyze the evidence. Also, some sensors known as Nano sensors have been made that can detect illegal drugs, explosives, and biological agents which can be used to conduct the crime this is a powerful tool for evidence collection.

5) Artificial Intelligence:

The use of AI has increased rapidly all over the country and it has made a drastic change in the field of investigation. It has reduced the process and work of the investigation officer because AI helps to recognize the details in the photograph or video more easily than a human being can find. This has boosted the time of investigation of the case. AI helps in analyzing criminal behavior patterns to reduce crime by studying the pattern and suspecting it.

6) Information Sharing:

The modern ways of sharing information between different organizations help the investigation to occur properly and the officer can search the data of different organizations also to find the details related to the suspect of the crime or find the pattern related to the crime.

7) Social Media and Open Source Intelligence:

The investigators also use social media platforms for the collection of evidence related to the case because a single piece of evidence can flip the case easily. It is also done to collect information about the suspect of the case and the criminal activities. Social media can provide proper information about the individual's behavior, his friends, and motives which can help the AI to study the case.

3.2. HOW DO THESE METHODS FACILITATE THE DELIVERY OF JUSTICE?

These new methods have increased the speed of providing justice to the people and also have cleared many backlog cases of the court. Majorly this has reduced the time taken to do the investigation and has enhanced the accuracy and efficiency of providing justice to the people.

Below are the few points based on which this process has increased-

1) Increased Efficiency

This new modified technology has reduced the time required to complete the legal process in the cases. There is the system of E-Court which is the type of virtual court that has cut down on the delays associated with scheduling court appearances, this court has helped a lot during the Covid-19 period with the help of all the operations of the court that has continued for that period. With the use of an Automatic Case Management system a lot of human errors, the burden on the staff of the court has been reduced which has increased the efficiency of the court process.

2) Access to Justice has been Enhanced

This system has enhanced access to justice for everyone in the country, there is a system of Online Dispute Resolution this platform allows the parties to solve their case without actually attending the court physically which could save the time of the court and parties too. In this, the parties can submit all the required documents on the online portal by which a person from a remote location can get access to the legal system.

3) Accountability and Transparency has been improved

This thing has made it easier for the person to track their case through real-time case tracking by which the party can see at which point their case is and what document or what thing they have to do next. The data submitted online is also protected properly just to reduce the risk of fraud. The investigators and court staff with the help of this system can crosscheck if any previous case is also mentioned related to the current problem so this can save the time of the court

from not re-attempting the proceeding of the same case matter and giving the same decision as that was given in the previous one.

- 4) AI has also made it easier for lawyers to do the research work and the legal analysis related to the case, with the help of AI they can have access to the related precedents and legal knowledge.
- 5) The capability of forensics has been increased as with the help of new technologies it has become a lot easier to recover any digital evidence from electronic devices, the evidence which is provided by these technologies is more accurate and can also help to solve the case more easily. The fingerprints from the material can be scanned very easily and also can be checked from the previous criminal data that see it matches with any of the person in their database.
- 6) This improved technology has also helped the judges and lawyers to improve their skills to perform their skills more effectively, with the help of AI they can make a virtual Courtroom with the help of which the lawyers or judges can practice their skills and can also improve them which will be beneficial for them also. With the help of these tools, the lawyer can save a lot of time just by reviewing the legal documents and case laws to prepare a proper draft to win the case.
- 7) This new technology has also helped to reduce the backlogs of cases in many of the departments just by properly managing the cases and allotting the court from time to time with a reminder to attend the upcoming hearing. This has helped to clear a lot of backlogs in the courtroom to provide justice to all of them.

4. CONCLUSION

The overall conclusion is that the intersection of technology and justice has mainly changed the working ideas and techniques of the legal system, it has enhanced the efficiency and accountability of the providing of justice to the people. It has mainly changed the working pattern of the legal system and reduced a lot of time for the investigation due to which a lot of backlogs have been cleared of the court and many people around the world have gotten justice. This has become a revolution in the field of the law and encouraged the people to apply for cases or raise their voices for justice, this has been done just because of these new technologies that have changed this system. Features like- fingerprint recognition, DNA analysis, and advanced digital Forensics have mainly helped a lot of the officers to solve cases while investigating them properly. The AI has helped to train a lot of officers, judges, and advocates to practice their skills by creating a virtual area or situation in which they can enhance their skills and develop them so that when they face a real situation like that they can work very efficiently and calmly and then they will be able to give a better result in that situation. Collaboration and information sharing have helped a lot of cases because the main time was taken while passing on the details of a person from one state to another. These new technologies have enhanced the justice system and in the upcoming days there will be more technological advancements in the world that will make it easier for people to get justice in their case AI will become more advanced and soon robots will take over the place of officers in the world and they will work very effectively and in an enhanced way and it is clear all the backlog cases and in all the cases the proper justice will be provided to them and no backlogs of the cases will be left then, all the people will again have more faith in legal system of our country, everyone will again live fear free because there will be police out for their protection. The intersection of technology with justice has totally changed and will change the way of providing justice and it will ensure that proper justice will be provided.