

Legal & Ethical Aspects of IT

Ashna Mehta¹ and Rishabh Jaiswal²

^{1,2}University of Petroleum & Energy Studies

E-mail: ¹ashnamehta.upes@gmail.com, ²rishabhjaiswal57@gmail.com

Abstract—Information technology has touched each and every aspect of life today. There has been a wide spread use of information technology ranging from individuals, to organizations, school, colleges, government, etc., everybody is utilizing its advantages. There has been a tremendous growth in the cyber space and the manufacturing of hardware and software. Everybody is there on cyber space and misusing the anonymity it offers. People have completely over looked the ethical and legal consequences it possesses.

The use has been continuing as a matter of right without realizing the adverse effects it leaves on the people being impacted. Some of the consequences have led to depression, suicide attempts, huge economic losses of individuals and organizations, a great threat that it poses to national security, people's privacy being affected, etc. There is no proper code of conduct for using cyber space and information technology. The government has laid down a few legal consequences of it which are either ignored or unknown by many.

The paper aims at providing a clear picture about law and ethics, the difference between the legal as well as ethical issues involved with Information Technology, and the challenges it possess. The first section starts by providing a brief about information technology and how it has been touching all the aspects of our lives. The second section deals with the concept and difference between law and ethics which are generally misunderstood by many. Subsequently the paper discusses their importance in information technology. By giving a detailed analysis of legal and ethical aspects of IT, the paper ends with the challenges faced by information technology.

1. INTRODUCTION

The increase in the demand on fast computing, availability of huge storage capacities and reduced cost has resulted into more dependency on the information technology today. Organizations have deployed more techniques for storages and processing for sustaining in fast business competitions. Individual data has also increased and storage has become prominent due to cheaply available storage capabilities. Connectivity has also brought people and information together. But since every dawn brings with it boons and banes, so does the information technology. With so much of increase in information, processing devices, internet, etc., it has become easy to intrude into these and violate ethical and legal behavior expected in the society. Since data has a lot of value to people, organizations, and nations today, it has become tempting targets for theft. Also, some have sold information for considerations to compete with the advanced world. Data extortion, ransom for data theft has become an ever growing

challenge for everybody. Social and legal patterns have still not been set for the expected behavior and practices in the Information Age. In the absence of any defined sphere of how to use information technology, violations are taking place rigorously. It therefore becomes important to understand ethical & legal aspects of IT and the cause behind such behavior.

2. ETHICS AND LAW

Ethics and law go hand in hand for any legal system to function in harmony with the desires of its citizens, yet there exists a difference between the two of them. Ethics are those set patterns of conduct and behavior expected out of an individual in a society where as law is that rule made by the legislative, executive and the judiciary governing actions and omissions of each and every individual. Ethics are born out of the state of mind of any individual whereas on the other hand law is a deliberation of the above stated independent bodies. Ethics is an expectation of society with the other humans for a code of conduct whereas law is an obligation on the individuals. Ethics allows a person to distinct between black and white whereas laws define what is black and what is white. Ethics, being majorly a product of a subconscious mind, plays a vital role in framing the laws[2]. Ethics are those guiding principles which can comment whether a law is a good law or not. In case of absence of a law, ethics becomes the closure. Law also talks about sanctions for violation but ethics take no consideration of the same. Ethics are bases for a law. A law should have minimum content of ethics so that it is acceptable to the society. Law imposes an obligation on the people; it is a mandate whereas ethics is by choice of an individual to follow[2]. Law may change from the needs and growth of the society and can be a very rapid in change but ethics takes time to evolve or change.

3. IMPORTANCE OF ETHICS AND LAW IN INFORMATION TECHNOLOGY

Information technology has been growing rapidly. IT has touched various aspects of life for every individual. Since due to IT and its related technologies and invention, there has been rise of a new world, the Cyber World. Since every nation needs ethics and laws to regulate the relations and conducts of

citizens and itself, even cyber world needs a set of rules and regulations for the people being active on it or utilizing it. There exists a moral responsibility of every citizen to use IT in a way as expected by the society she/he lives in. Also, since ethics has no obligation on anybody to follow, and consequences of any act using IT is harshly impacting, there comes a need to have certain basic fixed obligations on the users to be imposed by the way of laws. On one hand, law imposes bare minimum obligatory duty and rights on the user, ethics shape the conduct by adhering to knowledge of wrong and right[2,8]. Since ethics answers to questions regarding how, by whom, how much, when to use, law gives basic pattern of usage and omission. Where there exist no laws, ethics help in not only formulating but also negotiating on such usage. Since technological growth is unstoppable and takes place within days, laws regarding those technologies take time in its drafting as well as in the approval stage. The time duration taken up for coming into force of such legislation, if in that courts face a case relating to the said technology, ethics play a vital role in deciding the fate of that particular case. Hence, both law and ethics are two important aspects of information technology.

4. ETHICAL ISSUES IN IT

Every human being has been granted right to life and a few basic human rights as promised under Universal declaration of Human Rights (UDHR). It is the duty of each and every individual of respects these rights of other and not to do anything which is in violation of these rights. Right to life also promises right to privacy. Everybody has a right to maintain secrecy about himself, his family. There is a minimum expectation that each one would respect and not encroach on someone's privacy. The invent of IT has been a great threat to privacy of the people. Due to storage capacity it possesses, and the legal requirements by government, personal information of the people are stored and there are also chances of data breach here that data can be exposed to so many other people. Not only this, in case where there is no data breach, the data is still available to the employees of organization storing it. There may be some personal ailment one person may be under going and that is stored in the database of the hospital. This ailment, which is personal to the person and wants to maintain secrecy about the same is now known to his doctor, the assistance and anybody who next time gives him an appointment. The ailment nowhere remains personal. There have been government regulations on electronic surveillance. A person may expect privacy in what he is doing and what he is looking for. There has been surveillance which possesses threat to privacy and may be unethical at times. Phone tapping, surveillance of chats, is also a great threat to privacy. Also, another ethical issue is that of right to free speech and expression. Anything said or expressed on the internet is made available to so many people. The connectivity and speed of internet has been fascinating people for long but this also involves some ethical considerations to be made. People face

cyber harassment, cyber bullying, defamation are a few to name from the unethical practices that people face online. Ethical issues also revolve around the liability, interests and rights of the people in the cyber space and with information Technology on a whole. Some of the other unethical practices are hacking, plagiarism, digital divide, etc.

Even though constitution, legislations, human rights talk about equality, information security has resulted into a divide between the people who are capable of having an access to information technology and related resources and people who cannot afford the same[1,3]. There is very less realization of emotional, social and economic loss information technology can impose on the victim. People without realizing the hard work put in by an author; copy their work in the digital medium, violating their moral right and right to get award for their labor and hard work. While some people also make a copy of computer software's in which the developer has put great amount of intellect, skills and labor. This again violates its economic rights. There have been several other unethical practices taking place in the information technology such as hacking, sending viruses and worms to the computer systems and destroying the entire data of those system which may have other than just economic value to the owner, some moral, reputational and sentimental values too[5]. A person prefers storing data in the digital medium today due to the ease of availability of affordable storage, security, and reliability. By attacking systems and destroying data, it becomes difficult for people to believe in the technology and rely on it. People hesitate using it for the above stated reason resulting in discomfort to them as well as hampering the economic growth it has led to in the country[4,10]. This will further effect more advancement in the technology since not much demand would be expected and people would feel rewarded. Henceforth, resulting decrease in the creativity and investment. The invent of artificial intelligent machines might result in failure of justice to those whom being affected by them. Inventors are likely to take up technology and such intelligent machines to harm others and cover themselves up resulting in failure of justice.

5. LEGAL ISSUES IN IT

There has been a hustle going on in the field of law in order to regulate technology. The pace at which technology grows is expeditious which overshadows the growth in the legal domain. The advent of new technologies gives rise to new legal perspective. Some of the legal aspects of information technology are the intellectual property rights involved in it. Most of the legal challenges brought up before the courts today revolves around design patents of mobiles, tabs, and other gadgets, copy right issues in database, online content, content produced by artificially intelligent machine, etc[2]. There has been an underlying debate over software whether to be subject matter of patents or copyright. Other legal aspects reflect the legislative work required in data protection, online

surveillance, communication law, the design law and law for the protection of children and women from the evils of information technology. Security is one of the major concerns today in IT. Security can be that of individuals, their information, system, network and any other hardware or software installed[6]. Data protection laws have been brought into force across the globe while some countries, like India are also introducing national cyber security policy. Using information technology demands great caution and due diligence from the organizations to avoid liability. Any company storing any kind of personal data of their clients or any relevant information, are bound by regulatory measures to provide security to that collected information. Any negligence, disclosure or loss of such data can impose heavy civil liability or any criminal liability as provided by the statute[2].

Some legislative measures are focused on individual practices also. Hate speech or defamation online, cyber stalking, cyber harassment is also on the list of crimes that are punishable using information technology. Future of banking is now vested in e-transactions and m-transactions. Legal challenges of e-banking are also raising concerns in the government. More and more reliability on IT in every industry today require legal issues of those industries to be traced and addressed. For communication and e-contracts, digital signature laws also play a vital role. There are has been frauds reported on issue of fake digital certificates. Other than the discussed aspects and challenges, call drop and interception of phone is also bringing light on the upcoming facet of law in the telecom industry. Piracy law needs to be addressed seriously by most of the countries today. Some of the countries have taken initiatives to have dedicated legislation for software piracy[9]. Jurisdictional issues in the information technology has led to many cases being dismissed or have delayed justice. The courts become inapproachable due to absence of any clarity as to under which jurisdiction it should be approached. Unauthorized access to systems and network are resulting into more litigations brought up in the courtroom. The same has been addressed by imposing both civil and criminal liability but who possess such liability is also one of the challenges in the IT. A more emphasis is required on compliance of the framework and regulatory duties. Non – compliance is also a great challenge in the IT.

6. CHALLENGES

The purpose of information technology is to accommodate information securely and promote its access worldwide. Due to ethical and legal aspects of it, the purpose may be defeated. There are chances of people being resistant in utilizing the technology or may not show interest in investing. Till the time people would not feel rewarded, there would be no encouragement to produce more. This might, as said earlier in the paper, result in economic degradation across the globe. This can be a result out of too much of regulation of the technology too where people, rather than getting into complexities and maintain high standards would try avoiding

the use of the same[9]. The digital divide can take the face of social divides we have in the physical world today and might affect the society at large. Another major challenges is that of the difference of pace at which the technology is advancing and at which the regulations are being enforced[7]. By the time a legislative framework is enforced, the technology becomes obsolete. There is a lack of technical knowledge in the legislative body which possesses further a challenge in balancing the law and technology. There exist age old concepts and definitions of the physical world which have been reformulated for the information technology without realizing the difference between the techniques, methodology or consequences of the actions. Information technology has touched every industry today and has been replacing humans. There have been robots and experts systems coming up which might result in decline of job opportunities further[8].

7. CAUSES FOR UNETHICAL & ILLEGAL PRACTICES

For any act, there exists a reason of an underlying cause to it. For unethical or illegal behavior or practices, there exists a list of three broad categories, namely, the intentional motive, ignorance or negligence, and accident. An act can be due to accident, due to absence of care or due to intention of committing it, and the same applies in case of information technology[8]. An elaborative discussion on these three factors explains the cause of action clearly.

7.1. Intention

The intention to obtain wrongful gain or to cause wrongful loss to organization or any other victim can be the first reason why such practices take place. The intention might be to obtain money or to cause loss to the organization can accelerate the cause. Sometimes, the intention can be to cause distress or bully somebody or to affect the reputation.

7.2. Ignorance or Negligence

Since legal systems do not permit negligence or ignorance of legislation but there exists no general rule making frameworks and recommendations a mandate to follow. General practices involve either ignoring certain rules or policies or at times not taking it seriously and being negligent which results in unethical and illegal practices.

7.3. Accident

Accidents are act committed without any knowledge or intention of causing any loss or harm. Some acts may be beyond control or could not have been foreseen. Vis Major can also be an underlying cause resulting into an act which is unacceptable to the society or devoid of expected behavior.

When the causes are known and well understood by the society, organizations, government and stakeholders, it becomes easy to understand their consequence and to implement better preventive and recovery measures. It becomes important for everyone to understand the cause of action and then proceed with further steps to be taken.

Understanding the cause is the first big step followed by prevention.

8. CONCLUSION

With emerging trends in the technology, a legal revolution is about to start too soon to meet the demands of the society. Information technology has been touching each and every industry today. Code of conduct is the need of the hour for smooth working of industries. Right to life is a human right and right privacy can be drawn from the same. It is responsibility of each and every one not to infringe the rights of the other[6]. Making profits at the cost of security and privacy of others is unethical and unacceptable to society. Organizations cannot do away with their liability for their negligent act. For security in the nation, government needs to make more regulations addressing the grey areas of IT. An international cooperation treaty can promote welfare, peace and harmony at the global level.

9. RECOMMENDATIONS

Since it is extremely difficult to eradicate evils in using information technology, but prevention can still prove to be a better decision than cure. The following section contains a list of recommendations for individuals, organizations and nations to avoid being victimized or liable for the act of other:

- Organizations should conduct regular internal audits to detect anomalies in the usage pattern. This can help in recognizing breach of regulations or any unethical or illegal practices taking place in the organization and help in saving the organization's data, reputation and any further loss to the organization.
- Awareness about the consequences of breach of Information Technology security is important. Training should be given to staff regarding data privacy and precautions.
- Organizations should strengthen regulatory measures. Internal policies should be made effective regarding liabilities of the staff for any unethical or illegal act using data or information technology. When certain internal policy lays down liabilities for violation on the wrong doer, this might result in precautionary actions with due diligence by the employees.
- A code of ethical conduct in schools and corporate should be formulated. Any violation from the same should have a deterring punishment such as suspension, salary cut, probation, etc.
- Governments to make laws addressing the issues and ensure compliance. In the absence of strict laws, non-compliance of law can be seen which results into casual approach of the companies towards protection and preservation of data and Information Technology.

- Liabilities for non-compliance with the legal provisions should be made more stringent.
- Education about Digital Security should be spread early in the Schools. Today, even children are audiences of information technology. They are not aware about their rights, and duties, neither are aware about consequences of their act using IT. It therefore becomes really important to educate children from the early stage when they start coming in contact with the technology rather than waiting them to either take up IT as higher studies or getting training in their offices later in future.
- Parents should educate children about protection and privacy, especially about use and abuse of personal information, how to recognize, avoid and handle situations where the privacy will be compromised.
- International Digital Security Cooperation Treaty should be formulated. Information technology has a global concern and connects nations. There is no particular country controlling it or having jurisdiction restricted to a particular geographical area. To protect peace and avoid digital war, nations need to come at par with each other and cooperate with each other.
- Enforcement of acceptable use policies which would address to the risk associated with computer communication, rule for ethical and legal computer-network usage.
- Netiquettes Training sessions should be conducted to model ethical online behavior in students.
- Cyber-ethics should be promoted in students through online research.
- People should have knowledge about the laws and policies associated with the data confidentiality and exercise with caution when dealing with confidential data.
- Educate students and spread awareness among people on the importance of giving credits for the materials used and how to correctly cite the sources.
- People should help in making the network better; they can contribute by providing helpful information on network.

REFERENCES

- [1] Lynch, M., "Ethical Issues in Electronic Information Systems", *The Geographer's Craft Project*, 1994.
- [2] Longo, M., Purdy, R., "Ethical and Legal Issues", *Beaming*, July 2011.
- [3] Brey, P., "Ethical Aspects of Information Security and Privacy", in *Security, Privacy, and Trust in Modern Data Management*, Springer Berlin Heidelberg, 2007, pp. 21-36.
- [4] Ramey, K., "5 Ethical Challenges of Information Technology", July 2012.

-
- [5] Williams, R., "Ethical Dilemma in the Use of Information Technology", 2010.
 - [6] Sapping, T., "Technology in education: Legal, Social and Ethical Issues", Aug 2013.
 - [7] Wadhwa V., "Laws and Ethics Can't Keep Pace with Technology", April 2014.
 - [8] Connor, M. C., "Current Issues in Technology and the Law", May 2015.
 - [9] Peterson, J., "Legal Issues in Technology", in *VP Academic Affairs*, May 2014.
 - [10] "Ethical Issues in Information Technology", *Software Development*, 2010.