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## FROM THE EDITORIAL BOARD

In the words of Rabindranath Tagore, "*Civilization is waiting for a great consummation, for an expression of its soul in beauty. This must be your contribution to the world.*"

The much coveted 'thought process' and the much desired 'civilization', both owe their existence to a free mind that lends itself to these. The ability to comprehend, assimilate and express oneself in one's utmost capacity and in consonance with public order has been a long cherished goal of human society.

The CNLU Law Journal, post its inception and the overwhelming success of the first volume, revisits you with its second volume, with a heightened consciousness of surpassing the benchmark that it has created for itself. The Journal, a literary endeavour of Chanakya National Law University, presents to you, a holistic collage of ideas, thoughts and visions with a noted tinge of criticism and ingenuity from amongst the minds of scholars, academicians and students of legal fraternity.

### ARTICLES

The march on the path of technological advancement is a perpetual process. In this era of digital revolution, it is pertinent to explore the areas where the technical expertise gained by mankind can be best employed so as to solve those problems, which could not be solved otherwise, with such ease. One such area is the legal system of a country. It is a commonly observed phenomenon that due to structural as well as procedural complications and deficiencies, the traditional justice-delivery system is unable to address the plight of the litigants and also causes hardship to the lawyers and judges alike. In such a situation, technology may come to the aid of litigants, lawyers and judges. This idea is the theme of the article titled 'Digital Revolution and Artificial Intelligence- Challenges to Legal Education and Legal Research' by Prof. Dr. A. Lakshminath and Dr. Mukund Sarda. The authors envisage a situation where the ends of a judgement can be prophesied with considerable certainty with the use of intelligent computer programming. They further present a model for the same that utilises a thorough analysis mechanism based on statutory as well as real world information.

In their article titled 'Neighbouring Rights in the International Sphere- An Analysis', Prof. Dr. S. Sivakumar and Dr. Lisa P. Lukose have discussed the concept and facets of 'neighbouring rights' in great detail. The progress of technology led to the development of newer forms of exploitation of performances. As a consequence, the idea of giving formal recognition to performers' rights (also called 'neighbouring rights') began to gain ground and was gradually incorporated into the corpus of international law. The article contains a separate section on the international legal framework dealing with the said concept wherein the authors have presented an analysis of several legal instruments pertaining to the same. The authors lament the fact that despite substantial advancement in terms of technology, the relevant provisions

have not been revised and strongly recommend that the existing legal provisions be revised and updated in such a manner that they are as independent of technology as possible.

Alternative dispute resolution is by no means a recent phenomenon in India. The author, Vandana. V., in her article, 'The Predicament of Transitional Justice—Institutional Perspectives and the Shift towards "Informalisation" of Dispute Resolution in India' has analysed the prospects of the *Gram Nyayalaya* while discussing the viewpoint of the *Nyaya Panchayat* and the *Lok Adalat*. The article has also confabulated about the Gram Nyayalayas Act, 2008 which was enacted to provide justice at the doorsteps to the citizens. The inadequacies of *Gram Nyayalayas* are also dealt with in the paper. It concludes with suggestions for improvement of the informal dispute resolution process in the country.

With the advancement of science and technology come new challenges, challenges of regulating the use of such technologies, their effects on both the environment and human life. Dr. P. Sree Sudha discusses an emerging phenomenon called nanotechnology in her article titled, 'Regulation of Nano Technology- Need of the Hour'. It is in the last two decades that nano sciences and nanotechnologies have emerged, showing immense potential for a new "green order" and Research and Development in Health and Medicine. However, a limited understanding of its probable risks and the lack of a regulatory framework is seen as an impediment in the application of this technology. The author examines the response of various international organisations, nation-states, in particular, India in this regard. She opines that any regulatory framework has to be dynamic and well equipped to address the probable risks.

The 'rule of law' has long been a muse for scholars and jurists across the legal world. Despite its elusive nature, it has often been given paramount importance in comparison to the available written principles. In this article, 'Rule of Law *vis-à-vis* the Supreme Court of India,' the author, Mr. Shailendra Kishore Singh illustrates the same practice in Indian judiciary. He not only examines the prevalence of the rule of law over the written Constitutional text of the country but also vehemently criticises the said approach. To prove this, he substantiates his arguments on the basis of the *thick* and *thin* theories of the concept. The author expresses concern over this trend and finds it threatening to the sanctity of the written text of the Constitution.

Manipulation and misuse of data in cyberspace have become widespread crises in our country and the world over. In his article titled 'Regulation of Data in the Cyberspace- Drawing Roadmap for India', Mr. Faisal Fasih examines this major issue in detail. The author emphasizes the paucity of specific laws in our country to check this offence and simultaneously enumerates various general laws that provide relief to the data subject. The article also describes the different guidelines laid down by international and regional organizations and models of data protection to be



implemented in order to ensure proper governance of cyberspace and protection of rights of the data subject.

The most documented and clichéd drawback of our legal system remains its inability to render timely justice. In the article of 'Speedy Trial and Criminal Justice System in India- A Juristic Study,' the author, Dr. Krishna Kant Dwivedi, presents an important drawback and analyses various legal provisions and safeguard measures that have been enacted. While drawing influence from the legal system of the United States of America, the author has successfully drawn parallels with it in the Indian scenario. Dealing with a plethora of cases, ranging from the problems of witness examination and plea bargaining to the delay in rendering verdicts, the author has in every way tried to lay before his reader the basic glitches and corroborated it with cases which sum up the basic framework of the article.

#### CASE COMMENT

The extent of pardoning power is one of the most disputed issues in recent times and is indicative of the ongoing conflict between the Judiciary and the other wings of the government. The author, Mr Jagdish John Menezes, in his article 'Narayan Dutt v. State of Punjab- A Critical Scrutiny against the Contours of Pardoning Power,' deals with the issue of pardoning power in the Indian context. An exhaustive study of the case reveals the nature of clemency power and its dissent with the power of judicial review. The author opines that the judiciary must act as a 'watch dog' to ensure the non-arbitrariness in executive functions and that this is in fact, not only desirable but also necessary.

#### ACKNOWLEDGMENT

Chanakya National Law University rejoices the growth of the CNLU Law Journal, which has attracted contributions from all across the country and can boast of a colossal cascade of remarkably promising works. The release of the second volume strengthens the endeavour that seeks to create a forum to sensitize critical thinking along with a motto to bring forward to you, the valuable opinions of scholars and students. This has been made possible by the blessing of the Almighty and the support and co-operation extended by the University administration.

The beauty of the journey lies neither in its beginning nor in its end but rather in the distance that is covered between the two. The same is true for us in the journey of our association with this Journal. We extend our thanks to our faculty advisors, Dr. P.P. Rao, Dr. B.R.N. Sharma, Mr. Manoranjan Kumar and Mr. Rachit Ranjan for their indispensable insight and participation in the growth of this Journal. We also express our deep gratitude to Prof. Shanker Dutt and Prof. Shaileshwar Sati Prasad whose generous help is instrumental in the making of this Journal. Special thanks to Mr. Ramjee Yadav for the much needed technical assistance and, to Debjit Bhattacharjee,

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We believe that the synthesis of ideas presented herein shall go a long way in moulding both our 'thought process' and our 'civilization'. May each reader of this journal appreciate the effort put into it.



# DIGITAL REVOLUTION AND ARTIFICIAL INTELLIGENCE- CHALLENGES TO LEGAL EDUCATION AND LEGAL RESEARCH

Prof. Dr. A. Lakshminath\* & Dr. Mukund Sarda\*\*

## ABSTRACT

*The quest for innovation marks the growth of human civilisation. Ingenuity manifests itself in numerous ways, sometimes leading to spectacular revolutions. The transition from the era of the 'idiot box' to that of the 'thinking machine' as a consequence of the digital revolution is an instance of such a phenomenon. Unfortunately, there exists a dichotomy between the use of technology and even its access to different categories of people with the consequence that the advantages of information technology are not equally availed by all. This has led to a situation which is popularly known as the 'digital divide', the implications of which are too obvious to be ignored. This concern is particularly relevant because the application of the software technology to serve the ends of justice can present an effective alternative to the beleaguered justice-delivery system and may be of significant assistance in achieving the merits of an ideal adjudication mechanism, which include, inter alia, timeliness, affordability and transparency of the judicial procedure.*

*The paper proposes a model legal counselling/judgement prediction system designed in such a manner so as to predict with considerable precision, the ends of a judgement. The model so designed, uses a system of scientific classification and a comprehensive catalogue of case details as its basic inputs and an inbuilt artificial intelligence-based programming to process the same. The paper further illustrates the idea and procedure underlying the same through schematic diagrams and sample cases.*

## I. INTRODUCTION

The prospects are bright both for teaching and research in the application of computers. Inter-disciplinary studies in the area of law and computers would provide a meaningful interaction between the legal academicians and technologists. Computers can be best used in two ways to assist the legal profession. One is the information retrieval system which can be developed with the help of law faculty and the computer science department. The second area in which computers can very usefully be employed is artificial intelligence system with which several types of stereotype cases can be decided with the help of computer programs to arrive at more objective and

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quicker decisions. The law faculty should actively engage in collaborative research with the computer science department. This needs to be pursued vigorously to design meaningful computerized programs as alternative dispute settlement mechanism.

## II. ACCESS TO JUSTICE

Access to Justice, includes the meaningful opportunity, directly or through other persons— (1) to assert or defend a claim and to create, enforce, modify, or discharge a legal obligation in any forum; (2) to acquire the procedural or other information necessary— (a) to assert or defend a claim, or (b) to create, enforce, modify, or discharge an obligation in any forum, or (c) to otherwise improve the likelihood of a just result; (3) to participate in the conduct of proceedings as witness or juror; and (4) to acquire information about the activities of courts or other dispute resolution bodies. Further, access to justice requires a just process, which includes, among other things, timeliness and affordability. A just process also has “transparency”, which means that the system allows the public to see not just the outside but through to the inside of the justice system, its rules and standards, procedures and processes, and its other operational characteristics and patterns so as to evaluate all aspects of its operations, particularly its fairness, effectiveness, and efficiency.

Cornerstones for access to justice include lawyers, free dissemination of law and the judiciary. Now, lawyers are not practically accessible to all individuals in the society owing to structural failure of the legal system. Law develops its complexity with the society; nonetheless, dissemination technology of law is not as developed as sufficiently to satisfy demands of the society. The court is in a limbo in which impartiality and fairness to all parties constrain its role to assist unrepresented litigants.

Disruptive legal information technology and emerging Electronic Legal Information (ELI) may arise as the fourth cornerstone in face of the challenges, the other three being (i) Lawyer (ii) dissemination of law and (iii) Judiciary. Electronic Legal Information (ELI) refers to— (i) an integrated Electronic Law governing civil procedures and other areas of substantive law, (ii) electronic legal document filings and evidence and (iii) electronic court case status information. ELI is transforming the existing cornerstones to their virtual existences, which take on new capability to face the challenges of high costs, delay and complexity.

To promote access to civil justice, disruptive legal information technology should be adopted and a positive right to access ELI be established. For unrepresented litigants, the use of ELI will put them in a better position to assess if legal assistance should be sought or it would be better to remain unrepresented. Should they choose to be unrepresented, ELI provides ease of reference to law and integrates law from their perspective. For represented litigants, they will have a greater access to information concerning activity of court proceedings and they will be in a better position to push



progress with the availability of case status information and electronic court document filings.

### III. DIGITAL REVOLUTION

The digital revolution offers significant opportunities to those who provide legal assistance and education to low-income people and communities. New technologies enable us to create higher quality work product, conduct better research, work more collaboratively, learn more readily, and – most important – serve clients more effectively. Clients and advocates alike can find relevant information on the Internet; programs can use a variety of new management and evaluation tools, and everyone can communicate more easily.

In the past ten years, our society has experienced a “digital revolution”, the implications of which are as stunning as those of the industrial revolution, yet are even more remarkable because these changes are happening in a fraction of time.

Beginning with the affordable personal computer and taking a giant leap forward with the creation of the Internet and the web browser, this revolution has changed how we work, play, communicate, learn, and obtain goods and services.

Yet, the pace of change has not been the same in all sectors of society. Use of technology by the middle and upper class and by the West is significantly ahead of use by poorer people and people of colour, a gap that some observers have termed the ‘digital divide’. On a corporate level, this gap looms equally large between the private sector and the non-profit sector. These technological advances have–

- a) Enabled greatly expanded access to legal information for both advocates and clients through internet and e-mail technologies;
- b) Expanded access for clients by using telephones for screening, obtaining basic client information, referrals, and providing brief advice and services, and also by posting information on the Internet;
- c) Enabled better case management and data collection, along with automated templates for document creation;
- d) Improved communication between lawyers and clients through new telephone technologies, cell phones, and video conferencing;
- e) Facilitated staff and volunteer recruitment through e-mail and the Internet;
- f) Provided new avenues for outreach to clients and the public;
- g) Increased training opportunities for advocates; and



- h) Created a greater sense of community through e-mail and the Internet.

The uses of new technologies by the equal justice community in three functional categories can be discussed as follows—

- a) Improving program and office management;
- b) Increasing access to assistance and information for advocates; and
- c) Improving client education, preventing legal problems, and assisting prospective litigants.

In addition to educating clients and communities about resources, the Internet can also provide people with information about their legal rights and about how to solve legal problems on their own when they are unable or unwilling to obtain an attorney. At the most basic level, brochures and manuals can be posted on websites, which is an efficient distribution and production mechanism.

Moreover, the potential of web technology exceeds simply improving access to what otherwise might be available in print. Computer can help *pro se* litigants<sup>1</sup> create attractive, properly formatted and persuasive court forms and pleadings. Computerized templates can use branching logic to take clients through the process of analyzing their case and providing the appropriate information to the court. Video screens can be used to show clients how to navigate through the courthouse, or even how to present their case. Audio files can present information in spoken form for clients who can't read (due to illiteracy or disability). These programs can be made available at courthouse kiosks, libraries, and anywhere a client can obtain access to the Internet. A multifaceted effort, including education, scholarship, resource development, and collaboration, can serve as a powerful catalyst for change, even when the total amount of resources available is relatively small.

#### IV. DIGITAL REVOLUTION AND ARTIFICIAL LEGAL INTELLIGENCE

The gizmos of the digital age owe a part of their numeric souls to Dennis Ritchie (1941-2011) and John McCarthy (1927-2011), the machine whisperers. When Mr. McCarthy and Mr. Ritchie first developed an urge to talk to machines, people still regarded the word 'digital' as part of the jargon of anatomy. If they no longer do, that is because of the new vernaculars invented to cajole automatons into doing man's bidding. In 1958, Mr. McCarthy came up with the list-processing language, or LISP. It

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<sup>1</sup> Courts in American states on the East Coast, the Midwest, and the South generally refer to SRLs (self-represented litigants) as *pro se* litigants, from Latin meaning for oneself, or on one's own behalf. Black's Law Dictionary, 7<sup>th</sup> ed. (1999) at p. 1236.

is the second-oldest high-level programming language still in use today – one whose grammar and vocabulary were more perspicuous and versatile than the machine code early programmers had to use. A little over a decade later Mr. Ritchie created *C*. *C* fundamentally changed the way computer programs were written; for the first time it enabled the same programs to work, without too much tweaking, on different machines; before, they had to be tailored to particular models.

Much of modern software is written using one of *C*'s more evolved dialects. These include objective *C* (which Apple favours), *C#* (espoused by rival Microsoft) and *Java* (the choice for a host of internet applications). Mr. Ritchie and his life-long collaborator, Ken Thompson then used *C* to write UNIX, an operating system whose powerful simplicity endeared it to the operators of the mini-computers which were starting to proliferate in universities and companies in the 1970s. Nowadays, its iterations undergird the entire internet and breathe life into most mobile devices, whether based on Google's Android or Apple's iOS.

UNIX spurred the development of mini and later micro-computers. Mr. McCarthy always argued that the future lay in simple terminals hooked up remotely to a powerful mainframe which would both store and process data– a notion vindicated only recently, as 'cloud computing' has spread.

As for LISP, Mr. McCarthy created it with an altogether different goal in mind – one that was to talk back. Intelligently, LISP was designed to spark this conversation, and with it "artificial intelligence", a term Mr. McCarthy coined hoping it would attract money for the first conference on the subject at Dartmouth in 1956.

In 1962, he set himself the goal of building a thinking machine in ten years. He would later admit this was hubristic. Not that technology wasn't up to it, the problem lay elsewhere– in the fact that "we understand human mental processes only slightly better than a fish understands swimming." An intelligent computer, he quipped, would require "1.8 Einsteins and one-tenth of the resources of the Manhattan Project" to construct.

Neither was forthcoming. Mr. McCarthy continued to tinker away at a truly thinking machine at Stanford. He never quite saw his dream realized. Mr. Ritchie had more luck. "It's not the actual programming that's interesting," he once remarked. "It's what you can accomplish with the end results."



## V. ARTIFICIAL LEGAL INTELLIGENCE

Legal reasoning involves case analysis in statutory as well as real world perspectives. The impact of real world perspective on case analysis poses a serious challenge to knowledge engineers for building legal expert systems. A legal expert system intends to provide intelligent support to legal professionals. The proposed legal predictive system is an attempt to predict the most probable outcome of a case according to statutory as well as real world knowledge of the legal domain.<sup>2</sup> The system accepts the current fact situation of a case and analyses it interactively with legal personnel. This work introduces a frame-like knowledge structure, LATTICE, with two-dimensional attributes. This paper contains a detailed discussion on 'artificial intelligence-based' case analysis of theft cases in a real world perspective.

One of the basic principles of justice is that 'Justice delayed is justice denied'. It is from this that the Supreme Court of India has carved out the fundamental right to speedier trial from Article 21 of the Constitution of India. The present adjudication process requires transformation in view of the high cost of legal services, baffling complications in existing procedures and frustrating delays in securing justice. Formal adjudication should be more of a last resort than it has been in the past. In recent times, efforts have been made to develop alternate adjudication models in the form of *Lok Adalats*, *Nyaya Panchayats* etc. In this context, it is felt that alternate adjudication machinery can be augmented with modern computers for a greater extent of openness and accessibility thus lending credibility to the dependence of both government and people on these modes of alternate adjudication machinery.

Automation in the legal world was first proposed<sup>3</sup> at an International Symposium on "Mechanisation of Thought Processes" held at the National Physical Laboratory in Teddington, London. Law machines were classified by him into two types—documentary machines and consultation machines. Documentary machines are meant for legal information retrieval operations such as storing/retrieving legal provisions and supporting as well as opposing precedents relevant to the given case. A program FLITE (Finding Legal Information Through Electronics), was developed in 1964 as the earliest full text retrieval system for the US Air Force. LEXIS and WESTLAW<sup>4</sup> are some of the recent commercial systems offering interactive retrieval through terminals at the customer's office. Intelligent support cannot be provided for the user while retrieving the precedents owing to the text matching (keyword search)

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<sup>2</sup> *Brown v. Board of Education of Topeka*, 347 U.S. 483 (1953).

<sup>3</sup> L. Mehl, *Automation in the legal world*, Proceedings of Symposium on Mechanisation of Thought Processes at National Physics Lab, Teddington, London, 1958.

<sup>4</sup> C.D. Hafner, *Conceptual organization of case law knowledge bases*, In *Proceedings of the First International Conference on AI and Law*, [New York: ACM, 1987] at pp. 35-42.

