Subject: LAW

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Paper: RESEARCH METHODOLOGY
Module: JURIMETRICS: THE SCIENCE OF LAW
## DESCRIPTION OF MODULE

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### 1. INTRODUCTION

Jurimetrics is the science of law. Although it is the legislature which is entrusted with the work of making the law, it is the lawyers and the judges who are intrinsically involved in the study of law scientifically. How far can the task of a judge in developing the law be described as scientific? It can be assessed by a consideration of the theory of the logical plenitude of law. In a broad sense, this theory means that a judge cannot refuse to decide a case on the ground that there is no precise authority in point. The theory of the logical plenitude of law states the irrefutable truth that law is not a mere collection of detailed rules, but an organic body of principles with an inherent scope of growth and flexibility to adapt to new circumstances. Unassumingly, law is not only an organic body of principles but is a rational system for the exercise of authority of human beings. We need to use the Doctrine Logical Plenitude in a way to make it a narrowing force because if a case can be decided purely by logical deductions from the actual rules in force than we are depriving the law of all power to develop and will crush its growth.
Law can develop only by continuously drawing new values and solutions from the life of the community which is achieved partly via the development of new law and partly via standards and principles which are implied in particular branches of law. It is incumbent on the State to provide justice as it is being entrusted with the task of being the protector of the public within its territory. A judge’s philosophy is reflected in the judicial pronouncements. Benjamin N. Cardozo in his classic work, the Nature of the Judicial Process, mentions several factors which influence judicial functions. The origin of judicial law making process as normative principle of justice is in England. Modern Legal theory of judicial process is of much concern especially in American System. Justice is given by the judicial bodies on the set principles and settled laws of the land still some extraneous factors come in between to give different colour of interpretation to the law.

In recent years, attempts to predict judicial behaviour have taken a mechanical turn for which the term ‘jurimetrics’ has been invented. It takes the form of different kinds of investigations into legal phenomena by using symbolic logic, behavioural models and mechanical aids. Earlier, Boolean algebra was used to analyse complex sets of facts, prediction of behaviour has now moved away from that of the individual to that of groups and the use of computers is being explored.

Loevinger employs the term ‘jurimetrics’ to denote a different set of activities from those that are normally performed under the umbrella of ‘jurisprudence’. There are some basic differences between jurisprudence and jurimetrics. For example, jurisprudence is concerned with such matters as the nature and sources of the law,¹ the formal bases of law,² the province and function of law,³ the ends of law and the analysis of general juristic concepts.⁴ Jurimetrics is concerned with such matters as the quantitative analysis of judicial behaviour, the application of communication and information theory to legal expression, the use of mathematical logic in law, the retrieval of legal data by electronic and mechanical means, and the formulation of a

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¹ John Cmhpman Gray, The Nature and Sources of Law (1st Ed. Igog; Rev. Ed. 1921)
⁴ Roscoe Pound, Jurisprudence (Pt. 2 And Pt. 7) (1959)
calculus of legal predictability. Jurisprudence is primarily an undertaking of rationalism; jurimetrics is an effort to utilize the methods of science in the field of law. The conclusions of jurisprudence are merely debatable; the conclusions of jurimetrics are testable. Jurisprudence cogitates essence of law, ends and values. Jurimetrics investigates the methods of inquiry.

2. MEANING AND ORIGIN OF JURIMETRICS

Jurimetrics is the study of law and science. It involves a strictly empirical approach to the law and examines a wide range of scientific and legal topics that are interrelated. Origin of the term JURIMETRICS, juri-, juslaw + E-metrics(as ineconometrics). Jurimetrics is a step towards seeking new alternatives in the field of legal inquiry and may not be treated as a ‘new science.’ The term jurimetrics originated in the 1960s as the use of computers in law practice began to revolutionize the areas of legal research, evidence analysis, and data management.

The term ‘Jurimetrics’ was coined by Lee Loevinger in 1949 and introduced into the legal vocabulary in the late forties and signifies the scientific investigation of legal problems. It has been defined as ‘the empirical study of legal phenomena with the aid of mathematical models on the basis of rationalism.’ This is given strong support by the American Bar Association’s(ABA’s) Section on Law and Technology, which publishes the journal Jurimetrics. This has focused especially on legal informatics, symbolic logic, but has sometimes ranged much wider. Like the Gruter Institute for Law and Behavioural Research (which emphasis biology), ‘Jurimetrics’ has tended to be somewhat isolated towards the ‘scientistic’ end of socio-legal studies may be changing.

3. THE CONCEPT OF JURIMETRICS
Legal Reasoning is a process through which data is interpreted as high level concepts. In law, data is being represented in natural language, representing the facts of a legal case. Those facts are human events which may lead to a dispute. One of the objectives of legal argument is to interpret, analyze the facts of the case to try to fit the facts into defined rules of law. Legal reasoning takes intensive factual interpretation and the drawing of conclusions through heuristic computations. It is thought that with artificial intelligence tools, some form of computational model, appearing as Legal Expert Systems ("LEX"), can be devised for the analysis of legal problems within defined domains and where possible, to provide basic legal advice derived from the reasoning process.

LEX is a relatively ‘young’ industry and there is no authoritative definition of the product. It is worth noting that LEX, as is with every other kind of expert system, differs from legal information retrieval systems in that the answers given by LEX depend on who is asking the questions. They do not just point towards relevant documents rather they give advice on a particular problem of the user. Apart from the basic elements of an expert system, there are the following desirable elements of a LEX, as suggested by Professor Susskind:

I. High-performance problem solvers
II. Built with the assistance of human experts
III. Operates in specific problem areas
IV. Augmenting (rather than supplanting) humans
V. Is NOT intended for use by laymen
VI. Transparent ie., they explain their lines of reasoning
VII. Flexible
VIII. Aspiring to be heuristic - distinguishing between public and private knowledge, and between informal knowledge (in people's mind) and the definitive (in textbooks)

As compared with other expert systems, LEX is usually composed of three components:

- a legal knowledge base
- an inference engine, being its reasoning mechanism
- a user interface

The potential contributions of LEX to the public general take the form of the following benefits:-

- It elevates the work load of lawyers' low-end tasks and thus enhance the quality of their professional work;
- It offers the public ready access to simple legal advice at all times;
- offers the prospect of a much lower rate of legal service charge

Jurimetrics significies the scientific investigation of legal problems, especially by the use of electronic computers and by symbolic logic. The vast range and huge accumulations of material relevant to the legal process seemed to demand some kind of mechanical and mathematical approach, if only towards information storage and retrieval. On the other hand, the complexity of modern statutory provisions with collateral amendments, statutory instruments seemed to require more than traditional methods to enshrine / expound their meaning.

Symbolic logic could perhaps provide a useful tool to this end. Computer will help to eliminate arithmetical errors and data transposition oversights, which may distort the information being relied upon by judges in making decisions. More controversial types of question in the realm of behavioural research have also been undertaken in the prediction of judicial decisions. Work has also been done on the question how far patterns of consistency or regularity may be show to exist in relation to a large number of judicial decisions in a particular legal field. Computers would ensure uniformity and a fair application of the law.

The leading works on Jurimetrics are Jurimetrics, A Symposium8 which contained an introduction to this new discipline of the science of law, and also a number of examples of the types of work and experiments undertaken. Despite the diverse range of potential mathematical application to the law, it is however interesting to note that the authors nevertheless concluded that "the most perfect

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8 Hans W Baade (1963); and Frederick K Beutel, Experimental Jurisprudence (1957)
machine will never be able to replace the creative effort of responsibility of man in any decision on a public matter i.e. the legal regulation of social relations."

In this context and with the further scientific developments in the codification of law which has led to the danger of "machine-made justice" if, by allowing a proportion of legal inquiries to be conducted by machines rather than by individual judges. It may also cause judges and lawyers to avoid the responsibility for hard legal decisions, but to resort to ready-made answers based on computer.

The theme of jurimetrics in the old days was not to eliminate reason or philosophy from jurisprudence or to find a substitute for necessary values which are an intrinsic part of law-making. All that this particular type of investigation is concerned with are those matters which are capable of being subject to quantitative or probability assessments. At one point of time, most jurimetrics practitioners believed that it was unlikely that the more creative and discretionary aspects of the legal process could ever be adequately applied by computers or any other mechanical or mathematical device, however subtly programmed, since "everything must depend on such matters on the actual form of the programming, which itself would have to be done by persons highly expert in the nature of the problem involved."

The latter part of the belief may not be able to hold true any further, given the recent development in the powerful tool of artificial intelligence particularly in natural language processing common sense database, making possible computer-aided legal reasoning.

The emergence of analytical positivism, historical, anthropological, and sociological and the realist approaches in law gradually widened the scope of legal inquiry. This would not have been possible if jurisprudence was not receptive to advances made in other disciplines and had not readily adopted their techniques in its continuous search for alternatives. As early as 1895 Justice Holmes had asserted that ‘an ideal system of law should draw its postulates and its legal justification from sciences. ‘Undoubtedly, what he meant was that, at least potentially, the techniques of physical sciences could solve the most basic problems of law. For the rational study of law, he declared, ‘the man of future is the man of the statistics,’ and he projected
the ideal of an ultimate dependence upon science, because it is finally for science to
determine, so far as it can, the relative worth of our different social ends…”

In drawing distinctions between a scientific method and philosophic method
the ultimate test of any approach or method should be in its ability to advance
knowledge which can be utilised in solving manifold human problems as the methods
are only means to an end. In this respect no matter how jurimetrics is placed whether
within or beyond the boundaries of jurisprudence, the primary concern ought to be
with its ability to help in the understanding and investigation of legal problems.

4. **SCOPE OF JURIMETRICS IN JUDICIAL RESEARCH**

Jurimetrics substantially involves the use of quantitative methods in judicial
research. Quantitative methods are essentially aids to description. They help to bring
out in detail the regularities in the data researcher has collected. Means, ratios
and percentages are ways of summarizing the features and relationships in data.
Statistical measures based on the theory of probability go beyond the mere
quantitative data and use devices to bring out the association between variables
emerging out of data. Such associations at times can be used to test the existing
hypotheses or else they may suggest modifications, refinements or reformulation of
the old one. Quantitative methods are generally suited to the handling of large
quantities of data and wide range of variables. The bulk of the data and the
complexity of the variables involved may make it extremely difficult to handle the
data manually. For this reason, it is desirable to make use of computer which has
opened up, unprecedented opportunities to look beyond our fragmentary items of
unconnected knowledge.

Any social scientist involved in a study of judicial process would, no doubt, be
struck by the great quantity of relevant data systematically recorded and accessible to
one who wishes to use it. This is not always in social sciences research. In common
law countries, particularly, because of the binding nature of precedents, the decisions
of the higher appellate courts assume special significance for the subordinate courts.
For this reason, at least, it becomes almost inevitable that such decisions are
systematically recorded and published as far as possible. Variety of information can
be extracted from these reports, information which is otherwise considered to be as of
no consequence under the traditional approaches to the study of judicial process.
Information such as the parties to the litigation before the court the kind of subject matter litigated, the nature of the court’s response, the voting response of the individual judges and so forth. This information when classified and presented in tabular form is likely to reveal certain patterns and regularities. A simple exercise like this itself can reveal much that ordinarily remain embedded under the plethora of reports and can be utilized in testing several propositions which are often made but never really tested. The associations between these regularities can then be projected into a predictive fashion. Moreover, when observed consistently over a period of time in a category of cases, these regularities are likely to bring to the surface those elements in judicial decision-making which are highly subjective, non-rational and stubbornly value charged. Thus, if jurimetrics reduces our judge’s to ciphers, it does not so far a paradoxical reason:’ to reduce them to ciphers may be the best way to discover and explore their humanity’.

Jurimetrics is not a substitute for the basic elements of judicial reasoning. Essentially, it involves putting a series of questions that are capable of investigation. It seeks not sudden revelations or universal laws but the slow accretion of tested information. Perhaps the greatest and most obvious advantage of jurimetrics lies in that it helps us determine how fully they rest on historical accident or on practical limitations inherent in the traditional approaches to the law. Certainly, jurimetrics does not offer any social cure. Since it seeks primarily to understand judicial behavior through mathematical analysis of judges’ voting records often regardless of judicial talk suffers from certain obvious limitations. One such limitation flows from its inability to discriminate between decisions according to their meritorious worth. It assumes that all cases are of equal worth in determining a judge’s attitudes. While, this may appear absurd to many, yet differential treatment of cases is not possible within the ambit of mathematical analysis. Likewise, vote base response often ignores multiple issues that are raised and answered in several decisions. Jurimetrics has also been criticized for completely disregarding motives as it is argued that in discounting motives it discounts a crucial perhaps, the most crucial element in human conduct.

The limitations are as integral to jurimetrics as to any other approach, method or thought process seeking to unravel the mystery of human nature. This is what seems to have prompted Francis Bacon to remark, ‘it cannot be that axioms established buy argumentation alone can suffice for the discovery of new works, since
the subtlety of nature is greater many a times over than the subtlety of argumentation.9

5. ASSUMPTIONS OF JURIMETRICS

Quantitative analysis of juridical behaviour (jurimetrics) can be regarded as the work of second or third generation of American legal realists. The legal realists juxtaposed the essential characteristics of positive and sociological approaches and treated the law both as fact and as a social phenomenon. This new approach was highly empirical. To the realists, only the reality of law mattered in fact and reality was what actually happened in the courts and no more. Law therefore was to be found in the decisions of judges which, according to them were the product of ascertainable factors. The factors which are included are the judges’ personalities, their social environment, and the economic conditions in which they are brought up, business interest, trends and movements of thought, emotions, psychology and so forth.

Legal realism was not just one approach, but a compendium of several view points. For Justice Holmes, realism was a temper, the mood of pragmatism, while for Llewellyn, realism was only a method and the method was to get at the real facts and issues that underlie legal controversies and the procedures employed the values of the judge, since the judge’s personality was the only funnel through which policy norms could enter into judicial decisions. Frank, who was more influenced by Freudian psychology, shifted the focus to the sets of unique life experiences of judges which shaped their individual value-patterns; Felix Cohen offered the contemporary view that the decisions of individual judges, whatever, might be the forces that shaped their individual value-patterns, acquired social significance only when evaluated in the context of complex antecedent and consequent processes involving the interaction of many human besides the judge.

All these major exponents of legal realism, however, had a common theme on which they ‘directed attention away from the manifest content of judicial opinions, and away from a concern for ‘logical consistency among sets of legal norms’. this was ‘an attempt to break away from an older kind of sterility-a sterility of abstractions and mechanical deductions unrelated to reality.’ a knowledge of what judges do and say is

important, but it is by no means enough; a realistic understanding of judicial decision-making demands that ‘the acts of judges be examined like any other form of social behaviour.’

6. PROBLEMS ENCOUNTERED IN JURIMETRICS

6.1 The Group approach:

It is difficult to predict the behaviour of an individual, but that of a mass of people is easier. Student groups have been used as models of actual social groups. It is not enough merely to take account of the way in which the members of a group vote; it is necessary to consider the influence of personalities and of reasoned argument. In this connection two types of leadership are thought of significant: task-leadership, which is directed towards solving a problem efficiently and social-leadership, which provides a friendly atmosphere conducive to solving it.

This kind of inquiry can only work so long as there is a constant membership within the group. If this varies, as with the Court of Appeal or House of Lords, and there is no knowledge in advance of the precise composition of the group in a given case, there is no basis for prediction. There is also the difficulty of obtaining adequate information about the inner workings of a group. What is available tends to be fragmentary at most, e.g. memories and bibliographies and these in any case, are not available until after death. Even if it can be discovered who is the task-or social leader, it is not clear how one could tell whether these tasks have in fact been performed as well as they should or performed at all. The use of models could be misleading. When using scientific models, which are simplified abstractions of fixed phenomena, the corrections that have to be made are fixed too. Where, however, the phenomena fluctuate, as with human beings and social phenomena generally, it is impossible to know what corrections need to be made. For this purpose models are useless.

6.2 Computer prediction:

It has been suggested that in so far as there is consistency in decision and attitude, the prediction of judicial opinions by computers becomes possible. Computer techniques in this connection have been of fact studies (correlation between the circumstances in particular cases and decisions given in them) and attitude studies (correlation between personal attitudes to policies and decisions given). With regard
to the former, it is said that the acceptance of a fact by an appellate court rest on identifiable conditions surrounding the way in which it was presented to the trial court. Further, if the accepted facts are combined in certain ways, the decisions will go one way. Personal attitudes are also said to be capable of being scaled by means of scalogram analysis. The basis of this is that a person who reacts positively to a weak stimulus will react similarly to any weaker stimulus. If a line of cases can be made to scale in this way, this would show that a set of values is shared by members of that court. The future behaviour of that court then becomes predictable as well as the probable effects of a change in composition.

It is submitted that such attempts at prediction seem destined to fail. The personal element just cannot be eliminated from judicial decisions. A) Everything depends on how facts are viewed and stated. The same set of facts can be stated in different combinations and at different levels of generality. No mechanical aid can predict which combination or level is likely to be chosen. B) Different ratios can be extracted from a decision depending on whether the later court wishes to see resemblance or difference. If it is known which way a judge is going to regard a rule, a computer is not needed; if it is not known, a computer is useless. Another consideration is that the predictability of judicial decisions depends upon consistency in judges’ attitudes to values; but people’s attitude change with age and experience. Moreover, computer prediction can only work on the basis of reported decisions, the majority of which, especially those of lower courts, are unreported. This means that the bulk of a judge’s early decisions are unlikely to be available, so the basis for predicting his reactions is woefully inadequate. Where computer analysis has indicated that a judge’s decision will be such and such in a particular case or type of case, that very fact could induce him either to decide accordingly as if in submission to fate or else to decide the opposite deliberately so as not to be dedicated to by a machine. To produce either reaction detracts from the judicial function.

Even the possibility of trial by computer has been canvassed, the choice being given to the defendant. All that needs to be said on this is that the data programmed into a computer will reflect the personal quirks of the programmer, which will be substituted for the quirks of the judge. At least, the judge works in the open, where as
the programmer works behind the scenes. It is the judge’s view of the past and the needs of the present which determine his decision and neither a study of broad attitudes derived from his decision pattern by external observers, nor a characterisation of ‘facts’ projected into the decision pattern by observers can hope to correspond closely enough either with his view of the past or still less with his view of the needs of the future.

7. JURIMETRICS WITHIN THE INDIAN JUDICIAL SYSTEM

Judiciary is one of the three wings of the State. Though under the Constitution the polity is dual the judiciary is integrated which can interpret and adjudicate upon both the Central and State laws. The structure of the judiciary in the country is pyramidal in nature.

Indian judicial process is based on different altitude. Here law itself is a means to an end, justice being a goal. In a democratic system with high socialist inclination, afflicted by persuasive, distressing poverty and intent on planned development, social justice has a distinctive colour, an ‘egalite’ or a militant quality of human rights with a radical thrust. Social justice is the balancing wheel between freedom, political and economic and indeed, makes for the survival of democracy. Mr. Justice Krishna Iyer had passionate attachment towards the concept of social justice.

From the words of the Preamble ‘we the people of India…’ to ‘justice – social, economic and political’ embedded in Article 38 of the Directive Principles of State Policy all are related to justice. The access to justice is a foremost human right, which the court serves the people best which has the imaginative realism to appreciate the hungers, handicaps and hurdles of the common people and the judicial activism to innovate remedial strategies to reach and remove injustice wherever it is practised. The genus of the judicial process, to put in Justice Krishnalyers words, “is not to overstep, ever ready to ‘writ’ its way to effective relief to the humblest, finds its finest

11 Tapper, Computers and the Law, p 251
hour when it challenges power, public or private, to order and obedience so that human rights are within human reach.”

The Supreme Court of India is the highest judicial forum and final court of appeal of India as established by Part V, Chapter IV of the Constitution of India. According to the Constitution, the role of the Supreme Court is guardian of Constitution & that of a federal court. The Supreme Court has the power of constitutional review. The Constitution seeks to ensure the independence of Supreme Court Judges in various ways. A Judge of the Supreme Court cannot be removed from office except by an order of the President passed after an address in each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two-thirds of members present and voting, and presented to the President in the same Session for such removal on the ground of proved misbehaviour or incapacity. The salary and allowances of a judge of the Supreme Court cannot be reduced after appointment. A person who has been a Judge of the Supreme Court is debarred from practicing in any court of law or before any other authority in India.

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13 Article 124(4)
14 Article 125
### 7.1 Power of the Supreme Court to review its own judgments

Article 137 of the Constitution of India lays down provision for power of the Supreme Court to review its own judgments. As per this Article, subject to the provisions of any law made by Parliament or any rules made under Article 145, the Supreme Court shall have power to review any judgment pronounced or order made by it. Under Order XL of the Supreme Court Rules, that have been framed under its powers under Article 145 of the Constitution, the Supreme Court may review its judgment or order but no application for review is to be entertained in a civil proceeding except on the grounds mentioned in Order XLVII, Rule 1 of the Code of Civil Procedure.

### 7.2 Powers of the Supreme Court to punish for contempt

The Supreme Court has been vested with power to punish anyone for *contempt* of any court in India including itself. The Supreme Court performed an unprecedented action when it directed a sitting Minister of the State of Maharashtra, Swaroop Singh Naik, to be jailed for 1-month on a charge of *contempt of court* on May 12, 2006. This was the first time that a serving Minister was ever jailed. So far as the transfer or disciplinary aspect is concerned there is unanimity of opinion among the jurists that the executive should have no say in the matter; may be Parliament, but certainly not the executive. Once a person is appointed as a judge and takes the prescribed oath, his independence or his conduct cannot be questioned by the executive which is very often the main litigant before the Courts.

### 8. Judicial Behaviour of the Judges of the Supreme Court of India

Current interpretations of the judicial process have consistently assigned an important role to the social and political background of the Judges in explaining decision-making behaviour. Differing background characteristics and experiences have been hypothesized as being perhaps the major factor in understanding and predicting variant voting patterns of Judges. Such interpretations derive from the so-called dynamic theories of the judicial process which picture the Judge as a policy-

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15 Article 129
oriented decision-maker who derive his premises both from within and without the court room, and whose functions far exceed the mechanical task of applying settled rules of law to clear fact situations. These theories have not usually specified the precise nature of the relationship between a Judge’s background, experiences and his judicial work. They have eschewed the untenable hypothesis that judicial decisions can be explained solely in terms of social background. And they have accepted the notion that the Judge operates in an institutional framework which places certain restraints on the pure expression of personal preferences, but which also allows significant latitude for such expression.  

8.1 Philosophy of Judges

Constitutional law changes according to the philosophical current in the minds of the judges. It is illogical to dissociate the decision-making of the Judges from the personal philosophies held by the Judges. In the Bank Nationalization Case\textsuperscript{17}, the court overruled its own rulings which had held the field for more than twenty year. In the Privy Purse Case,\textsuperscript{18} the court changed its mind within one year. The subjectivity of an individual judge plays the most important role in the deciding of cases. And it is because of this subjectivity, the inherent morality embedded in a judges subconscious mind which gives the law dynamic character.

Judgments of the ‘higher courts’ are always unchallengeable by the ‘lower courts’ on the ground that their decisions are not truthful, not that such an explicit case has arisen. It is important to bear in mind that judges were inevitably once practising lawyers who at the pinnacle of their careers were appointed to their respective judicial office and so each respective judge has his or her own perception of what the law is and the functions the law undertakes to implement. Judges are not in fact always truthful in their reasoning for particular decisions and merely use other factors as a support grounding the decision.

7.2 Psychological Motives and Beliefs

Psychological motives and influences are not altered when one assumes the role of a Judge that is the case with other opinions of individuals. Judicial opinion

\textsuperscript{16}Chakraborty, Manas; Judicial Behaviour and Decision-making of the Supreme Court of India (Deep and Deep Publications, 2000, P. 23 to 27)
\textsuperscript{17}1970 SCR (3) 530
\textsuperscript{18}AIR1993SC1267
represents in a measure, the personal impulse of the judge in relation to the situation before him, and these impulses are determined by the judge’s life long series of previous experiences. The social views and legal philosophy of the judge are often powerful forces both in the shaping of the law and administration. The Judge’s attitudes and beliefs play a major role in formulating outcomes. The nature of the disputes brought to the attention of the Supreme Court may require its Judges to formulate a set of attitudes, a “philosophy” or an “ideology” regarding the large social issues of the day. It is possible to describe attitudes in a bipolarization or “conservative” and “liberal” attitudes.

In America, it is often been said that judges are ‘middle-class”; ‘middle-aged’ and ‘white.’ Therefore, their ways of thinking and of attitude are somewhat different. “Judges do not decide cases according to rules, but according to “hunch”.

The “hunch” is in turn the result of his heredity, environment training (which includes the legal principles he has learned), health... and all those innumerable factors that make the man. It is only after he has decided the case that the judge turns to precedents (and precedents there are, say the realists, to support any desired result), and by choosing wisely finds support for his conclusion.” The decision shapes the narrative of the facts and is meant to persuade the reader. Judges appeal to the emotions of a man’s mind by presenting the so-called ‘case’ and the rationale decision that follows, however, in doing so they ‘hide’ all the goings on, appeals and most importantly- their own personal ‘feelings’ about the case.

7.3 Human Factor in Judicial Decision

Judges are not superhuman. Like us they are mortals. They too carry their share of convictions and beliefs, and the constitutions they interpret, does not ultimately establish one set of paramount values. Supreme Court cases compel these sorts of value choices. A Judge is a human being. The Judges are neither anointed priests, removed from the knowledge of stress of life nor impersonal vehicles of revealed truth. They are men with vigorous minds and diversified background to interpret the constitution inferring out of their experiences and their judgment about practical matters, and their ideal of the social order. In fact, the social background of a
Judge, instils in him a latest predisposition to respond in patterned ways to a class consistent stimuli.

Accordingly for a full understanding of the nature of the judicial process, attention must be paid to the individuals who man the court and to their backgrounds, their interests and their attitudes. Schmidhauser assumes that the social and economic backgrounds of the Judges, especially family attitudes “may be accounted subtle factors in influencing the tone and temper of judicial decision-making.” Again, as pointed out by Goldman, the explanations of the variance among the Judges must lie in their differing values derived from divergent background experiences.

The personality of judges plays an important part in the process of their adjudication on particular cases and has to be taken into account as an irremovable part of the case. This argument leads to the point that the judge fails to give the real reasons which underlie his decision and so one may well question the fact that as the judge ‘omits’ to disclose the “real motives and decision” whether he can at later stages reflect on his decision accurately and the reasons that underlay it, rather than what he reads in the official published decision.

7.4 Environment

Judges like other men are born, develop, mature and become socialized. It is difficult to conceptualize the behaviour of a Judge as being a human being there can be non-spontaneous responses to an internal and external stimuli mediated by the properties of some relevant system or systems. As a child, the Judge is born into a human community that has already experienced and classified an almost endless number of situations and the behaviour appropriate for each. The guidelines derived from that experience are imparted to the child as he develops and matures when as an adult, the judge is faced with a case situation, a preconscious screening and typing of the situation and rules of behaviour occur. Where situations encountered do not fit to the previously determined categories, typing of the situations and the rules of behaviour occur. Where situations encountered do not fit to the previously determined categories, typing is done by analogy. The process occurs in the nuclear family during childhood but continues throughout life. The only requirement is that the individual possess the ability to learn and to modify his psychological state. But no man or Judge
can ever escape the influences of these processes. Many a time Judges are influenced by their fellow judges or the judicial conventions or the pressure of events etc.\textsuperscript{19}

In the backdrop of the charges of sexual harassment recently levelled against a Madhya Pradesh high court judge, there is a pressing need for the judiciary to set up a transparent and credible institutional mechanism to investigate complaints against members of its own fraternity. The victim of the alleged harassment was a lady additional district and sessions judge who claims that the M.P. Judge sexually harassed her. There have been instances where allegations of sexual harassment have been levied on other judges also, in the recent past. Not only that there are incidences of political favour by the judiciary, there has been found close nexus between politicians and judges, instances of corruption in judiciary etc. But at the same time, the Indian judiciary is still predominantly an independent and clean institution and a check on both the executive and the legislature; it must protect its image so that its integrity and impartiality remain beyond question. Such incidents as the one that took place recently in Madhya Pradesh, or Ganguly and Swatentra Kumar JJ, greatly compromise the fair name of this exalted institution and shake the foundations of the tremendous faith that the judiciary enjoys. It is, thus, vital that the black sheep in the legal profession be unmasked and strong action taken against them.\textsuperscript{20}

As a matter of fact, judges like Markandey Katju and GyanSudha Mishra should not be forgotten for their splendid efforts in moulding and broadening the Constitutional provisions and giving them a wide ambit through their bold and dynamic judgments. In Bhagwan Dass v. State (NCT) of Delhi\textsuperscript{21}, the Supreme Court mandated death sentence for ‘honour killing’. In Aruna Ramchandra Shaunbaugh v. Union of India\textsuperscript{22} case, the Supreme Court has allowed passive euthanasia though the plea for active euthanasia was rejected by the Court. These were the gallant judgments which came from the Bench of Justice Markandey Katju and Gyan Sudha Mishra. In Indra Sarma v. V.K.V Sarma\textsuperscript{23} the Supreme Court, through Justice K.S.Radhakrishnan, has held that “live-in or marriage like relationship is neither a crime nor a sin”, though it may be socially unacceptable.

\textsuperscript{19}\textit{Ibid}
\textsuperscript{21}2011(5) Scale 498
\textsuperscript{22}(2011) 4 SCC 454
\textsuperscript{23}(2013) 41 SCD 007
Thus, it can be said that the judges should be impartial, objective and impersonal in delivering judgments. Such judgments must be arrived at in a spirit of humility and in full consciousness of the limitations which are inherent in every decision given by any mortal person. But being bound to give a decision, the judge cannot evade the responsibility of giving an unpopular decision and he must be stoic enough to accept criticism. Judges are not vain enough to hold that courts have answers to every problem that concerns the society. They lay no claim to such infallibility. The interpretation and emphasis by each judge will depend upon his her socio-economic, philosophical and political background. Acceptances of all these variables influencing the judge’s decisions may weaken the aura of the judicial process, but to put it under wraps will give a wrong notion of the way the judiciary functions. The alleged judicial activism of the Supreme Court has been projected as a repudiation of the charge of a conservative face of the Court, such as judgments in environmental pollution cases, the pollution being an obsession of the effluent section of the society, however, a misery to the hundreds of slum dwellers on the banks of river Narmada and livelihood of the people. It should be assumed that the Court has always been on the side of the politically weak and socially neglected.

8. LIFESTYLE AND LIFE STRUGGLE OF THE FAMOUS CHIEF JUSTICES OF INDIA

From the time of independencetill date, India has witnessed 40 CJI’s and 41st is the very latest appointment of R.M. Lodha. With the deteriorating political standards of legislature and glaring handicaps of the executive, it is the grit and gumption of our honest and independent judges alone which ensures the survival of the Indian republic. Judges too have their black sheep but mercifully they are few and far between. To the truly good one we owe reverence and gratitude. Justices Kuldip Singh and Verma who adorned the Supreme Court Bench through their judgments are outstanding examples. They recovered stolen wealth of nation; compelling the corrupt police to do their job and helping citizens fight the battle against soot and sulphuric acid.

J. Krishna Iyer struck a new and dazzling path and left on the judicial sands an imprint which neither time nor man can erase. No doubt he was a card holding communist and communism is now dead but the dream of a world of equality, liberty and justice that inspired the first communists is still a valid one. It is that noble dream
that inspires all his judgments. Praful Bhagwati is a great intellect and doubtless he too had dreams of moulding the law. His accomplishments are enormous but his emergency record is not easily forgotten nor indeed his letter of congratulations to Mrs. Gandhi on her returns to power. While in the S.P. Gupta case he firmly erected the people’s ‘Right to know’ and carefully formulated the philosophy and parameters of public interest litigation, he also destroyed judicial independence by needlessly acknowledging executive primacy in matter of appointments.

Justices Pathak, Eradi, Sarkaria and Kania were gentlemen judges. They first wrote pithy judgments and while acknowledging judicial fallibility, failed to save Kehar Singh from what many regard as judicial murder. Justice Eradi’s compassion and humility are a lesson for all good judges at all times. He is now the guardian of consumer’s interests. Justice Sarkaria known more for his monumental report on Centre-State relations than for his judicial pronouncements must be read carefully for some of his judgments on preventive detention. He decided in favour of liberty and was not even once deflected by the hard facts of any case. Justice Venkataramiah was made in a different mould. With Justice P.N. Bhagwati he helped from the majority that ruled for judicial suicide. Almost to atone for his guilt complex he pontificated that independence of a judge had nothing to do with the law but depended on his inner self. He even quoted some obscure scripture in support.

Ranganath Misra’s role will always remain controversial. Having framed ninety charges against A.R. Antulay he became a party to the judgment that turned over a Constitutional Bench direction, that Antulay case be tried in the High Court. The majority judgment ignores the principle of finality and res judicata and proceeds on a novel theory which few either understands or follow. He did effectively frustrate the Antulay prosecution. His work on the Human rights commission might help work out a respectable balance sheet. Young Justice Kania was a brilliant student and son of a brilliant Chief Justice of India. A judge of perfect integrity and independence he was wholly right in his comments on Chief Minister Nilengekar’s polluting the sacred stream of education in Maharashtra.

It is not the duty of a judge to coordinate with other branches of Government. The task of a Supreme Court judge is always to be on the side of the citizen and confront and repel the insidious invasions of the citizen’s liberty and to protect his paltry belongings against the rapacity of the corrupt men in power. It is by this yard
Juggling the judges has been an eternal passion. The words of Honore Balzac are: to distrust the judiciary marks the beginning of the end of the society. We have an excellent judiciary. To expect judges to have the wisdom of Confucius, the philosophy of Plato, the analytic power of Edison or brilliance of Einstein was hitting the mark too hard. Neither could we expect them all to have the legal expertise of Ambedkar, the humanity of Gandhi, the charming acumen of Nehru or the capacity of the Almighty. Many judgments have been classics in their own right; many judges have sat through the nights silently awake, as the world slept, anxious to utilise their legal acumen in dispensing justice, despite the nerve wrenching decisions which many a time their conscience and integrity demanded. Where the call of duty was concerned, obsession with promotion, power of the judicial chair, fear of consequences and or scare of injuries, had all been relegated to the back shelf. If there had been a Khanna J who delivered the famous ADM Jabalpur knowing full well that it might shatter his dreams of promotion to the much coveted post of Chief Justice of India, there was also a Sarkaria J who recorded the entire evidence of a case, page after page in long hand, relieving his stenographer for giving his BA exams. If there is a Venkatarmiah J who sat up many a night to grant the famous midnight bails in Kehar Singh and Thapar, there has also been a Pathak J who had sat up till the wee hours of the morn to write out the Kehar Singh judgment on a day which coincided with his son’s wedding, despite the fact being at the material time, the Chief Justice Of India, with a single stroke of the pen, he could delay the hearing or may be even the execution itself by a single day.

The Supreme Court has also seen a Bhagwati J who fulfilled his enduring obsession to reach to the masses converting letters to writ petitions in order to make justice available to those in need: be it the prisoners in Bihar languishing in prison for several years without their trial having commenced or the children in Assam who had been accused and not tried for over two years or the stone quarry workers at Faridabad who were working in abominable conditions amongst stone crushing

24 Poornima Advani, Foreword, Indian Judiciary A Tribute, (Harper Collins Publishers India, New Delhi, 1997, 9-12)
machines at great hazard to their health or the exploited lot of workers engaged in the construction of the Asiad Stadium in New Delhi.

There are many more with significant contributions. Justice Krishna Iyer had displayed a deep concern for prisoners and had carried reforms into the prisons, imparting to them lessons on the value of human dignity. It was Justice Krishnalyer who left an illustrious example in speedy justice when during one historic summer vacation he heard the Indira Gandhi case from 10.30 a.m. to 5.00 p.m. at a stretch on one day and then delivered the judgment the next afternoon at 3.00 p.m., simultaneously arranging to 500 copies of the judgment duly cyclostyled and ready for distribution on the same day.

It was Eradi J who, while on the bench of Kerala High Court, for the first time, custody of a child to a foreign mother as against an Indian father and tactfully resolved a crisis that could have ensued with the factual conflict in law between Germany and India on the point of ‘loco parentis.’ In their post-retirement eras, it is these illustrious judges who continue to serve their nation. Justice RanganathMisrawas the founder Chairman of the National Human Rights Commission. He Visited prisons, formulated jail manuals, protected exploited children, visited various states in the country in an attempt to carry Human Rights education to all.

Yes, they were all great judges. They are all great men. They were all masters of constitutional laws. They all worked incessantly with a one point goal-justice to the needy. The work turned out to be much more challenging than expected. With the habitual obsession of judging everyone and everything minutely, always presuming that the visitor must be some aggrieved who wanted some favour or the other, the eminent judges at first stretched their backs up to sit in judgment overt the one who had dared to reach up to them. Initially restrain, then caution and thence slowly but steadily enthusiasm- that’s how the sequence went.

From the available evidence it appears that most of the judges while at Bar had undertaken general civil and criminal practice. There a few who seem to have worked in specific areas such as Pathak J and Sikri J who both handled majority of Income Tax cases. Grover J and BhagwatiJ were engaged in a larger number of commercial and company law case; and Desai J had a large practice of tenancy, land revenue and labour matters. Perhaps, some judges continue to maintain close affinity
with their areas of interest, despite the fact that they had possibly dealt with all type of matters in the High Courts. Pathak J and Desai J do provide such instances and it appears that both the judges have had their largest participations in their respective areas of interest. This is only possible if the Chief Justice talks into account the special subject matter interest or expertise of judges in making bench assignments either in order to accommodate the judges having such interest or where he feels that such expertise is needed.

Thus, the judges participation in the decision making process gets subjected to both the formal and informal rules and practices adopted in the bench assignment activity which as it appears from the above analysis, is a complex phenomenon and involves the interaction of multiple factors. Any study of groups and institutions would be incomplete without an attempt to discern the social attitudes and value orientations of the members who constitute the group. In order to find out the value orientations of our subject matter under discussion it is necessary to assume that judges like everyone else have their own value preferences which are likely to be manifested in the manner in which they decide the cases which come before them for their determinations. Their decisions can be interpreted as supporting one pattern of activity as against another ‘which makes them an important member of an interest group, however, temporarily and for whatever reason.

In other words, if such is the case then the social attitudes and value preferences of judges would be reflected in the opinions they write and in the votes they cast for or against a particular outcome. In determining the attitudinal differences among the judges almost all behavioural studies have relied upon the individualistic behaviour of the judges. Such studies have utilised for the purpose only the non-unanimous decisions in which at least one of the judges participating in the decision has recorded his dissent as to the ultimate outcome arrived at by the majority. It is often suggested that a judge is unlikely to register his dissent unless he feels relatively strong about a particulate outcome and thus, the presence of such behaviour on the court would indicate disagreement among the judges. One of the prerequisites for studying such differences among the judges is that the individualistic behaviour of each judge must reveal certain recurrent patterns, uniformities and consistencies over

25 Supra Nt. 13
a period of time. Only if the regularities are observable that variables sufficient to explain the observed regularities can be identified.

The Supreme Court of India and its judges have limited success in it because of three reasons:

I. The short tenures of judges leading to rapid turnover in the court making it difficult to observe their responses over a reasonable time period.

II. The frequent use of small panels consisting of two and three judges to dispose of bulk of the work of the Court ruling out any possibility of all or majority of judges to participate jointly and simultaneously on the decision making panels.

III. The quantum and character of overt dissent in the court has been such that it does not easily lend itself to behavioural analytical tools.

Thus, it is proving that the Indian Supreme Court Judges has become even more resistant to the quantitative methods employed in the study of attitudinal differences among the United Nations Supreme Court judges. Every judge, therefore, has to select among the alternatives in order to arrive at the decision. Thus, the voting ex response of the judge in certain identifiable subject matter areas observed over a period of time is likely to reveal some pattern in his decisional responses.

Contest between the business and the state, matters relating to employer and employee relationship contested between businesses is pitted against the individual in any other capacity. Support to business: especially on taxes, regulation of business and economy by the state and government contracts, hence each judge extended to the business in these three areas among others against the state. Eight judges: Shelat, Vaidalingam, Hegde, Jagmohan Reddy, Dua, Bhagwati, Tulzapurkar and A.N. Sen, supported the business in more than 60% of the decisions in which they participated.

Particularly striking appear to be the support pattern of BhagwatiJ (69.04%) and TulzapurkarJ (71.42%). There total support to businesses as against the state in different subject matter areas revealed that it was highest in tax matters (77.42% and 83.33% respectively), relatively less prominent in regulation matters (58.33% and 50%) and least in government contracts (30% and 33.33%). These figures suggest that the level of support extended by a judge to a litigant category may vary depending upon the subject matter of dispute. They also seem to suggest as if the two judges largely disapproved government’s tax policies concerning the business. It may
however be note that Justice Bhagwati and Justice Tulzapurkar maintain relatively high support to business.

Twelve Judges: Ray, Plekar, Mathew, Beg, Dwivedi, Mukherjea, Aliagiriswami, Krishna Iyer, Fazal Ali, Deasi, Chinnappa Reddy and Bahurul Islam, reveal an equally strong preference (over 60% support level) for the state as against the business in all such decisions in which they were a party to the decision making. These value preferences are measured without regard to the identity of the other judges who happened to be participating on the decision making panels. Thus, each judge’s vote indifferent combinations of the decision making panels is treated as a conscious choice excised by him either in favour of the business or the state. The fact that some judges upheld the claim of the business as against the state in over 605 of the decisions they participated and others reveal an equally strong preference in favour of the other party i.e. the state, shows that such a wide cleavage in the voting behaviour of judges could not have been a mere coincidence. The average support(45.53% being the norm, there are only seven judges ( Justices Chandradchud, Goswami, Sarkaria, Gupta, Jaswant Singh, A. N. SenandVenkatramiah) who have demonstrated their support for the business well within the norm. the remaining 32 judges are distinctly marked off in the extent to which they supported the business and the state, respectively. However, the fact that the business was favoured on an average in 45.53% decisions by the judges of the Supreme Court goes to show that the business performed fairly well as against the state in its conflicts with the latter.

7. CONCLUSION

In order to analyse judgments you need some insight into the decision making process of the judge. The single most important means of assessing whether you think a judge is right or wrong is to develop an understanding of the mechanism as to how the judge has arrived at the conclusion, yet very little has been written by judges themselves about the practicalities of judgship in modern times. Hence, there arises today an emphasis on the logic of discovery, and the drawing of an analogy between the task of the judge and that of the natural scientist. The latter, with a specific knowledge acquired through experiments, frames a provisional hypothesis and tests that supposition by making further experiments in order to assess the accuracy of the
deduction drawn from it. The Common Law doctrine of binding precedent has prevented final courts from engaging in tentative experiments and from correcting the mistakes of the past.

Jurimetrics, the application of modern logic and computer techniques to legal problems, may be useful in the analysis of facts, in the identification of ambiguities in syntax and perhaps in the prediction and formulation of judicial decisions. Judicial behaviour is perhaps best defined as a field of inquiry in which there is a fusion of theories and methods developed in the various social sciences in order to study scientifically how and why judges make the decisions they do. Judicial behaviour should be understood to have a primary focus on the explanation of the behaviour of individual decision makers but may also include propositions about decision making within or by groups of decision makers and by the institution-courts that are headed by individual judges and groups of judges. The Pioneers of Judicial Behaviour accounts for the emergence and exploration of three current theoretical approaches to the study of judicial behaviour--attitudinal, strategic, and historical-institutionalist.

Thus, it is clear that jurimetrics does not offer any social answers. It seeks to apply to legal problems ‘the same humble, honest objective approach that has characterised the development of science’ in other fields. Jurimetrics does not seek to oust jurisprudence, philosophy or faith from men’s lives. They have their settled place. Jurimetrics is not concerned with a debate as to whether the metaphorical life of the judge has logic or experience. Jurimetrics is concerned with only investigating the structure and dimensions of all experience that is relevant the law.

The law cannot dispense with a logical method if it is to have any claim at all to rationality. Materially, thinking may be bad because of a narrow or unskilful choice of premises. No doubt, in the past the premises from which rules have been deduced have been rather narrow, but instead of attacking logic it would be more reasonable to broaden the foundations of the law. To give up logic because of the excesses of a

particular method, or to worship irrationality because of the mistakes of the past would not be wise at all. Best law cannot be achieved without proper use of logic.

Thus, in the end it can be said that jurimetrics has two dimensions one is the information technology and computer advancement techniques and other is the mental, physical, social background of the judge and its impact on him while deciding any case. And until a time technology reaches that height where artificial intelligence would be able to analyse with certainty, the mechanism by which a judge decides a case, inquiry into the subjectivity of a judge's discretion would rest with the subjective analysis of fellow humans who are subconsciously governed by their sets of social and mental background.