Informatics and ideology of judicial decision-making

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INTRODUCTION

1. The development of contemporary informatics is one of the relevant features of the technological revolution of our time, and legal informatics is its corollary in the area of law. One asks now how law and lawyers will respond to the challenges brought by this revolution

I will deal only with a fragment of this large problem, viz. with the relations between ideology of judicial decision-making and the possibilities of legal informatics. The ideology in question is a set of ideas how the judge should decide the cases in the best way, and whether legal informatics can help to perform his task better and/or change his tasks and his ideology.

To simplify my analysis I deal not with decision-making processes but only with the justification of judicial decisions, within the paradigm of statutory law system and its operation. I will not analyze how far the formulated theses are applicable to common law tradition, but hypothesis is that to a quite large extent this is the case.

JUDICIAL DECISION-MAKING

2. Judicial decision-making is analyzed from a descriptive point of view. The object of description is either the decision-making process or the decision with its justification, or both of them.

From this point of view one describes the object of analysis, singles out its conditioning factors, one seeks to make generalizations, to discover regularities and, eventually, to predict the decisions or their trends.

The final product of the descriptive approach is a descriptive theory but it seems that to-day we have to do only with some fragments of this type of theory.

1. Cfr. e.g. S. Cotta, La sfida tecnologica, Bologna, 1968, part. III; V. Frosini, Il diritto nella società tecnologica, Milano, 1981, part. II.
3. There is also an interest in formulating "normative theories of judicial decision-making" which answer the question "how the judicial decision should be made and/or justified". This theory formulates the values the judge ought to accept and the directives of his activity. The former determine the purposes and the preferences of the judge determining his choices. The values refer either to the content of judicial decisions or to their procedures. The directives formulate the patterns of due judicial behaviour and justify judicial decisions.

If we accept the term "normative theory", which offends some methodological intuitions, then this theory should fulfill rather strong conditions. Such theory is a well systematized set of evaluative statements and directives, "consistent" and "coherent" in the defined meaning of these terms. Moreover, this theory is "complete": the values and criteria of choice the judge needs are determined by this theory. It is evident that it would be very difficult, if possible at all, to formulate such theory.

4. Taking this into account I would single out ideology of judicial decision-making which has the same scope as normative theory, but it does not fulfill such strong conditions: is neither complete nor consistent and coherent. It formulates different values which should be equilibrated, directives which point at opposite directions, and, thus, do not determine the judicial decisions as the normative theory should do.

It seems that legal doctrine formulates only ideologies of judicial decision-making, and, moreover, that quite often mixes them with the allegedly descriptive account of this activity.

IDEOLOGY OF LEGAL AND RATIONAL JUDICIAL DECISION

5. Not looking too far back into the history I single out three basic types of the ideology of judicial decision.

5.1. The "ideology of the bound judicial decision" sets as fundamental values legal certainty, security and predictability, and strongly opposes law-making and law-applying. The creativity belongs to the former, and the latter is thought of as a "logical" operation of a deductive character in which judicial evaluations do not play any relevant role. The paradigmatic example is traditional legal positivism in its crude formulations of l'école d'égèse or Begriffssprudenz.

5.2. The "ideology of a free judicial decision" as basic value treats the just decision in an individual case, which not always demands following a legal

rule. Application of law is a creation of law, and is based on the evaluations of the decision-maker which are his own responsibility. The paradigmatic example are radical versions of the free-law movement thought of as the opposition against formalism of legal positivism.

5.3. The third type of ideology is placed mid-way between the two preceding ideologies. This is the “ideology of legal and rational decision”, and it will be our frame of reference because this ideology based on the most up-to-date theory of justification of judicial decisions. This ideology is “formal” in the sense that does not determine several decisional choices, and, therefore, is accepted by different legal axiologies accepting the values of legality and rationality.

6. Ideology of legal and rational judicial decision aims at implementing two basic values: legality and rationality. Rationality has a somewhat different status than legality: the former means justifiability of decision, whereas the latter includes valid legal rules as one of the justifying arguments of decision, which has a special importance.

6.1. Judicial decision should be a justifiable decision. This means, that when needed, the decision-maker ought to be able to present arguments underlying this decision. These arguments are the premises (reasons or arguments) from which the decision is “inferred” according to the accepted justificatory reasonings (internal justification). These reasons and rules of justificatory reasonings could be, however, also appraised and they should be good reasons (external justification). Justifiability is the symptom of rationality: one cannot decide whether a decision is rational or not without an analysis of its justification. Hence on uses corollary conceptions of internal and external rationality.

Judicial decision is justified by two types of arguments: by knowledge and preferences of the decision-maker. Knowledge covers knowledge of law and of facts which are thought of as relevant for the decision. Preferences, the axiological component of justificatory reasons, mean here the values accepted by decision-maker which determine the purposes of his activity and the criteria of his choices. Ideology of judicial decision-making forms the core of this axiological component.

Rationality is a value of the ideology in question: justifiability of judicial decision has a positive value necessary for accepting the decision. Rational decision is thus a decision which is not arbitrary. The minimum rationality of decision consists in its internal rationality, because it means consistency and coherence in argumentation. It is an open question, whether other values

are inherent in rationality, such as generality, universalizability, reasonableness etc.

The ideology of legal and rational judicial decision neither presupposes a content of law nor determines the criteria of external rationality. It presupposes, however, a theoretical construction of justification of judicial decision.

6.2. Legality is understood as conformity with law. This conformity is formulated in relational statements, and their normal formula is "X is consistent with the legal rule N". But this conformity is positively appraised: legality as a value is expressed in a formula "X is consistent with the legal rule N, and every X consistent with the legal rule N has a positive value". This positive value is the value of formal legality. Ideology in question accepts the value of formal legality: judicial decision should be justified by applied legal rule or, in other words, it should be consistent with law. One of necessary arguments justifying judicial decision is, hence, its legality. The theoretical analysis, however, demonstrates that there are some lee-ways in determining what the valid legal rule is, what is its meaning, and what are the facts of the case.

THEORETICAL MODEL OF JUSTIFIED JUDICIAL DECISION

7. "Judicial decision" in legal language usually means a decision disposing of the case in a concrete court. Theoretically this decision is a "final judicial decision" which is justified by several "partial decisions".

There are following partial decisions: of validity, of interpretation, of evidence, of the choice of consequences. There is also a meta-decision of sources, if by these "sources" we mean arguments which either ought to be, or may be, used in practice.

The final judicial decision is formulated in practice as a decision of the choice of consequences, but it is easy to demonstrate that this decision cannot be justified without justification of all the "partial" decisions.

There are various possibilities to present the justificatory reasoning of the final judicial decision linking all the partial decisions. It is possible to present

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them as a rather complex syllogism in which, taking premises as granted, one makes proper subsumptions or "transformations".  

8. To make patent the problems of the justification of judicial decision I will present normal formulas of the partial judicial decisions identifying the justificatory arguments. It is no place here to explain the structure of each partial decision in detail, and, therefore, I only present their normal formulas leaving out analysis which leads to their construction.  

8.1. The decision of validity: The legal rule N is valid in spatiotemporal dimensions ST according to the rules of recognition RR₁, RR₂... RRₙ and evaluations Vₙ₁, Vₙ₂... Vₙₙ.  

The rules of recognition are thought of as determining the concrete conception of validity of a rule N in the legal system LS which has the features assumed in its structure. There are the following basic structures of a legal system: LSLE (system of enacted legal rules), LSFC (LSLE plus their formal consequences), LSIC (LSLE; and/or LSFC plus their interpretative consequences), LSOP (LSLE, LSFC, LSFC which are applied in legal decisions of "operative law"), LSPP (LSLE, LSFC, LSIC, LSOP plus the "principles, policies and other standards" referred to in valid legal rules or applied in operative law).  

The validity decision interesting the judge is treated as dealing also with applicability of the valid rule in case, although this is a simplification because the applicability presents some particular problems to be solved.  

8.2. The Legal interpretative decision: The legal rule N has the meaning M in the legal language LL and/or in the given situation S according to the directives of legal interpretation DL₁, DL₆₂... DLₙ and evaluations V₁₁, V₁₂... V₁ₙ.  

The realization of meaning to legal language and/or to situation of the use of the norm is linked with the contextuality of meanings of this language. The justifying arguments of interpretative decision are interpretative directives which appear as rules determining the semantic influence of the various contexts on the meaning of a legal rule, i.e. linguistic, systemic and functional
context. The evaluations in question are needed for a choice of interpretative directives and for their use, when they refer to evaluations.

8.3. The decision of evidence: The fact of the case $F$ exists in spatiotemporal dimensions $ST$ according to the evidence $E_1, E_2, ..., E_n$ and empirical rules of evidence $ERE_1, ERE_2, ..., ERE_n$, and/or legal directives of evidence $LRE_1, LRE_2, ..., LRE_n$, and/or evaluations $E_1, E_2, ..., E_n$.

The presented evidence is evaluated according to the rules of the ex lege what facts are taken as proved if other facts are proved (e.g., presumptions). The evaluations in question are needed either to deal with the facts which are determined evaually by the legal rules and/or when one has to choose and to use some conflicting rules of evidence.

8.4. The decision of the choice of consequences: The fact of the case $F$ having characteristics $C_1, C_2, ..., C_n$ has legal consequences $LC_1, LC_2, ..., LC_n$ according to the applied legal rule $N$ and the directives of the choice of consequences $DC_1, DC_2, ..., DC_n$ and/or evaluations $V_1, V_2, ..., V_n$.

The consequences of the fact of the case are at least in part determined by a legal decision-maker. There are also several LD which link the choice with characteristics of the facts of the case, e.g., penalties in criminal law. The evaluations are needed when the characteristics in question are determined evaually, and for a choice and use of the LC.

8.5. The meta-decision of sources identifies arguments which according to law, ought to be used ("must-sources") and/or may be used as arguments.

The former in statutory law and in the ideology of legal and rational decision systems are always valid legal rules (cfr. point 6.2.), and the latter — other arguments, inter alia precedents or opinions of legal doctrine.

8.6. The final judicial decision is formulated in the form of the decision of the choice of consequences which, if justified in extenso, refers to the partial decisions singled out above.

9. Comparing justifications of judicial decisions singled out above it is patent that the following groups of arguments are used: (a) rules of law, i.e. either the "applied rules" in decision or rules formulating the directives such as rules of recognition, of interpretation, of evidence, of the choice of con-

14. J. Wróblewski, Sadowa, chapt. IX, X/7/.
15. This is a simplification of the terminology proposed by A. Peczenik, op. cit. chapt. 2.2.
sequences, and *ex definitione* rules as the "must-sources" of decision. (b) facts, *i.e.* facts of the case, with their characteristics, and other facts relevant for decisions, *e.g.* the probable consequences of determined partial decisions; (c) evaluations used in all normal formulas of decisions; (d) a reference to justificatory reasoning is implied in all normal formulas, this reasoning is expressed in the term "according to", and its correctness is the evident condition of justification, too elementary to be singled out separately.

Justification of judicial decisions implies an ideology, and this appears in the referred to directives, (*even if they are formulated in law*), and in evaluative arguments as references to accepted values, and, sometimes, in choices of rules of justificatory reasonings.

**Types of Legal Informatic Systems**

10. There are many typologies of legal informatics systems, but in the present essay it is sufficient to single them out according to the basic types of questions they are expected to answer.

There are the following types of questions: (a) what valid legal rules, if any, regulate the type of cases (the case) C?; (b) what legal decision, if any, have dealt with the type of cases (the case) C?; (c) how the decision-maker (esp. the judge) ought to decide the type of cases (the case) C?; (c') what are the legal consequences which ought to be determined in a legal decision disposing of the type of cases (the case) C?.

A legal informatics system LIS can answer all or some of these questions. There is the difference whether LIS deals with a type of cases and the case but let us assume that it is up to the user of LIS to range the case in a type of cases, and that this difference is not relevant for construction of LIS. I will deal, therefore, with LIS answering the questions concerning the case C.

I single out the following types of LIS: the "regulation LIS" (R/LIS) answers the (a) question: the "precedent LIS" (P/LIS) answers the (b) question; and the "expert LIS" (E/LIS) answers the (c) and (c') questions.

11. The "regulation LIS" (R/LIS) is evidently linked with the decision of validity and implies also some conceptions of a legal system. Any use of a basic systemic conception of validity used in LSLE presupposes rather complex operations in which there are mixed descriptive and evaluative elements, and this is "inherited" by the LSFC and LSOL if not taken in

its radical form. But with some additional conditions, all three of them could be treated as descriptive conceptions of legal system and of corresponding validity notions, whereas openly evaluative are the conceptions of LSIC and LSPP and correlated notions of validity. 17.

There is also the question of singling out the valid rules regulating the case. This operation implies the description of case in terms used to represent the legal rules in LIS. In some cases, and especially in hard case, this is not an evident subsumption and, therefore, it demands an interpretative decision. This decision is contextually bound and refers to controversial interpretative directives and evaluations (cfr. point 8.2.). One is not willing, I suppose, to ascribe to the constructor of LIS a competence to make a functionally valid legal interpretation. If so, then it is up to the user of LIS to choose the legal rule which seems for him the most proper to use in the case in question. The user assumes that all questions of evidence are solved (cfr. point 8.3.), and are outside the scope of LIS.

It seems, therefore, that R/LIS can effectively be an "operative-informative system" 18 provided that its user is satisfied with a "first approximation answer". This means that the constructor of LIS assumes some conception of a legal system and correlated conception of validity, which determine the rules he introduces (or eliminates) as the set of valid rules to LIS. He accepts, thus, some rules of recognition, and if needed, some evaluations too (cfr. point 8.1.). If we expect from him objectivity, then he can put into LIS only those rules which, according to the current opinions of legal doctrine and of legal practice, are non-controversially valid. And the rest is up to the user, which has to decide the difficult cases. The interpretation issues necessary for an use of R/LIS are left to the user of the system (cfr. point 8.2.).

The R/LIS answering the question what legal rules regulate the case is expected to determine the rules which are valid and applicable to the case in question. It means taking into account the valid legal rules of conflict law and intemporary law, and it does not change legal problems, but complicates the technical informational devices.

12. The "precedent LIS" (P/LIS) contains legal decisions. There are no problems how to sample and store decisions, and especially judicial decisions. The practical experience of common law preceded and prepared the application of computer technique. The only problem for construction of P/LIS is that of the description of the content of decisions in the manner which facilitates the tasks of an user of P/LIS.

In statutory law systems the precedent decision may function as additional argument justifying a decision, but is always treated as a "may-source", and never as a "must-source" of a decision, because there is no rule of stare decisis.

17. J. Wróblewski, Operative..., pp. 223-229.
18. J. Wróblewski, Operative..., p. 230 ss.
13. The “expert LIS” (E/LIS) presents serious difficulties, but opens also challenging perspectives of the so-called artificial intelligence\textsuperscript{19}.

The E/LIS, roughly speaking, makes the final judicial decision, i.e. determines the consequences of the proved facts of the case according to the applied legal rules. The functioning of E/LIS presupposes then the decision of validity and applicability of legal (cfr. point 8.1.) rule, which could be given by R/LIS, and the decision of evidence (cfr. point 8.3.), and a determination of the characteristics of the facts of the case relevant for the choice of legal consequences (cfr. point 8.4.).

There are two situations: (i) the applied legal rule determines only one consequence of the facts of the case, or (ii) there are more than one consequence, and the decision-maker ought to choose one or more consequences which are ex lege possible. The (i) situation makes the E/LIS an extremely easy proposition, but (ii) situation opens serious problems.

What are the conditions to make the E/LIS work in the situation of the (ii) type? It seems that there are the following conditions in question: (a) a complete descriptively formulated list of characteristics of the fact of the case relevant for the choice of consequences; (b) a complete list of consequences according to valid legal rules; (c) a set of criteria of choice adapted for algorithmical application; (d) a formulation of algorithmized operations ascribing of (a) to (b) by using (c)\textsuperscript{20}.

The (a) and (b) problems demand a reconstruction of the content of legal rules or are postulates de lege ferenda. The former case stimulates serious doubts, because some legal rules formulate the relevant features of facts in an open-ended and/or evaluative way, and the same holds for some types of consequences (e.g. some penal sanctions or consequences determined according to equity or justice). Sometimes ratio legis of this indeterminacy is to give to the decision-maker a choice for an individualized decision proper for a concrete case. Taking this into account any “reconstruction” of allegedly complete and descriptive list would be against the axiology of lex lata.

Also the (c) factor does not correspond de iure lata to the directives of choice formulated in law. These directives identify some of the features of the fact which should be taken into account when choosing consequences, but only exceptionally there is a one-one relation between them. It is so because the law-maker leaves some decisional lee-ways on purpose.

\textsuperscript{19} Cfr. in general C. Ciampi, Artificial Intelligence and Legal Information Systems, in Artificial Intelligence...

\textsuperscript{20} One discusses, however, theoretically “fuzzy algorithms” too, where the conditions put on the criteria of choice and operations are ex definitione not rigid cfr. L. Reesinger, Legal Reasoning by Analogy. A Model applying fuzzy set theory, in Artificial Intelligence...
Types of Legal Informatics Systems and Ideologies of Judicial Decision

14. The ideology of the bound judicial decision (cfr. point 5.1.) is linked with the faulty theory of judicial decisionmaking and of the legal system. The theoretical assumptions of this ideology are contrafactual if taken as features of each judicial decision and of the whole legal system and of each legal rule.

But supposing that these assumptions were true, then this ideology fits perfectly all the types of systems of legal informatics.

R/LIS presents no problems because the criteria of validity and applicability are treated as proper for the LSI.F. and LSFC provided that an application of the criteria of systemice validity do not require any evaluations. P/LIS presents no problems but seems not to be useful.

E/LIS also is quite feasible because the decision of evidence made, all remaining decisions are results of purely "logical" or "formal" operations. The E/LIS can be ascribed to the ideas of a "mechanical jurisprudence". The ideology of bound judicial decision has been created long before the construction of any LIS, but the idea of computerized decision is wholly adequate to the main ideas of this ideology: the exclusion of subjective human factor from the decision-making. What could be better for the implementation of the basic values of legal certainty, security and predictability than the decision-making in E/LIS?

15. The ideology of a free judicial decision (cfr. point 5.2.) is inconsistent with the functioning of the IIS, because LIS gives informations with are neither necessary nor sufficient for decision-making.

R/LIS is not relevant because the fuzziness of validity makes the decision concerning legal rules not certain, and, moreover, the decision-maker is not bound by these rules. The E/LIS is just the opposite of what proper judicial decision-making should be.

16. The ideology of legal and rational decision (cfr. points 5.3. 6.) has basic values: legality and rationality.

The implementation of the value of legality has to take into account that the valid legal rule and its meaning are, at least in some situations, not strictly determined, and that decisions of validity and decisions of interpretation do refer on evaluative choices (cfr. point 8.1. 8.2. 6.2.). These features determine the possibilities of construction and using of LIS.

R/LIS can be useful for implementation of the value of legality by giving correct information. But this information has two limitations: (a) the constructor of the R/LIS assumes some conception of validity and some notion of legal system correlated with it; (b) the choice of these conceptions and notions is not strictly determined by law the IIS deals with, but depends on
some extra-legal factors. The R/LIS can give, therefore, only an information which is pre-determined by the constructor, who tries to follow the well established legal practice and legal doctrine, if he doesn’t try to replace the law-maker. Because of the known fuzziness of the well established views on validity, there remains a margin of doubt in hard cases of validity. The R/LIS could give, hence, the good approximation of the set of valid legal rules, and cannot decide the problems of their meanings. R/LIS is an invaluable time-saving device, provided it is constructed according to the top technical standards, but cannot remove the basic features of fuzziness of validity of rules and of the language in which they are formulated.

P/LIS presents not problems, and can be used as a source of additional information, which in fact is relevant both for the decision-making process and for justification of decisions.

There are some rules applied to some situations which make E/LIS an operative possibility. But to make it a general model of decision-making demands deep changes in law and in its axiology (cfr. point 17). The *lex lata* gives several lee-ways and demands decisional choices on purpose, and not only as a result of faulty technique, fuzzy language and the lack of strict determination by some descriptively formulated rules of recognition. Moreover, E/LIS for *ex lata* has to cope not only with “what is valid, applicable rule of law in the case, and what meaning it has” but also with the decisions of evidence and decisions of the choice of consequence (cfr. point 13.).

It seems that R/LIS and P/LIS could help the rationality as a time-saving device, because of the technical features of data retrieval concerning legal rules and the knowledge of legal practice. An user of LIS is better equipped to formulate his decision and this increases his chance to give a better externally rational decision in the dimension of knowledge. These systems, however, do not function in the dimension of axiology, provided that the constructor of LIS does not impose some axiology on the decision-maker. This, however, would be contrary to the ideas of legality of judicial decision.

E/LIS *de lege lata* does not cover all judicial decisions. But where it can be properly constructed and function the internal rationality is guarantee by the construction of the automated decision-making. The external rationality depends on the constructor’s knowledge and his preferences and on the decision of evidence used in input of E/LIS.

**Conclusion**

17. The use of singled out types of LIS is presented from the point of view of the three ideologies of judicial decision, taking into account the theory of justified judicial decision.

There are important limitations of the R/LIS and E/LIS taking into account the *lex lata*, i.e. the fuzzy legal language, the fuzziness of validity correlated

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with various conceptions of legal system, and the looseness of several directives linked with purposeful lee-ways left for judicial decision.

This appears the background for discussing the relations of LIS and judicial decision-making. The actual relations described in the present essay present the LIS and their operation within the ideology of legal and rational decision. There are three attitudes which determine the possibilities of legal informatics for judicial decision-making and the features of law.\(^{21}\)

The attitude of extreme informatization of law is expressed in the following theses: (a) the use of LIS in law is a cultural necessity as a result of technological changes of our civilization; (b) the actual law is not adequate for using in the full scale the technically possible LIS; (c) the law should be changed so, as to make full use of the LIS in question operative; (d) the changes of law include such formulation of law that E/LIS would be possible as the instrument of a wholly certain and predictable decision-making; (e) this change means a radical transformation of the roles ascribed to the judge and to the law-maker: the former could be, eventually, superfluous.

The attitude of informatic status quo, means to preserve the present situation described in the present essay and is expressed in the following theses: (a) one should not change the historically developed judicial function and its axiology; (b) one ought to take steps to improve the technical level of law; (c) one ought to help the judge through eliminating the tasks which do not require his qualifications; (d) the LIS is a relevant instrument for (c) within the limits imposed by the features of law and responsibilities of judicial function.

The attitude of moderate informatization accepts the following theses: (a) the scope of judicial choices and the scope of judicial decision determined by applied legal rules depend on the scope ascribed to the law-making, and on the instrumental features of formulated law, and on the ideology of judicial decision-making; (b) informatization of law should be the consequence of choices concerning (a) assessing the proper task of judicial decisions which "cannot be a purely logical operation".\(^{22}\); (c) it is possible that some areas of legal regulation could be changed so, as to make the E/LIS decisions acceptable within the framework of the changing contemporary legal culture; (d) within that culture an elimination of judicial decision by E/LIS in the way discussed in this essay cannot be approved of, and changing the law so as to make E/LIS possible at the price of this culture is not justified; (e) informatics should be used for bettering the legal system.\(^{23}\)


23. "Mathematization of law" proposed by M. Sanchez-Mazas is used to describe legal system.
If the attitude of moderate informatization is accepted, then there would be a call for a critical appraisal of the law, and especially for eliminating the lee-ways where they are not the result of legislative purpose, and transferring where possible, the decision to the mechanisms not requiring the judicial skills. The moderate informatization attitude will result in enlarging the of use of LIS based on changes in law, in legislative technique and in the mechanisms of law-making, but without radical transformation of the axiology of judicial function and of the mutual relations between law-making and judicial law-applying in statutory law systems.