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**LEGAL FUTUROLOGY – POTENTIAL OF FORESIGHT RESEARCH IN
LEGAL SCIENCES: COULD LEGAL FUTUROLOGY BE TREATED AS AN
INDEPENDENT SCIENCE IN JURISPRUDENCE?**

Abstract: Forecasting the future in relation to the science of law has not been seriously considered so far. It is not only because the fact that half a century ago futurology was treated as an issue of science fiction. Doubts were raised by the specificity of law as a social science and its susceptibility to cultural factors which are impossible to predict. It was also not very clear what legal futurology was supposed to concern itself with and how to define it. Is it about the area of law in force or about the way of practicing the science of law? The limitations of futurological reflection also result from the fact that the characteristics of the law in force determine the way of conducting jurisprudential research. The former, in turn, as already signaled, operate within a wide spectrum of uncertainty.

The paper aims to answer the research question to what extent legal futurology, understood as a set of issues oriented towards the analysis of the future of law and legal science, can be cultivated as a sub-discipline within the structure of legal sciences.

Keywords: theory of law, methodology of law, legal science, futurology

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Introduction

On May 7, 1847, in Berlin, Julius Herman von Kirchman (1802-1884), who has been then a Berlin prosecutor since 1846, delivered a lecture that carried the title "On the lack of value of jurisprudence as a science" (Radbruch, 1924). A year later he published a book under the same title (Kirchman, 1848). Kirchman, who at that time was already quite a recognizable figure of legal practice and science, sharply attacked above all the proponents of the philosophy of law: years later called the "historical school". Kirchman effused on May 7, 1847: *Jurists have become worms that live in the rotten tree, turning away from what is healthy, nestling and spinning their filaments in what is diseased (...) the science of law becomes the handmaiden of chance, error, passion, and misunderstanding, looking only to the past. [...] Where positive law is unambiguous, the science of law should remain silent, for it has nothing to say* (Stelmach, 2012).

In the disciplines of legal studies, both historical and general, Julius Kirchman's speech is regarded as the symbolic beginning of continental legal positivism and the onset of a solid reflection on the methodological status of legal studies. Kirchman was no exception to the doubts raised whether jurisprudence is a science. From the very beginning, representatives of continental legal positivism drew attention to the defects of the hitherto practiced science of law due to the speculativeness of the conclusions and their impermanence. Demonstrating the deficits of the historical school (episodic philosophy of law, treated as a stage of transition between the dominance of *Ius naturale* and legal positivism), legal scholars such as Kirchman emphasized that the change of the law in force makes obsolete the considerations founded on the paradigm of the "spirit of the nation".

A fundamental methodological postulate of the nineteenth-century positivism was the desire to base the study of law on a naturalistic program of scientific inquiry. In this respect, the difference between the positivism operating within the framework of civil law tradition legal systems and the Anglo-Saxon orders quickly became apparent. In the latter, the issue was not so radically raised. It was rather a matter of analyzing the concepts operating in the legal discourse using semiotic analysis, while "programmatically excluding" axiological issues (Opalek & Wróblewski, 1991).

Meanwhile, the continental positivists quickly set the bar much higher. They wanted to shape the methodological foundations of jurisprudence in such a way that they would be modelled on – in their view – the most efficient in building scientific theories of applied science. On the basis of such assumptions developed, the division into general and detailed disciplines of jurisprudence, which is accepted to this day, developed. The latter, known as dogmatics, were to be oriented, on the basis of the adopted axioms, towards the analysis of the law binding in specific areas of regulation, the differentiation of which was carried out based on a logical division rather than an unspecified typology.

In principle, the contemporary jurisprudence differs little much from the formula formed during the second half of the 19th century. This observation is valid primarily with regard to continental jurisprudence. In relation to common law culture, among other things because of its internal diversity, I would not make such firm conclusions.

Meanwhile, the last two decades have seen a rapid development of sciences related to the acquisition, collection and processing of information. Advances in cyber-electronic technologies have led to transformations of civilization that happen in short time intervals. In some ways, this resembles the situation in the second half of the nineteenth century, when the rapid progress of the relevant sciences affected the social sciences, including law.

In some respects, contemporary jurisprudence is "looking back to the past" as well. However this fact is not commonly assessed in a pejorative way. For various reasons, both the needs of legal practice and prosaic academic didactics, it is pointed out that proper cognition and understanding of the law in force is facilitated by the knowledge of its genesis.

Forecasting the future in relation to the science of law has not been seriously considered so far. It is not only because the fact that half a century ago futurology was treated as an issue of science fiction (It is said that "Futurology was coined in 1943 by Ossip K. Flechtheim, a German refugee teaching at Atlanta University, to describe the science of predictive probability" – Butler, 2014). Doubts were raised by the specificity of law as a social science and its susceptibility to cultural factors which are impossible to predict (Beebe, 2013). It was also not very clear what legal futurology was supposed to concern itself with and how to define it (Ashby Pate, 2010). Is it about the area of law in force or about the way of practicing the science of law? The limitations of futurological reflection also result from the fact that the characteristics of the law in force determine the way of conducting jurisprudential research. The former, in turn, as already signaled, operate within a wide spectrum of uncertainty.

The progress of futurological studies in other social sciences (predictive research became an academic focus in the 1960s. – Butler, 2014), such as management, security sciences, political studies, has partially eliminated these doubts (Peerenboom, 2011). Also, improvement of information technology tools, both through the availability of hardware and software to conduct futures studies, are offsetting what was previously thought to be the impossibility of conducting futures research (Zacher, 1971). Ultimately, the challenges of the future in the form of climate change, economic transformation, social migration or the development of technology (including biotechnology) require that legal reflection includes an attempt to work out solutions not in the moment of need, but in order to have the means or legal constructs for the future, if necessary (Muller et al., 2012).

This paper aims to answer the research question to what extent legal futurology, understood as a set of issues oriented towards the analysis of the future of law and legal science, can be cultivated as a sub-discipline within the structure of legal sciences. Alternatively, could it be treated as an independent science within jurisprudence?

This issue also extends to the specific issues of legal studies and perhaps especially to interdisciplinary projects, which are geographic information systems (GIS) related projects. The use of new technologies, cooperation with experts from other sciences opens up the need for legal studies to develop methodological standards for undertaking research related to – generally speaking – futures studies.

The structure of legal sciences - some remarks in methodological and praxeological aspects

Looking from the position of the general methodology of sciences, one can doubt the legitimacy of treating jurisprudence as a conglomerate of various normative disciplines, unless the notion of "science" in relation to jurisprudence is not treated as such, which must each time meet the postulates of a separate object of research and an independent (or recapitulated) research method.

Nowadays, the structure of jurisprudence, which is unquestionably accepted, as a group of general (theory, philosophy and not always independently distinguished methodology of legal sciences), dogmatic (detailed sciences of jurisprudence), historical and empirical disciplines, which was developed in the second half of the 19th century under the influence of the positivist paradigm of practicing science. Such a division, with minor differences, is common in countries belonging to the culture of the statutory law.

The general acceptance of such an accepted structure of jurisprudence as a scientific discipline (excluding the common law culture) does not exclude the formulation of polemical remarks. Doubts can be formulated from the praxeological (utility) and methodological perspective. These are, of course, exemplary directions of critical reflection, but as one may think, they are fundamental for the theory (and philosophy) of law, bearing in mind that each theoretical thesis may be supported or inferred on the basis of a particular philosophical in accordance to legal thesis (Wróblewski, 1966).

Let us first address the praxeological issue. The aforementioned division makes jurisprudence a science of high internal heterogeneity. However, it stands in opposition to the convergence and unification processes observed for at least half a century. Both of them occur in the science and practice of law. The former are connected with the internationalisation of the issues of legal science and practice between the culture of the state law and the common law systems, in which there is no such strict division on the location of problems in specific sub-disciplines of legal studies. The unifying tendencies, on the other hand, concern the direction of development of the whole modern science, in which one tries to combine research problems and build theories that do not abstract the explanations from each other, but take into account the factors located in different sciences. It seems that the heterogeneous structure of jurisprudence hinders rather than facilitates the realization of its external integration, if only due to the generation of numerous methodological problems on the part of the science of law itself. Legal practice, on the other hand, faces completely different problems. Of course, the traditional division into branches of law remains valid and doubting its correctness seems to be an aberration. Especially that the division into civil, criminal and administrative law fulfils the conditions of logical differentiation because of the precisely specified criteria: the subject of regulation, the method of regulation, the type of legal relationship shaped by this regulation. All of them make it possible to divide the denotative scope of legal regulation into three scopes. For all three names exhaust the range of designations of the name: "legal regulation". The problem is, however, that it is the representatives of legal practice who observe that certain legal problems are located

in the area of different aspects of regulation. Also in the science of law itself the division into flagship dogmatics is increasingly perceived as insufficient, in view of the emergence of new sub-disciplines in their areas, which are characterised by far-reaching specialisation. We have observed it before, basically, mainly in the area of administrative law, but in the face of deepening specialisation also in the area of private law and even in the area of penal-material law the previously mentioned criteria of dividing dogmatics become too general, and a "penalist" from the area of penal- fiscal law sees qualitatively significant differences in relation to general penal law. All this, to put it succinctly, results from the increase in the number of legal regulations and the legislator's embracing of more and more new subjects of regulation.

While the praxeological aspect can be accepted or not, the polemic from the methodological perspective is more serious. It is about principals of the foundations of jurisprudence as a science. It should be noted that, as it has already been pointed out, the division into general, dogmatic, historical and empirical disciplines of jurisprudence does not meet the criterion of logical differentiation. It is a typology, and in addition, such, which does not always allow to precisely qualify research problems to a particular discipline. Difficulties of this kind are observed at the level of general science of jurisprudence. The literature indicates that in the statutory law legal culture the boundary between the theory and philosophy of law is not precisely defined and, in fact, it does not seem possible to define it. This gives rise to justified doubts as to the methodological correctness of the division of jurisprudential disciplines, since it does not allow for an answer to the question which of them should formulate theories concerning a given research problem. It is also worth noting that the division of general jurisprudential disciplines is itself "general" and does not take into account those subdisciplines which became independent especially after the Second World War. I mean here legal ethics (located within the philosophy of law), but also logic and legal argumentation. All of them are most often situated in the area of legal theory, but the latter – also following its genesis in the period of legal positivism – is most often divided into the theory of norms, interpretation and application of law. There is not enough space for logic and legal argumentation. The point is that important legal disciplines, which have been intensively developed during the last several decades and which are responsible for significant reformulation of thinking about law, are not included as such in the structure of jurisprudence. Logic has brought to the study of law the great importance of semiotic analysis and a pragmatic view of legal language. This made it possible to reject or at least reduce the significance of the naturalistic methodological postulate in relation to the phenomenon of law, which as social following the pattern of Anglo-Saxon analytical jurisprudence began to be analyzed in the form of conceptual studies. The division of the general sciences of jurisprudence does not take into account the transformations that took place as a result of the anti-naturalistic turn in the social sciences after World War II and the shift of attention to the discursive-argumentative aspect of law, the linking of theoretical issues with constitutional law, and legal reasoning being shaped by argumentative, "Perelmanian" logic. By necessity of the limited volume of the text, it is only possible to marshal these problems.

Meanwhile, the general sciences of jurisprudence still function according to the 19th century scale of issues and problems. The second aspect of methodological polemics with the existing structure of jurisprudence is connected with the already signaled requirement of distinguishing an independent object of research and an autonomous or recapitulated research method. These requirements result from the general methodology of sciences. The postulate of the methodological autonomy of jurisprudence was the fundamental problem, the solution of which ensured jurisprudence the status of a science. The reception of conceptual analysis to the specifics of normative reasoning allowed jurists, through the whole theory of exegesis, to construct a methodological apparatus that could meet these requirements. However, it is worth recalling that while it works in the field of analytical jurisprudence, on which the theory of law and dogmatic disciplines are based, it does not apply at all in the other disciplines classified as legal sciences. This is because the exegesis of a normative act – or more broadly – the theory of interpretation of law is not a basic research method in the historical and empirical disciplines of legal studies. The former use the historical method, although the interpretation of no longer binding sources of law takes place in the formula of exegetical or free hermeneutics, which is necessary due to the requirement to take into account the historical realities of their creation. Reading the meaning of the non-binding sources of law, or more broadly, of historical normative texts (which, after all, not all of them have the status of currently defined normative acts) in a limited way is carried out by using contemporary theories of interpretation, or general rules of exegesis. Another thing is that - as noted in the literature – the theory of legal interpretation is a "relatively young" discipline (Wańkowski, 1936), since it was developed at the end of the 19th century, and the directives of interpretation are not directly applicable to earlier historical sources. They are used by historians of law in an auxiliary way. The empirical sciences of jurisprudence form a conglomerate of disciplines with such a variety of subjects and methods recycled from other sciences that the methodological autonomy of jurisprudence does not apply to them at all. Thus, including the sociology of law, criminology, not to mention criminalistics or forensic psychology into the group of empirical legal sciences is an artificial typology within the framework of the division of disciplines, but it does not meet the requirements of autonomy of a given science, set out in the general methodology of sciences. Of course, it can be assumed (and so it is) that the name "science" within the concept of "legal science" is characterized by different attributes than "science" within the general methodology of sciences. In any case, it results in the current postulate of the still nineteenth-century positivism that the boundaries of jurisprudence are determined only by its autonomous research method, and all other disciplines, except for roman studies, should be excluded from jurisprudence and placed within the framework of other sciences proper to them. In this convention the sociology of law, like the philosophy of law, should be placed, respectively, as a subdiscipline of sociology and philosophy. The status of empirical disciplines of penal sciences would be unclear, however, taking into account the research area of, for example, victimology or criminalistics, the research

questions need to be answered from the perspective of their respective sciences, such as psychology or a given applied science.

Of course, there are other proposals for defining the structure of legal studies. For example, in 1990 Robert Alexy and Ralf Dreier pointed out the possibility of distinguishing the general juristic theory of law as a subject discipline and the theory of legal science as a metatheory of the general theory of law (Alexy & Dreier, 1990). This proposal, however, has not been widely adopted by the theoretical-legal discourse, and the division into scientific units within institutes or faculties of law in the entire legal culture reflects its structure outlined above.

The above in itself does not raise major problems, apart from still defining the methodological status of certain disciplines within the legal sciences. On the other hand, if we consider the possibility of incorporating into this structure innovative research areas which could be given the status of sub-disciplines, such as the issue of studying the future of law, then the question of the validity and usefulness of the existing typology of legal sciences is most justified.

Legal futurology – science or fantasy?

Stanislaw Lem in his famous science-fiction novel "Solaris", accurately summarizes in the words of its main character Kris Kelvin, that in the history of science there have been situations when "every science is always accompanied by some pseudoscience, its bizarre twisting [...] astronomy has its caricaturist in astrology, chemistry once had it in alchemy..." (Lem, 2012). Wondering about the possibility of integrating into the structure of legal sciences its sub-discipline in the form of legal futurology, the question arises whether we are dealing with such a pseudo-scientific "freak" (Lem, 2012) or could it be a real, new subdiscipline of jurisprudence, as it seems – classified as an empirical science and placed next to sociology of law, criminology, or legal psychology, which is rarely mentioned but has already gained its rightful place in this group?

Before we consider the answer to the question posed in this way, we should first consider whether the analysis of the development trends of certain research subjects in the science of law entitles us to assume that we are dealing with futurology (Andersson, 2018). Futurology is defined as, generally speaking, the study of the future, but one which, by means of empirical methods of analysis, is supposed to lead to conclusions which are considered to be true (Butler, 2014). Of course, we do not mean actual findings of what and how will happen. It is rather a question of making certain prospective assumptions which, on the basis of replicable procedures of empirical analysis, would have the same content if only different researchers had implemented a given method in the same way and procedurally applied it in the same way. We cannot predict all future factors. This is understandable, but what is involved is the ability to reach a rational conclusion about a particular phenomenon in the future on the basis of evaluation criteria currently accepted as true. Although logical categorical sentences do not apply to prospective sentences, this is true, of course, by analogy, of making

statements about the future in a manner similar to that of syllogistics, assuming other factors unchanged (the *ceteris paribus* clause).

It can be assumed that the veracity of the observation that modern science has the tools to conduct research on the development trend of certain phenomena will not be contested. Analyses of this kind should fit into the above, very generally outlined formula and, together with technological progress, should be part of the automation of at least some of the research processes (Barton & Bibas, 2017). The methods used to conduct futurological analysis are various. Taking into account the specificity and needs of legal sciences, the empirical prediction of development trends on the basis of the Delphi technique, or other surveys or questionnaire studies of experts may be applied in order to determine the direction of development of a given phenomenon, classified as one that falls within the area of interest of legal studies. Due to the characteristics of the legal phenomenon, it seems that various computer modeling techniques can be used in a limited way within the framework of legal futurology. Analyses of development trends using computer software may be applicable to the analysis of so-called hard indicators within individual sub-disciplines. However, they must not be confused with the focus of legal futurology itself. This is important as well. The fact that we analyze, for example, trends in the development of crime on the basis of data from previous years concerning the number of recorded crimes of a given type is in itself an example of studies on the future, but in itself does not entitle to qualify such analyses to the area of a possible new discipline of jurisprudence, which would be legal futurology. This type of research has already been conducted for many years – also because of the needs of practice – in existing disciplines, in this case within criminology. In order not to expose ourselves to the accusation of lack of precise distinction of the object of research for legal futurology, we should only define it by including previous research that has been successfully conducted in disciplines listed so far.

Let us remember that the basis for the evaluation of the legitimacy of the separation of a new sub-discipline in the structure of legal sciences is to obtain an answer not to the question whether it is possible to find already now single issues corresponding to the formula – in the scope of our interest – of the studies on the future, but whether it is possible to isolate the area, that is, the range of issues so far not analyzed or studied residually – fragmentarily and qualify them to the discipline of jurisprudence so far unknown. The second condition, formulated by the general methodology of sciences, concerns the possibility of defining an independent research method. In the case of legal futurology, this requirement is fulfilled by the reception of research methods for conducting studies on the future and incorporating them into the needs of legal sciences.

In order to clarify the complexity of the methodological problem outlined above, it should first be pointed out that obviously exegesis of a normative act is not applicable to futurological analyses. By contrast, it can itself be one of interest to legal futurology. Leaving aside the assessment of the effectiveness of such analyses and the possibility of endowing their results with the value of credibility, in this respect there is a difference between individual research issues which can already be qualified as formulas of futurological studies and the actual area of legal futurology as a sub-discipline of

jurisprudence. Only additionally, in passing, it may be noted that the analyses of analytical problems – such as the one signalled above, concerning the directions of development of the theory of exegesis, is precisely an example of the application of research techniques combined with the so-called foresight studies (including the Delphic analysis, which will be discussed in a moment).

Let us refer to the doubts which immediately arise from such requirements concerning the methodological correctness of distinguishing legal futurology in the structure of legal sciences. Predicting the directions of development of legal phenomena is difficult due to their interaction with factors from the extra-normative environment. Thus, studying – for example – the law-making process in some individual context (e.g., the development trends of criminal law guarantees), a large uncertainty immediately appears, which is due to a significant number of socio-political factors. In other words, in the case of legal phenomena, the difficulty of conducting studies on the future is due to the significant influence of unchanged factors that remain in relation to the studied phenomenon, which makes it difficult - as already mentioned - to endow these results with credibility, since they are worked out in conditions of considerable uncertainty. At the same time, the factors around the normative are also burdened with the same conditions. Thus, a whole spectrum of interactions appears, which, while allowing for some analysis of their developmental trends, are highly uncertain, so that futurological analyses of this kind, conducted in these contexts, are not treated as ones that generate scientifically certain conclusions.

The problems of legal futurology are also sometimes seen as studies on the evolution of specific legal institutions (Marano & Noussia, 2020). Such a research approach seems to be wishful thinking and results from a misunderstanding of futurology itself. It is difficult to predict what changes in positive law will occur in a certain period of time. Indeed, the aim of futurology is to conduct studies on the developmental tendencies of certain phenomena, and not in the context of legal sciences – on the development of particular legal institutions. Reflection of the latter kind can be undertaken at the level of individual legal dogmatics. Regardless of the assessment of the legitimacy and effectiveness of conducting such studies.

Legal futurology, meanwhile, should be associated with analyses of the legal science problems, and, as it seems, to a limited extent with the sphere of legal practice, due to the difficulty of conducting studies of this kind. Thus, legal futurology may cover – for example – not particular problems of law application or interpretation, but evolution of these legal phenomena based on current and assumed as future developmental tendencies of these aspects of law. Therefore, the subject of legal futurology is the study of the future of particular legal science disciplines or problems functioning in them as general research directions, and not particular dogmatic or theoretical-legal issues.

At the end of this part of the discussion, we should briefly refer to the signaled research methods that can be used within the legal futurology. The first catalog of such methods consists of survey or questionnaire-based expert research with a wide range in the formula of Delphi analysis. This type of research consists of a multi-stage questioning of experts in a given field (in the case of legal sciences, e.g. theorists dealing

with the theory of legal interpretation) to indicate the current conditions and future directions of development of a phenomenon within their area of competence. The next stage consists in revealing the aggregated results given by all the experts with a request to evaluate the conclusions reached and formulate further predictions about the development trends. The number of inquiry stages depends on the individual study, its specificity and the scope of analysis. This formula is characterized by the flexibility of the research methodology and allows it to be adapted to the requirements of a specific project. As it has already been mentioned, computer modeling techniques and specialized software enabling the determination of development trends of specific phenomena are of limited use in the case of legal futurology, due to the necessity to operate on quantitative variables, which would necessitate the operationalization of qualitative variables, characteristic of legal sciences in the studied scope, into quantitative variables. This does not always seem possible, and even if it is, it does not solve the difficulties of using such operationalized variables in computer modeling. In general, legal futurology would rely on sociological research methodology in formulating forecasts of the development of the science of law. The whole range of methods of this kind enters here, from the already mentioned questionnaire and survey research, to interviews, and even observations (external and participatory) and simulations (e.g. of different procedures of applying, making, interpreting the law, adapting new technical or organizational solutions to carry out such legal procedures). However, one cannot escape the doubt whether the above catalog of methods entitles legal futurology to the status of an independent sub-discipline in the structure of legal sciences, or whether it should be placed in one of the already existing disciplines of jurisprudence.

An attempt to summarize the potential of future studies in legal sciences

We have established that there is a potential in the area of legal sciences to undertake research classified in the general methodology of sciences as future studies. Thus, we have verified the first requirement for distinguishing legal futurology as a sub-discipline of legal science. We have also determined that the reflection on the evolution of legal science, rather than on specific institutions of positive law or problems of legal practice (therefore, the consideration of the evolution of, e.g., contract law should be qualified as the subject of civil law dogmatics and not legal futurology as a separate science in the structure of legal studies, cf – Borselli, 2020), should be the subject of its interest for praxeological reasons. The former, however difficult to analyse from a futurological perspective, are already nowadays – albeit rarely – undertaken by dogmatic disciplines and should be placed there, analysing the matter from the perspective of the methodology of legal sciences.

It is problematic, however, to meet the second requirement – to define a research method unique to legal futurology. To be more precise, these are methods used in the sociology of law, recycled for the purposes of studying the future. This also applies to the Delphi technique, which, although most often associated with futurological analyses, is also used as an instrument for improving decision-making processes in large

organizational units, analyzing their current status, etc. In other words, the Delphi technique is not unique to futurology per se. This raises methodological implications for legal futurology that this method, too, although considered effective, is not unique within futurology studies.

To summarize, there are fundamental methodological limitations to determining whether legal futurology deserves to be treated as an independent discipline within the structure of legal sciences and, if so, in which group of sciences it should be placed. In fact, the answer to this question depends on the accepted boundaries of legal studies itself. If we were to apply the currently rather unacceptable criteria of legal positivism, based on methodological naturalism, legal futurology could not be qualified as a science of law, just as all other empirical disciplines, because they do not use the formal-dogmatic method. However, nowadays, such rigorous postulates are rejected, and disciplines that recapitulate the methods of other sciences are included among legal sciences.

However, I have fundamental doubts whether legal futurology can be treated as an independent discipline among empirical sciences of jurisprudence. Understood as a reflection on the directions of legal science development, it seems more appropriate as a part of legal theory. The theory of law is usually divided into three basic sections: the theory of legal norms, the theory of law application and the theory of law interpretation. On the other hand, there are new groups of issues that do not fit into this traditional division of legal theory, such as jurisprudence or legisprudence (and also interdisciplinary issues, such as transhumanism, e.g. – Maj, 2019). Also legal cognitive science is located as a multidisciplinary issue in the area of legal theory. The fact that legal futurology is not treated as an independent discipline of legal studies does not depreciate its role or the importance of the analysed problems. It does, however, give rise to a reformulation of the division of legal theory itself, which is still based on typology and cognitive limits formulated for general jurisprudence, shaped during the domination of legal positivism. In this context, it may be worthwhile to separate the levels of legal theory, in a way referring to the already signalled proposal of Alexey and Dreier that the theory of law should be divided into two levels: a general theory of law and a detailed theory of legal sciences. The latter would take over the traditional, nowadays specified, divisions of the theory of law, which, after all, constitute a metadiscipline above the detailed sciences of jurisprudence. On the other hand, the general theory of law, which is divided into general analytical and empirical jurisprudence, could encompass all new research directions, which so far have been difficult to assign, and which also require an answer by the science of law to the postulate of theoretical unification of conducted analyses. This is combined with interdisciplinary research, which is not always the same thing (Bruhn, 2000; Bunge, 1983; Grobler, 2006). Then, legal futurology as a part of general, empirical theory of law could interact with legal cognitive science, jurisprudence (or cognitive jurisprudence) and try to shape empirical reflection on law, reducing all accusations of having no of methodological basis.

Reference

- Alexy R., Dreier R. (1990). The Concept of Jurisprudence. *Ratio Juris*, vol. 3, no. 1, pp. 1–13. <https://doi.org/10.1111/j.1467-9337.1990.tb00047.x>
- Andersson J. (2018). *The Future of the World*. Oxford.
- Pate R.A. (2010). The future of harmonization: soft law instruments and the principled advance of International Lawmaking. *Toronto International Law Review*, vol. 13, no. 2, 23 pp.
- Barton B.H., Bibas S. (2017). *Rebooting justice. More technology, fewer lawyers, and the future of law*. London.
- Beebe B. (2013). Fair Use and Legal Futurism. *Law & Literature*, vol. 25, no. 1, pp. 10–19.
- Borselli A. (2020). Smart Contracts in Insurance: A Law and Futurology Perspective. In: P. Marano, K. Noussia (ed.), *InsurTech: A Legal and Regulatory View*. AIDA Europe Research Series on Insurance Law and Regulation, vol 1. Springer, Cham. https://doi.org/10.1007/978-3-030-27386-6_5
- Bruhn J.G. (2000). Interdisciplinary research: a philosophy, art form, artifact or antidote? *Integrative Physiological Behavioral Science*, vol. 35(1), p. 58–66.
- Bunge M. (1983). *Treatise on Basic Philosophy*, vol. 6, Epistemology & Methodology II: Understanding the World, Reidel, Dordrecht, p. 219–221.
- Butler A.M. (2014). Futurology. *The Oxford Handbook of Science Fiction*. DOI: 10.1093/oxfordhb/9780199838844.013.0040
- Grobler A. (2006). *Metodology of Sciences*. Wydawnictwo Aureus-Znak, Cracow.
- Kirchman J. (1848, reprint 1990). *Die Wertlosigkeit der Jurisprudenz als Wissenschaft (The worthlessness of jurisprudence as a body of knowledge)*.
- Lem S. (2012). *Solaris*. Wyd. Literackie, Warsaw.
- Maj M. (2019). Artificial intelligence and robots as a challenge for law. <https://doi.org/10.34616/23.19.064>
- Marano P., Noussia K. (ed.) (2020). *InsurTech: A Legal and Regulatory View*, vol. 1, Springer.
- Muller S., Frishman S.Z.M., Kistemaker L. (ed.) (2012). *The Law of the Future and the Future of Law: Volume II*. Hague.
- Opalek K., Wróblewski J. (1991). *Law: methodology, philosophy, theory of law*. Warsaw.
- Peerenboom R. (2011). The future of Law in a Multi-Polar World: Toward a Global New Deal. In: S. Muller, S.Z.M. Frishman, L. Kistemaker (ed.), *The Law of the Future and the Future of Law*. Oslo.
- Radbruch G. (1924). *Introduction to jurisprudence*. Warsaw.
- Stelmach J. (2012). Positivist myths of legal method. *Legal Forum*, no. 3 (11).
- Waśkowski E. (1936). *Theory of interpretation of civil law*. Warsaw.
- Wróblewski J. (1966). The philosophical and aphilosophical attitude in the contemporary theory of law. *Studia Prawnicze*, no. 13.
- Zacher L.W. (1971). Technical change and structural and social transformation – futurological remarks. *Humanization of Labour*, no. 5–6.