On the Future of Legal Science

Peter Wahlgren

Studying the Future

To study the future, demanding exactitude and concreteness of the study's results, is impossible. The future does not exist in the material world, and as it approaches, it continuously changes its shape. Studies of the future will therefore always contain a degree of speculation.

Difficulty in obtaining unambiguous results is, however, no reason for neglecting or abandoning studies of the future. On the contrary, analyses of the future are in many cases indispensable, and staying aware of ongoing changes and adapting to them is in most cases absolutely necessary. It is also clear that all forms of future studies are not equally problematic: a lot can be predicted with a high degree of probability, and one can also identify some of the factors that influence the likelihood of reaching interesting results.

It is obvious, for example, that the longer the time to be surveyed, the more difficult it becomes. Equally, being able to prophesy about the future depends on one's knowledge of the phenomena that one tries to understand. The object of one's study is, naturally, also important - the more complex it is, the more difficult is the task of predicting the development. In addition, the pace of change exhibited by a given phenomenon is something that has a decisive influence on the possibilities of any meaningful speculation.

Complexity and the pace of change are factors which highly concern future studies in various fields of science. Scientific activities vary in kind, and can be revised in several ways: step by step, as new knowledge is added to the old, but also in a more drastic way if the outlooks undergo radical changes, or, as it is sometimes described, when the paradigms shift.¹

Scientific progress and the consequences entailed by such progress belong therefore to the phenomena which are particularly difficult to foresee. To illustrate the complexity of such a task one can try to go back in time one

Paradigm – "the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community." Kuhn, Thomas. *The Structure of Scientific Revolutions*. The University of Chicago Press, Chicago, 2nd ed., 1970, p. 175.

hundred years, and from that perspective attempt to specify that which could have been reasonably safely predicted about the future at that time. It can be assumed then that even the most far-sighted people would have most probably completely failed to predict many of the things that have changed the essential prerequisites for the human race only fifty years later. From the perspective of the late 1890s it was impossible to anticipate the extent of changes that would be brought about by, for example, aviation, motorization, antibiotics, the Relativity Theory, nuclear fission, radio, television, development in mathematical logic and construction of the first computers.

As regards scientific development it appears also that in many respects the pace of this development is accelerating. As late as twenty-five years ago there were very few people, if any at all, that could predict the full extent of the revolution within information technology (IT), made possible by computers and telecommunications. This development has in turn paved the way for extremely intensive development of methodology, and increased efficiency in the majority of scientific and technical areas. In the last decade IT, together with exponentially growing calculation possibilities, have frequently changed in a decisive way the prerequisites for scientific activities and other work.

Looking back at past history it would be prudent for those who try to analyze the future of scientific development to assume a cautious attitude. The task may even appear impracticable, and it is not unusual that the judgement of posterity over those who tried to predict the future of scientific changes is harsh: "Nothing is usually more obsolete... than yesterday's visions of the future. No matter whether they contain some truth, or whether they end up far away from the reality, they usually make a naive impression, emphasize the wrong aspects and misjudge the consequences of what goes on at the time."²

Studying the Future of Legal Science

Difficulties in predicting scientific changes do not need to constitute an obstacle to studies of the future in the field of legal science. The development of legal science, which has been relatively stable in many respects, differs in many ways from the more or less revolutionary development that can be observed in other domains. The paradigm shifts can easily be calculated here, and when the pace of development becomes uneven, it proceeds in small jumps. An established point of view also indicates that the object of legal science is primarily of the legal dogmatic kind, i.e. that the main task of legal science is to investigate and systematize the applicable law. In such an approach it is often assumed that the selected method is a familiar and a well-functioning one, and that any explanations that must be given are related to the way in which the separate sources of law relate to each other in the area in question. The research material - the applicable law - is something given here, and the only things to be done on the theoretical plane are to find a compromise between the seemingly incompatible standpoints expressed in the old masters' works, spread the existing knowledge, and make sure that the method is preserved and that it will

Rasmuson, Marianne. *Visioner om ventenskapens framtid.* Svenska Dagbladet, 1995-10-10, p. 23.

be used. Such an approach may also embrace the viewpoint that it is incorrect to draw parallels between legal science and other forms of science, or, in any case, that results obtained in the field of legal science are of a different, special character.3

Looking at legal science from a somewhat different perspective there is some reason to claim that it has not yet reached the stage when it is correct to speak of paradigms at all. Studies in legal science are, not uncommonly, of quite a disparate character. In addition to contributions of a purely legal dogmatic kind there is a wide spectrum of various traditions, each generating studies of a different type. On the other hand, trying to study the development in general in order to discern uniformity of the research results may be a problematic task. The studies relate to many different things, discussing under the same heading of "legal science" a variety of issues, such as the nature of law, legitimacy of the legal system, legal argumentation, the logic of law, norms, rights, the hierarchy of legal sources, etc. The situation is complicated by the fact that many of the discussed issues can be approached from different perspectives, and that, not infrequently, several approaches have been developed, which are sometimes incompatible.

"We have many different theories about the law or what the law is. These theories are all proper theories, but yet they contradict each other because each one rests on or entails very different sets of presuppositions which reflect very disparate moral, ontological and epistemological beliefs or doctrines. Nearly every general philosophy or philosophical school has implications for legal theory? Nearly every legal philosophy is a special case of, or application to law of a more general philosophical position?"5

If we disregard the issue concerning the question which of the approaches to the nature of legal science that is correct, it seems to be relatively clear that, with the exception of the production in the area of legal dogmatics which is of central importance, the practical results of legal science are relatively modest. The discussions are mainly theoretical, and the knowledge that is accumulated is discussed primarily in contexts that are isolated from the general development of society. It is likewise difficult to compose a longer list that would show point by point how the theoretical results of legal science have been reflected in practical legal applications. To put it bluntly, it can be said that the method and the type of grounds employed by, for example, judges or authors of legal investigations

[&]quot;In the natural sciences the value of a scientific work depends often on the fact that it affords the public a discovery in the sense that it establishes a factual relationship or connection that was earlier unknown. In legal science discoveries of this kind are seldom, if ever, possible. The important thing is for a given work to convince others, gaining importance in this way." Hellner, Jan. Kvalitetskriterier i rättsvetenskapen. Arbeidsretlig tidskrift, 1985, p. 241 [Original in Swedish].

^{4 &}quot;Before [the post-paradigm period] occurs, a number of schools compete for the domination of a given field. Afterward, in the wake of some notable scientific achievement, the number of schools is greatly reduced, ordinarily to one, and a more efficient mode of scientific practice begins." Kuhn, op. cit., p. 178.

Smith, J.C. Recension av Wahlgren, Peter; Automation of Legal Reasoning. Juridisk tidskrift, 1993-94, p. 248.

in their decision-making process have remained unaltered over time. In more guarded terms one can say that the implemented changes reflex to a large degree administrative measures and ways of increasing efficiency whose sources can be found in areas other than that of legal science.

"We have settled no matters of controversy. We have only reframed from generation to generation the same old issues which divided the Pre-Socratics from the Platonists, the Platonists from the Aristotelians, the Aristotelians from the Stoics, and so on, throughout history. We have reached no agreement. The Critical Legal Theorists have taken over the positions of rule scepticism from the American Legal Realists; the Right Theorists have replaced traditional natural law; and analytical positivism, like the proverbial snake sheds its skin from generation to generation to adapt legal theory to the latest version of philosophical positivism."

The point of view suggested above may be somewhat controversial. In this context it is not important, however, to decide on the extent to which it reflects the development of legal science. The aim is rather different here, and that is to show that legal science can be understood in at least two different ways: as a practical activity centred around the production of legal dogmatic investigations, and as a comprehensive term covering a number of primarily technically-oriented studies with different orientations. One additional intention is to demonstrate that it is possible to consider the development of legal science and the results that have been achieved in this field until the present moment from a relatively critical angle.

What Influences the Future?

One point of view implying that both legal dogmatics and more theoreticallyoriented legal science are relatively immutable subjects suggests that speculations about their future development may seem to be straightforward enough. Nevertheless, this may not be the case: there are many signs at present, indicating that conditions are changing even in this area. Some of the factors appear more central than others, but in a discussion about the future there is at least one factor which appears to deserve a more profound analysis - the quickly growing social pace of change.

The reason why the pace of change appears to be one of the most significant aspects is simply the fact that in a growing number of areas it is becoming obvious that readiness to meet changes and ability for adaptation are qualities of increasing importance. This applies not only to individuals, organisations and authorities, but also to society as a whole, which is why it would be interesting to consider the significance of this phenomenon for legal science. Solely due to considerations of space the following discussion has been restricted, however, to the contemplation of ways in which the growing pace of change may come to be reflected in the activities of legal dogmatics.

⁶ Smith, op. cit., p. 249.

Pace of Change and the Legal Dogmatic Method

The growing pace of change is something that can be observed in many ways. Development of IT, improved communications and internationalization are some of the phenomena that reflect this most clearly. It is also clear that the accelerating pace of social development, speeded up by technical and scientific progress, constantly generate new products and new ways of looking at things. It is equally clear that the implemented changes create new problems of different kinds. Examples illustrating the above can be found in almost any area. This is why the first trivial conclusion is that as regards legal science it is reasonably safe to predict that even in the future there will be new phenomena and new questions to be analyzed.

Accelerating social development manifests itself not only through the emergence of new areas that have to be legally regulated. Even the wellestablished branches of law may become subject to violent upheavals accompanied by requirements for alterations and changes. The normative function of law comes into play then, when it must specify what is to happen if the existing conditions change and it may be necessary to revise the whole system. In some cases it may be assumed that classification of the legal material into subjects and legal systematics will have to undergo serious changes. One factor that can seriously contribute to the latter is internationalization of law, but even changes in the approach to social phenomena may call forth new, "inter-juridical" disciplines of the type exemplified by environmental law and women's law.

Predicting which areas will require an extra effort in legal dogmatic work due to the ever-increasing pace of development is pointless, because reality is too complex and too unpredictable. Some of the areas discernible even today are probably going to successively attract more and more attention. IT, genetic engineering, natural environment, and issues that have to do with internationalization stand out as the most expansive ones within the nearest future. All this can quickly change, however, and the development may proceed along totally different lines. What legal problems could emerge, for example, in such interdisciplinary ventures like the ones concerning the DNA technology, holographic representation and the communication theories?⁸

At a more general level one can also assume, however, that the accelerating social pace of change must be reflected in the way in which the legal system develops - in more or less the same way in which societies with well-developed administration and technology seem to grow hand in hand with the development of law away from casuistic type of legislation and towards better developed legal systematicity. The pace of change is therefore also something that may come to be reflected in the way in which the legal dogmatic work is conducted.

The question that can be asked at this stage is thus whether the everincreasing pace of social development is not going to emphasize the need for

See, e.g., Europagemenskap och rättsvetenskap, Iustus Förlag AB, Uppsala, p. 15, 21 and passim.

Cf. Zeilinger, Anton, Quantum Teleportation: The Future of Travel? Or of Computing, Scientific American, April 2000 pp. 32-41.

more fundamentally oriented, long-term legal activities. It may seem paradoxical, but the need for more long-term research can be anticipated in several ways. One indication is that in a growing number of areas it is becoming increasingly clear that traditional legislation activities are insufficient. This state of affairs is illustrated, among other things, by the fact that astonishingly many problem complexes of central importance remain unregulated, despite the fact that those most closely affected insist upon introduction of legal measures. In other cases it seems to be indisputable that solutions offered by the legal system are old-fashioned, and it is also obvious that the shortcomings of the legal system can be observed most clearly in the areas undergoing quick changes.

An example of the latter may be found in the form of protection of intellectual achievements (copyright based on protection against copying in times when the possibilities to copy, reshape and spread products are more or less freely accessible to anyone), legislation on privacy (based on antiquated premises with regard to technical prerequisites and perhaps also on the misjudgment of risks and possibilities⁹), as well as regulations governing international trade and the exchange of information via telecommunications and the Internet (in practice non-existent as regards the selection of laws, liability, etc.). The stamp of patchwork is also borne by the proposals (in many respects not even implemented) that have been presented under the heading of computer penal law¹⁰ and those measures that have been taken in order to facilitate making use of IT in the administration and judicature. The two latter sectors of activities have had for a long time very good possibilities for promoting efficiency and a better use of resources, but part of the existing legislation in the area seems to have had a rather hampering influence on their development.

The adaptation difficulties suggested here can be explained to a large degree by the fact that the phenomena to be regulated are frequently rather complicated, and that a lot of time may be needed to get acquainted with different questions. Difficulties with access create problems not only for lawyers working with the material, but are also in many cases the reason for the delays in necessary political initiatives, owing to the fact that, among other things, it is difficult to work out appropriate legislative directives. This is accompanied by the fact that the phenomena that are to be regulated may be undergoing more or less continuous changes, which, coupled with the fact that the legislative process shall be normally conducted within narrow time limits, makes it difficult to make any more profound changes in the regulatory system.

Against this background it seems natural to ask whether the central task of future work in legal science is not perhaps intensification of the conceptual and operational analyses so that they can be conducted even more earnestly than they are today. Expressed in another way it means that the "traditional legal dogmatic method", i.e. the systematic survey of legislation, case law, preparatory works

Regarding the need for an "urgent" revision or for a "priority to revise" the Data Protection Act, see, Toppledarforum/Datainspektionen, *Lexit*, Stockholm 1995, p. 10.

¹⁰ The awareness that these perspectives should be supplemented in different respects can also be detected in a recent, comprehensible report in the area. See, *Information och den nya informationsteknologin: Straff och processrättsliga frågor m.m.* Betänkande av Datastraffrättsutredningen, Stockholm 1992 (SOU 1992:110), pp. 155, 334 and passim.

and doctrines, should be in many cases supplemented, and furthermore, that legal science may need to concentrate more on developing domain-specific knowledge of a more fundamental kind. All this should be done with a view to focusing the work on the future in a more pronounced way, and diminishing the risk of short-term, ill-founded solutions.

A legal-scientific strategy based to a greater degree on domain-specific competence means above all an attitude in which deep and profound understanding of the discussed phenomena should obtain more central importance. Behind this view lies the simple assumption that analyses which take notice of the conditions prevailing in the different domains right from the start have much bigger chances of becoming successful than works that proceed, more or less spontaneously, from various constructions of legal concepts (which can be obsolete in the worst of cases).¹¹

A more long-term legal scientific strategy based on more advanced conceptual and functional analyses presupposes in its turn several other things. In some cases it is obvious that more intensive surveillance and analysis of technical and scientific progress are necessary. In other cases a wider perspective will probably indicate that more general solutions can be applied. The privacy legislation mentioned earlier may serve here as a possible example. In yet other cases the investigations may have to be supplemented with wellinformed discussions about the ways in which different objectives, conflicting interests and purposes shall be valued and prioritized. It would seem to be a reasonable argument to propose, namely, that legal science cannot, or even should not, try to compete with large research divisions within organisations, departments and companies whose activities are more or less controlled by political and commercial considerations. The task of legal science seems to be in the first hand to be able to concentrate its resources to a greater degree in order to furnish neutral analyses, and, at a more specific level, to develop useful conceptual instruments that are not too bound up with more or less short-lived technical prerequisites.

The approach here developed includes also the view that law may need to be considered to a much higher degree than today as a dynamic system in which alterations, revisions and adaptations are its natural elements. Another important condition to note in this respect is that professional work of renewal and change implies systematic effort and high methodological awareness. It is therefore natural to ask in this context whether follow-ups and analyses of undertaken measures will not be in constantly greater demand. Systematic compilation of general knowledge about the effects of regulatory systems, which cannot be said to constitute any central activity of legal science today, can be assumed to facilitate the debate about good and bad solutions, contributing in this way to better awareness of aims and methods of legal contributions in different types of activities.

Creation of a pool of knowledge that is suggested here may have immediate consequences for the more methodologically oriented theoretical research in legal science, i.e. more dynamic development of law seems to clearly

¹¹ Regarding this point of view presented in more detail, See, Sandgren, Claes, *On Empirical Legal Science, supra* p 445-482, in this volume of Scandinavian Studies in Law.

presuppose a more highly developed methodology. This means also that the list of questions that should be considered more closely can be made very long. What stages in a working process can be identified in the legal dogmatic method, for example? What categories of information and/or knowledge are best suited for legal analysis? In what way shall knowledge be collected? How shall the material be documented? Does the legal material contain recurrent structures components (e.g. substantive, methodological or formal rules, or systematizing and defining concepts) that can consistently be used for the creation of more lucid regulatory products? What stages can be identified in the more analytical working process? How does one choose between, and how does one learn to recognize various categories of concepts? What is a suitable way to formulate legal concepts? What relations can be identified between different types of concepts? How are rules created? Are there any methods used in the legal dogmatic work that can be expressed with the help of formal logic, or is it done in a different way - and if so, how? How does one test a system of rules to see whether it is non-contradictory? How does one assess rule effectiveness and the effects of application of the law, etc?

Important in this context is likewise that also the growth of a rule system makes demands on the results obtained from the analysis. Some of the needs that can be predicted to appear then can be described as needs having to do with the formation of a general idea of the system. It has to do in such cases with the development and adjustment of an all-embracing systematics - or a way of looking at things, or a theory - that will be able not only to reflect the traditional classifications of legal problems, but also handle new, suddenly appearing perspectives, and manage to integrate various international approaches.

In many cases it is naturally desirable that revisions of the legal corpus are made without delay. It is already the case, but one can assume that requirements of quick handling will grow concurrently with the accelerating pace of development. Meeting such demands is not completely unproblematic, of course, and there is a number of qualitative aspects to be taken into consideration in this respect. For example, the result of a change in the orientation of a given work should not appear in the form of generally preserved preambles or imprecise general clauses. Developing a deeper perspective does not mean developing just a system of rules based on more general concepts. Another important thing is also that being in a hurry must not be used as an excuse for letting quantity go before quality. In many areas it may be equally necessary to try to lift one's gaze to see the connection between different activities and different types of legal solutions - something that may require a much bigger legal scientific effort since the material to be analyzed will be more voluminous. At the same time this may lead towards much more lucid and suitable solutions. Neither should one necessarily aim at being able to argue de lege ferenda, which could be perceived, perhaps, as controversial from the more traditional perspective of legal dogmatics. Instead, one should try first of all to create prerequisites for more well-informed discussions and well-founded solution proposals.

Furthermore, it must be emphasized that a more long-term perspective is not contradictory to legal scientific work of a practical kind in the form of legal investigations and solutions to legal problems. The viewpoints presented here

are only the expression of a need that may arise at some later stage to put legal problem solving in a wider context, and the fact that in many areas it still appears to be important to focus on comprehensive, long-term issues and the formation of concepts. Moreover, it should be stated that such an approach does not mean any radical change in the kind of results that can be expected. A deeper, long-term perspective does not either have to mean abandoning the traditional legal dogmatic work in the form of analysis, systematization and codification of concepts. Even the more long-term type of work must be based on such activities, and such efforts will also lead to investigations and proposals of the kind we now know. The difference will in the best of cases be that the proposals of solutions may be slightly better-adjusted to the respective conditions prevailing in the different domains, perhaps being therefore also more anticipatory.

Organisational Issues

The necessity of closer cooperation between legal science and representatives of areas strongly exposed to changes may be taken, in many cases, to be of permanent character, which is why it is obvious that all measures that may facilitate such cooperation should be tested. Methodological development of the kind suggested above seems also to be a good reason for the testing of a scenario in which centres of competence are set up for different domains, with representatives of legal science as well as different experts working together in a more long-term perspective.¹² There are various reasons for this.

Providing the work with a more solid organizational base is something that may markedly improve the communication between legal science and the practical activities that it aims to regulate. This measure is urgently needed in many areas simply because from a narrow legal perspective it is often rather difficult to make the correct estimate of the progress that has been made. Difficulties are sometimes quite considerable in this respect, and in many areas it is quite obvious that representatives of legal science cannot be entrusted straight off with the task of formulating long-term solutions of good quality on their own. One can also speculate as to whether the traditional measures employed in order to overcome legislative problems, i.e. assembling a few clever experts and lawyers in an ad hoc way, and telling them to come up with solutions, are not becoming increasingly insufficient as the growing number of activities become more and more complex.

¹² Proposals in this direction have been made regarding, for example, the setting up of special law offices of the European Community, *op. cit.* note 7, p. 20. A special working team - Toppledarforum - has also been formed to assist in the development of operations in public administration; see, Toppledarforum/Datainspektionen, *Lexit*, Datainspektionen, Stockholm 1995 and Toppledarforum/Statskontoret: *Offentlighet och IT: vägledning för den offentliga förvaltningen*, Statskontoret, Stockholm, 1995 (Statskontoret report 1995:14). Similar ideas have been purported concerning computer law and legal issues surrounding IT: Seipel, P. *En strategi för datarätten: IT:s juridik*. Institutet för rättinformatik, Stockholm 1995 (IRI-PM 1995:13), and in 1996 an *IT Law Observatory* attached to the Swedish Government was established, see "http://www.itkommissionen.se/observ/index.htm".

This implies, in other words, that in many areas one can anticipate the appearance of a need for more pronounced interdisciplinary competence, or, in any case, of a need for competence that will be characterized by more than just the way of thinking which is typical of the legal discipline or specific, activityoriented considerations. In this context it is also important that in different spheres of activities there exists mutual understanding about implicit assumptions concerning objectives and means with which to achieve them; even in this respect it can be noted that frequently enough the approaches show considerable differences. In many cases it is also so that the language and the conceptual apparatus that are used in law, as compared to those used in the different spheres of activities that are to be regulated, are quite distinct. It may take some time, however, before this fact is noticed, whereas the possibilities of misunderstanding are always much bigger than can be imagined. For example, the notion of "damage" has a totally different meaning for someone discussing suitable machine constructions in a factory, as compared to that when it is understood as the notion of liability when used by lawyers; the notion of "document" differs considerably depending on whether it is used, for example, by a system developer or a lawyer; the programmer's use of the notion of rules is completely different from the judge's way of thinking in terms of rule systems, etc.

Yet another reason for closer cooperation between legal science and the relevant spheres of activities is that it will become more and more important to be able to quickly identify new routes of development. The fact that construction of the technical and scientific systems will become increasingly complex in many areas means namely that law may need to be "built into" the different spheres of activities in which legal considerations should be continuously taken into account. To discover that the newly built factory does not meet the law's environmental standards, that the authority's customised document handling system cannot distinguish between classified information and information which must be open to the public with respect to the Freedom of Information Act, or to find out that the technically advanced system for measuring efficiency of employees' work performed by their computers at home is in conflict with the working hours legislation can indeed be a costly discovery causing many practical difficulties.

Another reason why organizational measures seem to be well-motivated is that, if properly applied, such measures can also be presumed to facilitate more goal-oriented coordination of legal scientific resources. A more solid and more highly developed organisation is therefore justified also by the fact that problem solving in an increasingly dynamic and technically complex society seems to demand a greater amount of systematic effort and more goal-oriented activities. This applies also to legal science where both personal as well as other resources may have to be used more cooperatively than it is now usual. One can also speculate as to whether the scope for personal contributions will not diminish with time. Another possible consequence of the development that has been sketched out here is thus a future in which legal scientists may have to specialize in an even higher degree than what is now the case.

Different organization of legal scientific activities can also be predicted for other reasons. It is evident, for example, that the emerging, increasingly digitalized society places new demands on legal scientific production. It is clear in this respect that there will be an increasing demand for legal material to be delivered in the electronic form. From this it is also evident that authors of legal scientific work will become more and more dependent on electronic aid, making that the traditional legal dogmatic method will have to be adjusted to the fact that the underlying traditional legal sources have changed their form.

It is also for this reason that one can predict the necessity of coordinated effort. More advanced products, as well as technical prerequisites for the production of ambitious electronic products, can be achieved namely only through cooperation between persons possessing different kinds of skills and competence. At the present moment tendencies in this direction can be discerned in the fact that university faculties of law, similarly to other large work places employing lawyers, develop their competence by recruiting persons with special skills in data communication and application programs. In the future one can also foresee the need for cooperation between persons with special knowledge of legal structures (text and document representations must be supplemented with other forms of information), technical standards for the marking of texts (texts must be able to have several different functions), with experience from operational analysis and systems engineering (digital aids must be adapted to legal work processes), knowledge of graphic design for multimedia (the presentations must be comprehensible and user-friendly), etc. It can also be foreseen that the traditional knowledge of the substantive aspects of law will have to be supplemented with knowledge about user situations and insights into functions of law in different respects in order to be able to work out the kind of products and services that should be developed.

Perhaps it is the last-mentioned, i.e. the understanding of how new possibilities should best be used, that is going to play the most important role in the future development of legal science.