SOME METHODOLOGICAL REMARKS ON KNOWLEDGE MANAGEMENT/GOVERNANCE

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Purpose: Analysis of logical/methodological relations between various scientific disciplines studying knowledge (its structure, development, impact on society etc.). Author's conviction that that further integration of these disciplines is of greater and greater practical importance in knowledge society/information civilization – it was the main motive for preparation of this text.

Design/methodology/approach: Combination of logical analysis with some elements of the history of science/knowledge and general history of the 20th century.

Findings: Two challenges for the theory of knowledge management/governance were identified and some suggestions how to cope with were presented.

Research limitations/implications: Due to complexity of problems analyzed in this paper, it can only be regarded as an attempt at a description (a "map") of the *problematique.*

Practical implications: Possible practical implications of analyzes presented this can be of indirect character: they might inspire some efforts oriented at restructuration of various mechanisms (institutional, legal, financial…) influencing development of knowledge/science and its role in the comprehensive development of society.

Social implications: In the (very) long run, the results of these studies might contribute to making various collective decisions (political including) more and more rational

Originality/value: The formulation of problems (paradoxes) indicating some possible ways on which their solutions could be sought. The paper is addressed to management theoreticians, sociologist, philosophers and all other persons interested in actual and possible roles knowledge/science plays/could play in (the global) society.

Keywords: globalization, production of knowledge, distribution of knowledge, consumption of knowledge, knowledge governance.

Category of the paper: View point.

1. Introduction

"Our times" – the last decades (symbolically: from 1989 – "Round Table" in Warsaw and the fall of Berlin Wall, or from 1972 – the Stockholm UN Conference and publication of the "Limits to Growth", or even from 1945) can be characterized in quite a few ways (rather

complementary then alternative). Commencing the presentation of this paper, I would like to say – following (Handy, 1995) – that "our times" are times of paradoxes. One could add: of great many paradoxes. Obviously, I do not intend to provide even just a list of them; I am going to speak only about two of them: about paradoxes that inspired me – among other things – to write this text. To formulate them three/four notions will be essential: globalization, democracy and knowledge society/information civilization.

Quite a few interesting definitions of globalization were formulated (e.g. Bauman, 1999; Morin, Kern, 1993) Very useful and comprehensive overview was provided by (Scholte, 2005). In my opinion, the variety of these definitions is neither incidental nor (necessarily) reflecting different theoretical stances: Globalization – intuitively comprehended – is a very complex process and this variety reflects (though not exclusively) this complexity. Thus, formulating my own definition (perhaps similar definition have already been formulated but I know nothing about it), I am not going to claim that it would be better than others – in any sense. I want but draw attention of the Reader to this aspect of globalization which is of central importance – in the context of problems to be discussed in the present text.

By globalization I mean the process of (mainly: spontaneous) creation of one eco-techno-socio-system encompassing the whole planet (and, perhaps we should add taking into account the revival of interest in the exploration of the Space: its surrounding). Without elaborate considerations, let's only stress that the concept of eco-techno-socio-system combines the notions of ecosphere, of techno-sphere, and of global society. And the word "system" should be regarded as a "link" to general system theory. Let's also underline that introducing this definition expresses the factual thesis stating that the process of creation of this system does take place.

Now, a few words on democracy. Any elaborated discussion of this notion is impossible here (and a short one is unnecessary); I am going to formulate only one comment: Speaking in this paper about democracy I mean mainly its particular (one might also say: "demanding") kind – deliberative democracy (Gutmann, Thompson, 2024). Briefly put: democracy – in which political decisions are made on the basis of rational (!) discussions/debates.

Finally, some comments on the concepts of knowledge society and information civilization. Reaching into the extensive literature, we will surely note that these two notions are both close and different. Discussing in a more systematic way their relations is impossible. I would suggest referring to two distinctions: this between information and knowledge and that between civilization and society. The first one is so often discussed that no further comments are necessary. As regards the second distinction, I would suggest to regard "civilization" as denoting non-human (and mainly material) aspects of social life and "society" – its central, human aspects. To these conceptual remarks, I'd like to add some more substantial. First, various studies – both relatively early (e.g. Drucker, 1993) and the recent (e.g. Harari, 2024) – demonstrate the profound economic, social, political, cultural changes resulting from the development of knowledge and technology. And second remark: The idea of the

rise/development of knowledge society/information civilization should be by no means interpreted as suggesting decreasing the role of other domains of human activity. – For instance: It is obvious that production of food will remain in the coming decades and (let's hope) centuries and millennia as important as it has always been. But production of food was extremely different in the societies of gatherers/hunters, very different in agricultural societies, different in industrial ones, and will be (more and more) different in knowledge/information societies. This same can be said about clothing and housing, also – about health care and upbringing children, etc. etc.

To these remarks on globalization, (deliberative) democracy and knowledge society/information civilization, I'd like to add some notes on a very important – at least in my opinion – idea which was born in our time: idea of (global) collective responsibility. This idea was most likely born after Hiroshima/Nagasaki 1945 tragedy. A philosophical elaboration it received in the book "The Imperative of Responsibility" (Jonas, 1984) And in the last years it regained some popularity, even in the form of "longtermism" (MacAskill, 2022) – an ideology insisting on our responsibility for, very simply put, the well-being of the generations living in next centuries.

To pass from these remarks on (global) collective responsibility to discussion of two paradoxes mentioned at the beginning of this Introduction still one, rather short, step is to be made: Some words are to be said about relation(s) between responsibility and knowledge (Ingarden, 1970): the idea underlying (at least) modern morality and law is both simple and fundamental: responsibility for an action of an (individual or collective) subject presupposes his/her/its knowledge about possible consequences of this action. Let's supplement this thesis with two rather obvious still important observations: First, one can possess the relevant knowledge if this knowledge exists at all. And second, if this knowledge exist s/he/it should have had access to it. (I ignore here the rather complex problem of responsibility for the lack of accessible knowledge). Having made this step, we can pass to discussion of paradoxes.

The first paradox runs as follows. If you accept two following assumptions: (1) Performing various actions we all contribute (in various ways, of course, to very different degrees…) to the process of creation of one eco-techno-socio-system. And indirectly – to various (ecological, social, cultural…) consequences of this process. (2) We all are potentially responsible for creating this system and for (particularly: negative) consequences of its existence. Do we have the relevant knowledge – necessary for transforming potential responsibility into actual one? I am prone to give rather negative answers. Of course, some individual appeals were voiced (e.g. Wilson, 1998) Some organized efforts under slogans of "imter-, trans-, multi-disciplinarity" have been made. – I would not like to underestimate them. But I think that at best what we have now (as regards the knowledge about the global system) is far too little in relation what we need (incidentally, to construct some possibly precise instruments to measure this relation would be a contribution to improving our to-day situation). And what seems to be most paradoxical is the fact that this (very?) negative situation is a side effect of the progress

(the word should be read here without quotation marks – in the old positive sense of the Enlightenment philosophy/ideology) of science: better health care, more food, more safety in industrial plants… And there is, in my opinion at least, little doubt that numerous achievements of science would have not been possible without progressing specialization in (or, as some figuratively say, "balkanization" of) science. In which way to overcome this paradoxical situation? – That is the question to which a tentative answer will be sketched in the chapter 4 (on knowledge governance).

And the second paradox? Complexity (Gell-Mann, 2022) is partly the very essence of globalization (the eco-techno-socio-system is – from definition – more complex as a whole than the subsystems considered as independent), but partly it increases the complexity of elements. And complexity has a simple but important epistemological consequence: some relatively simple parts of the world can be known without special cognitive activities. But "sufficiently" complex objects can be known either by (also complex) cognitive actions or by learning already gained knowledge.

If so, the development of deliberate democracy demands "smart citizens". But some observers have noted an opposite tendency. A few decades ago, wrote about it (Bocheński, 1993), some years later (Wheen, 2004) – How to overcome this paradoxical situation? – To this question also, a preliminary answer will be outlined in the chapter 4.

Let me end this Introduction with a glimpse on the present text. Except for (rather long: presenting my view of the present state of the world – of science and not only) the Introduction, and short final remark, it contains three main chapters. This structure reflects a perspective on science in general, and on the science(s) of science – in particular. Before I pass to the presentation, let me formulate my opinion on "borders" between sciences. My opinion is rather not radical: On one hand, I am skeptical as to the possibility of defining very precisely (uncontroversially, …) these "borders". On the other, I think that "flexible" borders – help to define the relations between various disciplines. (Discussing analogies/differences between taxonomy of knowledge/science and biological taxonomy might be instructive. But it cannot be undertaken here).

First, I do accept (remembering the reservations made in the previous passage) the distinction: fundamental versus applied sciences. The goal of fundamental sciences is to describe (a part of) the world, irrespective of possible practical usefulness of these descriptions. Contrarily, applied sciences are oriented at solving practical problems. In other words, applied sciences do not describe the world but create designs to modify the world by constructing some new elements of the world. The sciences of the first type are fundamental for the applied in a double sense: Firstly, they provide diagnoses of the state of the world in this or that fragment of space and time. And some diagnoses enable defining practical problems to be solved by applied sciences. Secondly, fundamental sciences indicate the conditions to be satisfied by the hypothetical solutions. – This characteristic is not complete: Some practical problems can be defined without scientific instruments (e.g. how to avoid consequences of some natural

disasters). Thus, practical problems can direct interest of fundamental sciences to those regions of the world in which arise the practical problems.

I would say that the just described situation is quite common in social sciences. The preset text starts from practical problems (defined in this Introduction) – to be "solved" in the 4th chapter by purely experimental – trial and error – method. Thus, the two previous chapters are devoted to some fundamental problems. But why two separate chapters?

I could simply answer that epistemology (a part of philosophy) and sociology of knowledge are – for various reasons separate disciplines, however close. This is acceptable answer but, I think, a bit more profound one can be proposed. It will be based on methodological ideas of idealization and concretization. I will assume that epistemology studies cognitive activities performed by "ideal subjects" (the meaning of this term will be characterized in the next chapter), and sociology of knowledge – studies cognitive activities performed by "real men". Briefly put, epistemology is regarded as a foundation for sociology of knowledge, and the latter as the foundations for the theory of knowledge governance.

2. Epistemology

The domain of philosophy known today as "epistemology" is as old as philosophy itself though its most popular today name it received only in 19th century (Woleński, 2004).

It is very large domain: just look at the *Handbook of Epistemology* (in which Woleński's paper is published) to see how diverse are problems discussed by epistemologists and how various are epistemological orientations. However, it is neither possible nor necessary to summarize the issues/orientations presented in this *Handbook.* My goal is different: Firstly, I am going to indicate these epistemological problems that are – in my opinion – of key importance for the theory and practice of knowledge governance. And secondly, I am also going to point out these orientations that seem applicable to this discipline. From the point of view declared above, it is theory of truth that seems to play central n epistemology. However, a few theories of truth have been formulated (David, 2024). To summarize David's 80-pages paper in tens sentences does not seem meaningful. But it would not be useful/necessary: I am convinced (here, as seldom, very profoundly) that – remembering what goals this paper is to achieve, even if partly– we can/should limit our attention – to one theory (or, more precisely: one group of related theories) – classical theory of truth. This theory was developed by, among others, Aristotle, St. Thomas and A. Tarski. This theory is very intuitive: it articulates way in which (great) majority of people understands this notion in everyday life. But this interpretation of the notion of truth plays a fundamental role in our social life, in particular – in morality and law: The declaration of a court "John Smith murdered Mary Brown" should be just – in both

classical and intuitive sense – true. And if the sentence is false, the court should declare that "John Smith did not murdered Mary Brown".

I think that a few words about broader philosophical context of this theory should be said now. This theory presupposes a metaphysical (ontological) stance known as realism (Haack, 2004). Realism articulates the widely accepted convictions that world does exist – regardless of existence or non-existence of mankind. Intellectual experimentation with rejecting realism is not meaningless. But we try to define here epistemological foundation for knowledge governance. From the point of view of politics (a type of governance), knowledge – if to be generously financed – should be regarded mainly as an instrument of civilizational development, and only to a limited degree as a part of culture (in its narrow sense: poetry, theater, philharmonic etc.).

However simple and intuitive as regards its basic idea, classical theory contains more complex and less intuitive questions. One of the oldest issues (considered already by Aristotle, and widely investigated in the previous and present centuries) is the question of logical value of predictions – are they true or false (as propositions concerning the past or present time) or another values (e.g. possibility) should be ascribed? – So-called multi-valued logics try to precise the second answer.

Common knowledge (but also some scientific disciplines) contain many unprecise sentences, such as "Very few people participated in Sunday demonstration in front of Parliament". – So called fuzzy logic tries to deliver some formal instruments to cope with this issue.

Possibly, relatively little attention from logicians received the problem of truth/falsity of collections of propositions. Perhaps most easily this problem can be illustrated by considering the possibility of two very different (one "positive", one "negative") biographies of one and the same person – both containing only true propositions. – This issue seems to be of importance for theory of (sophisticated) manipulation, a part of sociology of knowledge.

And last but not least: A prominent philosopher of science (a sub-discipline of philosophy that might be regarded as a part of epistemology in the broad meaning of the last term) N. Cartwright published in 1983 a book titled provocatively "*How laws of physics lie*". – This title expresses opinion that in a form (perhaps, most often, less radical) has been widely accepted: scientific theories describe models of (some parts of) the world. And if one accepts this opinion, then one has to consider whether at all, and if so then in which sense scientific theories can be evaluated as true or false. – This issue seems to be also of importance for sociology of knowledge as well as for knowledge governance.

And now, moving on to the next part of this chapter, let's note that truth (or falsity) can be interpreted as a relation between a proposition (or more complex semiotic system) and the world (reality, …). But epistemology is also interested in relations between subject of cognition and propositions.

As declared in the Introduction, epistemology (as conceived in this text) regards subject of cognition as "ideal". This decision would also deserve a broader discussion, but here I limit myself to a simple characteristic of "ideal subject". – His/her cognitive activity is oriented at achieving (true) knowledge, and not other goals (from money to personal satisfaction).

Propositions can be accepted as true or rejected as false (Weirich, 2004). A neutral attitude can/should be also assumed: the proposition is neither accepted nor rejected (opinion/belief is "suspended").

Though the decision to accept, to reject or to "suspend" (so to say figuratively, "abstain from voting") can be made in an "irrational" way (without availing of any rules or criteria of acceptance/rejection/suspension), one of the main goals of epistemology, perhaps even the most important one, is to precise, compare and systematize rules/criteria that – if applied – make epistemic decisions rational In other words put, epistemic decisions – as perhaps many (all?) others – should be justified (Lammenranta, 2004)

Even if we think about individual "intellectual biographies", we should have noticed that probably all people change from time to time some of their opinions. But opinions change also in "macro" scale: history of science is not only adding new truths to the immutable collection of earlier accepted proposition. Contrarily, some "old truths" are simply rejected or (more often) replaced by "new truths" (some epistemologists claim that the "new truths" should "correspond" with the "old" ones). These issues are briefly characterized as problems of revision of believes (Hanson, 2004)**.**

As noted above, epistemology is a very rich, differentiated domain of philosophy, and is constantly developing. And as already stressed, no systematic overview of this domain not possible. My only aim is to indicate these epistemological conceptions that, in my perception, could be – in this or that way – applied in sociology of knowledge and/or in the theory of knowledge governance.

In the previous passages I mentioned some older sub-domains of epistemology. Now ending this chapter, I would like to say a few words about two relatively new epistemological schools/currents – interesting and, in my view, of special importance for the problems undertaken in this paper**.**

Firstly: virtue epistemology. Though some its basic ideas are, as almost everything in philosophy, very old (e.g. Aristotle's concept of dianoetic virtues). as a "school" it is rather young: initiated by E. Sosa and L. Zagzebski in 1980's (Zagzebski, DePaul, 2003). In this field focus is on the role played by traits of knower's intellect (personality etc.) in achieving truth/knowledge. One of the interesting (and connected with issues that will be mentioned in the next passage) questions concerns the possible role of intellectual virtues of a proponent of a proposition (a set of propositions) for justification this proposition (this set). To this question we could also approach from another side: from the perspective of ethics (the general notion of virtue is evidently ethical one). And assuming this perspective we could formulate a question

concerning moral responsibility for his//her beliefs (for their justification etc.) It seems that this question is getting more and more important in knowledge society.

Secondly: social (or: collective) epistemology. Like virtue epistemology, it is some forty years old; Alvin Goldman and Steve Fuller are its initiators (Goldman, Whitcomb, 2011). Two issues seem to be at the center of this sub-disciplines: From historical perspective, it is rather evident that individuals building their personal knowledge less and less can rely on their direct contact with the world, and more and more – on the knowledge of other persons. In this situation (characteristic for "our" times), some rather sociological categories – such as "trust" or "authority" are gaining greater and greater epistemological importance (Bocheński, 1993; Goćkowski, 1979).

To indicate the complexities of these problem, a brief comment on trust. Schematically put (and drawing upon everyday experience), trust can be "irrational" or can be justified (based on justified beliefs). But what justifies beliefs justifying trust? – With this question I end this notes on the first central issue of social/collective epistemology. Now, a few words on the second one. This issue is very directly important for the key problems discussed in this text.

To make it clear, let's return for a while to the concept of knowledge society. It is a society in which knowledge/science plays/should play fundamental role in decision making (political, economic, cultural…). And, it could be said, the more fundamental decisions to be made the greater role knowledge/science should play in making them. But beyond this rule might lurk the danger of *circulus vitiosus*: Belief that a decision is of fundamental character is itself never a "pure" opinion but is always based on some knowledge. And decision that a decision should be regarded as fundamental seems to be fundamental also. – *Circulus vitiousus* or hermeneutical circle? One of many issues to be discussed in a (much) more extensive text.

At the very end of this passage let me note (only note! – it is too complex issue to be disused in a few passages) the connection between just discussed problems and the problem formulated in a form of a mathematical thesis known as Arrow's theorem. It says, intuitively speaking, that not all criteria of aggregating individual preferences can be met at the same time (Arrow, 2012). If we assume that except for moral or utilitarian preferences, we could speak about epistemic preferences, and about collective epistemic decisions, we will have to take into consideration the possible consequences of Arrow's theorem.

3. Sociology of knowledge

Passing from previous chapter to this one, I would like to make a comment on the "sociology of knowledge" as a name of a sociological sub-discipline. I think that the phrase "sociology of beliefs" in a better way than "sociology of knowledge" describes a quite well delineated and

consistent part of social reality (I regard the word "knowledge" as an approximate equivalent to Plato's *episteme*, and "belief" – to his *doxa*).

Perhaps, to make my stance more clear, an analogy might be useful: analogy between sociology of knowledge and sociology/theory of literature (art). I think that sociologists working in the second field should be (and "today" more and more are) interested in all types of works: not only in these of Shakespeare, Rembrandt, Chopin or Bergmann…, but also in *Harlequines, kitches*, disco-polo, C-class movies…

Having formulated this remark, I must say that I am not going to propose changing the name of the discipline: all other reasons aside, such a proposal would be extremely unrealistic. So, I will use the traditional name, paying no attention to epistemological definitions of knowledge. I would also add that the (broad) way in which I use the name "sociology of knowledge" is close to so-called "strong program" of this discipline (Bloor 2004).

Sociology is a relatively young science (if to distinguish it from social philosophy existing at least from Plato); somewhat paradoxically, it received (from A. Comte in 1835) its name before its coming into academic world in the last decades of 19th century. Interestingly, one of the first subdisciplines of sociology was just sociology of knowledge (ca. 1920-1930). For these hundred years, this discipline has accumulated quite interesting and impressive achievements. As in the case of epistemology, it is neither possible nor necessary to summarize this history. I will present a (possibly systematic) view on this discipline.

Let me make now three general remarks on sociology. First: I tend to use this term as a convenient short equivalent for "social sciences" rather than as a name for a discipline separating itself from economy or political science.

Second: I believe that historical sociology is not a special subdiscipline of sociology but rather a strategy of developing sociology. For this reason, I will use (for practical reasons: only once, just here) the term "historical sociology of knowledge".

And third: The variety of cultures, personalities, social orders… – it has, in my opinion: without any serious doubts – biopsychical foundations. Thus psychology (and particularly, though not only, social psychology) should be regarded as one of foundations of sociology.

Having made this remark on psychology, I'd like to use this moment to indicate a large and very important class of bio-psychological phenomena most often grouped under the heading "emotions". – Let me add to this sentence two short notes. First: there exists sociology of emotions. And second, a bit more elaborate and much more important: In spite of some cultural tendencies (e.g. Romanticism) to oppose/isolate reason and emotions, their interrelations are very complex. In particular many opinions are more or less heavily influenced by such emotions like fear, terror, sadness…

Let's pass now to an overview of some problems of sociology of knowledge. I think it could be convenient to distinguish two rather different (though, by no means, separated) areas of sociology of knowledge. This distinction is based on distinguishing two kinds of knowledge.

I tend to think that this distinguishing is not formal/mechanical but has serious substantive justification.

The first kind of knowledge can be named "common/spontaneous" one: Humans, like many other animals accumulate knowledge obtained by direct contacts with the (natural and/or human) world. Knowledge of this type is, so to say, a "by-product" or "side effect" of non-cognitive activities. To suggest usefulness of a notion (and more: interesting sociological idea), one could be speaking about knowledge generated by/in everyday life. Let us note that societies differ (in time and space) as to (also: statistical) differentiations of the everyday lives of their members.

The second kind of knowledge can be named "produced" one. Perhaps, some primates can also "produce" simple knowledge, but this ability is generally specific for humans.

I have decided to introduce the notion of "produced" knowledge since – in spite of some of its rather negative linguistic-aesthetic values – it suggests interesting and important analogies facilitating systematic/ordered sociological analyzes of this kind of knowledge. Let's demonstrate some of these analogies.

First: Any knowledge exists in a material form: In the case of "spontaneous" knowledge, it exists only in the form of recordings in the brain/body. In the case of "produced" knowledge it exists in multiple forms: momentary (spoken texts, gestures etc.) and relatively permanent (books, papers, films etc.) In majority of these forms crucial role plays language (Marody, 1987). So, a comment on spoken texts. As we know, there exists (a speculative question: how long?) so-called 'internal speech'. Referring to this fact, I'd say that one of the simplest (simplest: in a sense only) methods of producing knowledge is self-reflection (transformation of spontaneous knowledge into "produced").

Second: "produced" knowledge is, *ex definitione*, a result of an intentional cognitive action. As in the case of any intentional action, its subject (actor or agent, if you prefer) has to have a (perhaps: complex) motivation to perform this action, S/he has also to have some skills/abilities to perform it. As regards the issue of motivation it could be said what follows:

Primo – the number of possible motivators is enormously great (from satisfying basic physiological needs through gaining money and power to self-esteem, meaning of life and many others).

Secundo – the number of motivators is historically (and geographically) variable and seems to manifest upward tendency.

Tertio, probably, on one hand, all types of motivators can motivate all types of actions (thus: also cognitive ones), but – on the second – statistical distribution of motivators as related to types of actions seems to be strongly differentiated. As regards abilities: Some of them are side-effects of trials/ attempts to achieve some "non-educational" goals. Some others are "products" of learning activities of which main goal is to develop some specific abilities.

Third: As in the case of many (all?) other types of activity – from finances to criminal activities – also organizations collectively produce knowledge. Already in ancient times we can note this phenomenon (Plato' Academia, Aristotle's Lykeion…), some fifteen centuries later – European universities… We could say that acceleration of this process started somewhere mid-19th century (say, symbolically, from the first international congress of chemists in Karlsruhe in 1860), and accelerated once again after 1945. All organizations have their own specific interests (financial, political, symbolic…). There is no reason to suppose that organizations producing knowledge should not have similar interests, though certain specificity should be expected.

Fourth Elliott Jacques, having published in 1951 "The Changing Culture of a Factory", initiated the studies on organizational culture. It seems rather obvious that if two banks or two motor-car plants may differ as to some elements of their functioning – due to their different organizational cultures – then two institutes of mathematics or two prominent universities will differ when their organizational cultures differ.

The list of analogies between production of knowledge and production of bread, houses, tanks etc. etc. might be enlarged, but not much place remains (the size of paper is limited) and I'd like do say a few words about other groups of analogies.

Texts – like any other products – must be distributed, Therefore, some material media of distribution have to exist: libraries, lecture halls, salons, clubs…radio, TV, Internet… Also schools (from grammar ones to universities), research institutes, local, …, international scientific societies, academies…, museums, "cities of science"… There exist also various mechanism of regulating/controlling distribution of texts. The best known is the institution of (state) censorship. But here are many others: compulsory school readings, acquisition policies of libraries, and – public opinion of various milieus. These are but some instances – the list should be longer.

And the last element in the process of (economic, social, cultural…) reproduction: consumption. Consequently: consumption of texts (This phrase, somewhat strange, at least: at the first sight, is getting some popularity; it can be instantly found in Internet). Consumption is determined by production (let's risk supposition that in the case of texts the determining role of production in relation to consumption is greater than in the case of, say, food or clothes), by distribution, and by abilities (as regards many texts, the system of abilities to consume them is very complex – as is its production) and motivations.

Let me end this chapter stressing the systemic character of the social reproduction of knowledge: the complex interactions between production, distribution and consumption of knowledge. And we should not forget about the role of everyday life: It generates the "spontaneous" knowledge and the latter co-determines production, distribution, and consumption of the "produced" knowledge.

4. 4. Theory of knowledge governance

Let's start from a few comments on the title of this chapter. The most important is the word "governance". I've it chosen since it is "located" (as regards its intuitive content) somewhere in-between the word "management" and the word "politics". So much about the word. But why did I seek such a word?

The answer is composed of two parts. First, activities of managers of business organizations and of politicians are in many ways analogous (I'd even say that mayor of a small town is more a manager – in the conventional sense of the word, and CEO of an oil corporation – a politician). We could also add here the leaders of religious organizations, presidents of international sport federations (FIFA, IOC…) etc.

Regarding the term self-governance as denoting special case of governance, we could say that governance denotes any form of organizing collective activity (List, Pettit, 2011): from radical democracy (no leader), through various hierarchies/oligarchies to despotic authoritarianism (one leader). And analogies suggest seeking for one general theory describing/explaining differentiated phenomena (This methodological principle formulated decades ago Polish lawyer, sociologist and philosopher Leon Petrażycki).

And second part of the answer: all types of human activities (economy, religion, art…) are governed (regulated) by various groups of people and in various ways. This general regularity also applies to knowledge/science.

The very general, and thus not very precise question (providing concepts and methods allowing more precise formulation should be regarded as one of main challenges for sociology of knowledge) could be formulated as follows: Are the mechanism governing knowledge/science "sufficiently close" to optimal?

I think that the answer should be negative. Why? There is no doubt that the question of global climate is one of the most fundamental problems humanity faces today. And there is also no doubt that our decisions (political, technological etc.) concerning this problem should be based on the relevant knowledge. But is that how things are? An instance:

There is a book devoted to climatic crisis (Lomborg, 2021). You do not have to be denialist, a "merchant of doubts" (Oreskes, Conway, 2010), to ask questions – formulated by Lomborg – about the levels of ecological risks connected with climate changes, about alternative strategies of copying with global warming, about financial and other costs of various strategies etc. etc. In my opinion Lomborg is not denialist though is also rather distant from Greta Thunberg and other activists (or "activists" if you prefer). His book deserves many comprehensive debates. I am not able to analyze the situation in other countries, but in Poland I have not heard about even a single debate. To stay for a while to the climate problem: Quite recently a paper on wildfires was published (Cunningham et al., 2024). Their authors claim that these fires are mainly caused by climatic changes. Perhaps. But this year in this same journal a paper (Schutze,

de Dios, 2025) was published in which serious doubts concerning conclusions of the previous one. It is interesting whether this difference of opinions will be analyzed.

And another example: Health is one of the most important problems, both individually and socially. The Covid-19 epidemic reminded us of this in very dramatic way. As surely, we remember the problem of vaccination turned out to be a great political question. And it remains so. And yet one should think that since, at least, Pasteur, there should be no doubts as to positive role of vaccinations.

Two years ago a book (Kennedy, Hooker, 2023) concerning vaccinations was published. If accept the image of R.F. Kennedy, Jr. disseminated by some media, one should expect domination (if not exclusive presence) of ideological arguments. But just open the book and you find a great number of statistical data. Perhaps not precise, perhaps in a sophisticated way manipulated, or incorrectly interpreted…Perhaps. But, in my opinion, critique using ideological labels can convince only those who are already convinced. We will see if a genuinely scientific criticism will be addressed to this book.

How we could summarize the above remarks? In democratic countries you can express various opinions (in print, in electronic form, spoken…) but various mechanism – (to be) studied by sociology of knowledge – eliminate (more or less effectively) many opinions, theories and even data. Therefore as one of the most important challenges for the theory of knowledge governance can be regarded designing institutional/organizational mechanism supporting public access to pluralistic spectrum of opinions.

The opinions I have presented in the previous passages I would defend, regarding them as rather objective. To them, I'd like to attach two more subjective (based on personal "impressions") opinions:

First, I think the role played by big publishing houses (such as Kluwer, Macmillan…) is much too big: Their publishing policies seem to contribute to overproduction of (scientific) books and journals. (And this overproduction might have further, rather negative consequences).

And second, referring to situation in Poland: the role in the science governance played by the Polish Academy of Science (scientific societies etc.) is much too little in comparison with that of Ministry of Science and Higher Education.

I've above given instances of issues that should be discussed under the heading "optimal knowledge governance" – just to illustrate my intuitions concerning the question of optimality.

At this moment, I am not able to offer any more systematic analysis.

And some more general comments on "optimality": In some domains, the meaning of "optimality" is relatively (!) easy to be defined (in medicine, in technology). But in social life the problem is much more difficult: the values with which we evaluate social relations are less precisely defined than those in technology (such as resilience, durability…), sometime even contradictorily: think only about various definitions of justice. And even if we accept definitions then it turns out that, for instance, individual freedom and social solidarity, economic growth

and care for natural environment… – Ideological controversies were not created by ideologist; they only articulated and systematized real axiological differences and conflicts.

If you understand the words "goal" and "instrument" in a sufficiently broad sense, then the thesis that science is an instrument to achieve some goals is trivially true. The issue (also: historical) is what is/are the goal(s) of science: "contemplation of the beauty of the world", "power over nature", "intellectual satisfaction", "sustainable development", …? Only having answered this question, one can start to discuss the problem of optimal knowledge/science governance. – An axiology of knowledge should be regarded as one of fundamentals of knowledge governance.

Note that the simple (in formulation) question arises here: who, and – in which way, should define the goal(s) of science. At this moment we are coming in the area of political philosophy, and to be precise, and since we are formulating this question in the 21st century – in this part of it in which are considered, the problems of democracy – of its forms, its limitations etc.

I would like now to make a comment on the role of applied sciences (and let me remind: I regard theory of knowledge governance as an applied science): To formulate it both briefly and generally, one could say that they are instruments of rational/free decisions. Freedom is closely connected with the notion of choice (no choice no freedom). And the latter – with that of alternatives. And designing new tools, new medical technologies, new organizational forms of social life… – theses and many other activities enlarge the spectra of alternatives in various domains, thus – they expand the sphere of our freedom.

I would like to end this chapter with a few words on knowledge/science and politics. Some aspects of their relations are widely known and discussed; in particular: the problem of public expenditure on science. But, viewing from the perspective of (national or global) society, the most important problem might be expressed in the (political) demand for "knowledge/science-based politics". Two comments should be added to it:

First, scientists are citizens and this group is more or less politically diverse in all countries. But differentiation does not exclude the possibility of some common actions. The strengthening of political role of science seems to be a good realistic aim for such actions.

Second: taking into consideration the "pluralist" thesis, the demand for greater role of knowledge/science in politics does not imply any diminishing role of politicians. Quite contrarily: knowledge/science-based politics would be more interesting, creative and efficient. But, on the other hand, would be more difficult…

Is this vision even minimally realistic? – I am prone to give a cautiously optimistic answer. World Economic Forum, the various bodies of experts… – there are some phenomena indicating that some politicians are interested in intellectual debates with various experts. But these phenomena are first steps only and this process should be accelerated.

5. Final remark

At the very end of this text, let me return for a while to its beginning. I presented there two paradoxes. (I formulate them in somewhat different way as in the Introduction; it should help the Reader to grasp – "beyond" the words – the thoughts/ideas).

The first one: "Our" world is getting one complex natural, social and technological system. For various reasons we (humanity) need knowledge about this system. But some consequences of the development (progress) of knowledge (science) result in difficulties/obstacles in producing this knowledge.

And second: Due to the complexity of the system (genuine) democracy demands "smart" citizens. But many observations suggest that an opposite trend – toward various forms of irrationalism – has for the last decades dominated.

Personally, I am rather far from apocalyptic visions: Even if we do not overcome these paradoxes humanity will exist, people will live. But I am convinced that overcoming these paradoxes could contribute to making our world better than it today is. – That is the reason I started to work on this *problematique*.

Obviously, it is very large and cannot be presented in sufficiently systematic and detailed way. – A book is necessary. I am preparing one and hope to end it in one year or two. And the present paper is intended as draft of this book.

In a sense, it is more than a draft: it is also a plan of further studies necessary to complete this book. The role of this plan is determined by my two convictions (of very general character but applied also to the domain of sciences of sciences).

First: for the last century or so great amount of knowledge (also in the meta-knowledge domain) has been amassed that integrating (systematizing etc.) it seems to be more and more important task – both for cognitive and practical reasons.

Second: two general strategies – "down – top" and "top – down" might be possible. But if the previous conviction is valid the "down – top" strategy would be either impossible (at least to be adopted by one person) in a systematic way or results of its application would likely be chaotic and incidental. Thus the "top – down" strategy should be adopted: at the outset – construction of a comprehensive (both large and possibly detailed) image of the field (based on the general but determined by previous, specific interests of the author knowledge), then – searching for texts most relevant for all issues identified in this draft/plan, ten studying them, and finally – writing the book. – This is rather schematic picture; I suppose that the plan will be modified during its realization.

At the very end of this paper let me say that I will appreciate all sorts of comments: on the general ideas and on the specific formulations, on the logic presentation and argumentation and on the language. I will also be thankful for any suggestions concerning books, papers and other materials I should be familiar with.

I would also like to express my thanks to one of the anonymous reviewers for some suggestions how to make this text more readable.

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