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KNOWLEDGE-BASED SOCIETY – NEAR FUTURE OR DISTANT PROSPECT?

Summary

The submitted paper proposes that the emergence of the knowledge based society does not primarily depend on the structural conditioning of its functioning, its technological infrastructure or proper management of information space, etc., but rather on the quality of knowledge which is at people's disposal and which is to a large extent shaped by the school. The analysis of parameters of the school knowledge which is currently implemented at schools reveals that the formation of graduates does not meet the requirements of the age of the knowledge based society. It can be, thus, extrapolated that the knowledge based society (not to be confused with society whose economy is based on knowledge) still remains a rather remote prospect. Thus, in order to make it a nearer perspective, radical steps must be undertaken to reform institutions responsible for the condition of individual awareness, which applies particularly to schools.

Keywords: knowledge based society, school knowledge, parameters of school knowledge, sociology of knowledge, sociology of education,

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The views on the knowledge-based society are neither systematically organized, nor in fact are they consistent. In literature devoted to the subject the prevailing approach associates the knowledge-based society with a society in which the basis of the economy is not the capital or work force but knowledge. There are at least three reasons why such an approach to the problem might be unsubstantiated: 1) economy is not the only area of human activity – whatever processes occur therein, they should not impose the interpretation network identifying

the entire society; 2) knowledge itself is universal in nature – it constitutes an indispensable element of all the contexts of the collective experience, moreover, it is an essential element of a society as such – thus, in order for the knowledge-based society to be realized, the knowledge should not only achieve a certain position and quality in the economy, but also in all sectors of the collective life; 3) the knowledge-based economy (associated with the knowledge-based society) does not lead to wisdom society – numerous experts who study the discussed research area emphasize that the so-called knowledge-based society is a stage preceding the wisdom society. Thus, the term ‘knowledge-based society’ including the associated connotation should be replaced with the following: ‘a society in which the economy is based on knowledge’. The meaning of the discussed term, coined and predominating in literature, involves an unwarranted appropriation of the semantic field, as even one of the advocates and ‘prophets’ of the so-called ‘knowledge-based society’ points out (albeit, perhaps, not entirely aware of this fact): namely Peter F. Drucker, who, by the way, contributed greatly to the establishment of the narrowed down formulation of the category discussed. In Part 3, Chapter 12 of his famous book entitled *The Post-Capitalist Society* (Drucker 1999), the author identifies the knowledge-based society not only on the basis of the context of economy and the collective life sectors associated therewith but also the knowledge which is available to people. Such an approach is correct as it is the sphere of individual awareness which decides whether we are dealing with a societal formation which is of interest to us. It is in this sphere where the basic values of the collective life quality are reflected. Thus, the analysis of an individual scope of knowledge is the best way leading to a correct formulation and an adequate identification of the knowledge-based society. It is, therefore, this way which we shall follow for the purposes of this text

The majority of scholars who study the subject of knowledge-based society are of the opinion that such a society is the state of the future. It does not suffice to prepare an appropriate technological infrastructure which would provide a universal and uninterrupted access to various information resources, to record on electronic media the content of books, periodicals or even manuscripts concerning all possible disciplines and specialties and incorporate them into the Internet network, it is not enough to implement extra-fast data-processing computers and make them available to researchers working on development of various branches of knowledge as well as others who might be interested, nor is it sufficient to popularize the network education system and create virtual workshops, etc. Aside from a proper arrangement of technological and environmental aspects, it is also essential for at least several additional conditions to be observed, such as: adopt-

ing and popularizing the appropriate understanding of the notion of knowledge within the social space, the change of people's approach to knowledge and forging a suitable configuration of individual awareness.

On the basis of the view expressed by Wojciech Cellary in the statement: "The key to transformation of the society of today into the knowledge-based society is education..." (Cellary 2008)¹, we shall endeavor in this text to find an answer to the question whether the currently operating educational institutions contribute to the construction of the personality and intellect formation of those who benefit from the services thereof, and which is essential for the emergence and further functioning of the knowledge-based society.² In an attempt to solve this problem, we shall begin with demonstrating a range of qualities shaped by the educational institutions of today which reflect the school knowledge in a broad sense (including also the awareness states), and then we shall confront them with the parameters of knowledge which should be associated with the knowledge-based society, which in turn shall bring us directly to the solution of the problem discussed in this article.

1

Every institution which follows the stipulations of its chosen strategy engenders a characteristic operation style of its own, with a corresponding cognitive style. School not only acts in an appropriate manner and, in doing so, manages to 'mold' students, but its basic purpose, one which has been openly acknowledged and universally exhibited, it to shape the awareness-related formation of those who remain in its charge. Researchers who study the field of knowledge sociology are fully aware that, depending on various factors (temporal, cultural, political, economical, etc.), the effects of its activity assume diverse features. Let us focus our attention on the qualities within the field of knowledge which are shaped by modern school operating in developed societies. The main point of interest here

¹ One of the reasons is the fact that educational institutions have exceptional power of influence on human awareness. One can, more or less successfully, liberate oneself from other sources of knowledge, but not from knowledge transferred in school institutions which in developed societies are universal and obligatory. Moreover, they affect individuals for a long time in the period when they are the most susceptible to environmental influence. Thus, they instill certain qualities in the awareness formation, determining the epistemic model which to a large extent is a reference point for all forms of knowledge and cognitive relations which involve the activity of individuals.

² The significance of such question has been pointed out by Lech Zacher (Zacher 2004, p. 106).

is the formal aspect of the knowledge in question. Reflections on this subject will bring us closer to the answer to the question posed above.

1) Knowledge is characterized by atomic structure. Subjects included in school curricula are not coordinated. Each of these subjects implements its own independent plan, favoring facts from within its field, emphasizing the unusual and unique nature of the presented approach. In the adopted strategy, educators are not concerned with finding links between individual disciplines of knowledge and demonstrating to the students that various disciplines complement one another in the process of learning about the world. As a consequence, they are perceived not as elements synchronized with one another but rather as subordinated to individual priorities or even mutually competitive (Stevens, Wineburg, Herrenkohl, Bell, 2005, p. 139).

The situation is similar in the case of topics presented within the scope of the subjects taught. Their arrangement does not bear any signs of integration. Frequently, they do not correspond with one another and the provided information functions as if separated from the whole problem, thus creating an impression of randomness. No efforts are made in order to find links between them nor does anyone attempt to establish a common denominator for them.

2) Knowledge is not ordered³. Educational knowledge lacks clear regulations. At school, often values, behavioral patterns and models of action are demonstrated which lack inner consistency. **In many cases, they are even contradictory. There** is not a single dominant which would arrange them in order. Young people are also frequently given dissimilar, often mutually exclusive interpretations of facts and topics without a final evaluation. For example, on the one hand, a view is presented stating that a fight for a just cause is worthy of undertaking, that it is an imperative founded on honor and higher good, while on the other, opinions are evoked which stress that any armed action is indeed a nonsense, explaining that it is a contradiction to fundamental values, an utter absurd and as such all armed activity should be immediately ceased and unconditionally rejected (Wądołowski 2008, p. 99, 120). By presenting alternative solutions, possibilities and positions as well as leaving their formula open puts students in an ambivalent situation, which they are not capable of solving on their own. They are left with dilemmas far beyond their abilities and then they are either directed by their teacher's personal preferences or left to their own devices in creating an individual project, of whose suitability they are neither certain nor convinced.

³ These remarks particularly apply to subjects from outside the canon as well as humanities.

Another case related to the discussed problem concerns creating problematic situations which students should solve on their own, of initiating discussions which they are to settle themselves and of presenting tasks which they are to perform, etc. The purpose of this is to transform adepts of education into creators of knowledge (Popkewitz 2000, p. 20). It should be added here that they are not given a reference point which would enable them to correct the achieved results. Thus, they are faced with the necessity to determine cognitive values. In doing so they are made not only creators but also arbiters of their own achievements. The evoked case is another proof confirming that the obstacles put in front of students are not placed where they should be. This creates an opportunity of a broad (sometimes unlimited) arbitrariness which frequently results in errors as well as in confirming one's – not always correct – convictions, opening various paths of heresy, equating the achieved results with knowledge based on scientific methods and epistemic authorities and competing with the said knowledge, which might entail attempts to remonstrate it or even fight against it.

The basis of such educational practice is the ideology which assumes the lack of universal truths, standards and norms of research conduct, etc. Individual experiences and single solutions are a point of reference for themselves, as well as the voucher of their reliability and an unerring augur. The constant is replaced with the volatile, the unequivocal becomes ambiguous, the fixed becomes flexible, etc. There are no definite borderlines nor are there unambiguous and simple answers (Popkewitz 2000, p. 20). The described situation is particularly relevant in the case of humanities which are taught with considerable liberty (Stevens, Wineburg, Herrenkohl, Bell, 2005, p. 134).

3) Knowledge is relative. The multiplicity of presented theoretical directions, research perspectives and alternative viewpoints (feminist, racial, ethnical, etc.) is not so much treated as an enriching outlook opportunity which provides a fuller view of the studied reality but rather it is utilized as a evidence of the existence of ambiguity and incommensurability as well as leads to undermining of universalism. In practice, this results in frequent attempts to put to test the certainties accepted by students. It also leads to the situation when the participants of educational contexts are incapable of differentiating truth from false, good from evil or beauty from ugliness. Values became mixed with anti-values. Students are not given the instruments to divide one from the other. They are not shown ways nor methods to find a reference point which would show directions and help to determine purpose as well as instill values in cognitive acts.

Such state of affairs stemming from the context of didactic actions is further reinforced with the contents of the communicated doctrine. Within the school

symbolic space, options negating the existence of truth, beauty and good are in conflict with those which advocate the adherence to these values. Nowadays, a greater power of influence is observed in the case of such standpoints which argue that speaking of objective truth is utterly preposterous, that it is an archaism born out of fossilized anti-progressive minds; for everything is fractional and limited, everything can be undermined and refuted. The foresaid features of educational knowledge are fitted within the quality of knowledge established in the general – extramural – circulation (Melosik 2002, p. 119–121).

Considering the arguments presented, it may be concluded that schools no longer advocate a clear vision of the world while simultaneously arguing that the world cannot be objectively recognized and interpreted. Thus, the only “scientific” standpoint is to acknowledge of the ubiquitous relativism. Under such circumstances, the measure and canon of scientificity is non-scientificity or even anti-scientificity, which leads to the borderline dividing knowledge from pseudo-knowledge being gradually abolished (Bloom 1997, p. 390, 402 *ff*).

4) Knowledge is blurred and ambiguous. The language of school discourse is not sufficiently clear nor transparent. Notions become obscure. Instead of unambiguous, precisely defined terms, ambiguous expressions appear with fluid, undetermined limits. The precision of argument is replaced by colorful phraseology. Language becomes laden with euphemisms which dilute the undertaken topics and the reality itself. Empty rhetoric displaces substantial reference to the specific. The real world disappears, flooded with the language of appearances, fiction and artificiality. Real problems are replaced by pseudo-problems. Pompous formulas are constructed, as well as ephemeral and bizarre verbal constructions, the purpose of which is to induce an impression of professionalism and erudition. In fact however, they only incite disorientation and chaos, without any construction contributed to the recognition of reality. Instead of attempting to simplify the world, an opposite direction is taken – where everything becomes entangled and obscure (cf. Kozyr-Kowalski 2005, p. 115).

5) Knowledge lacks a strong setting in tradition. The fast increase in new discoveries, theories, concepts and interpretations causes that calling upon what had earlier functioned as the canon of knowledge requisite to be learnt at school, cannot be presented as the starting point for reflection. In the majority of cases such knowledge is either dismissed entirely or treated perfunctorily; it might also be deemed exotic – a type of information which one might quote as an anecdote, curious detail and a confabulation element. Generally, however, it is pushed aside and treated as extracurricular, meant only for those who are exceptionally interested and ambitious. Organizational limitations of the modern school system

do not provide an opportunity to present everything that has been discovered, completed and what once had belonged to the canon of basic data taught to young people of that time. Thus, it became necessary to undertake a selection. As a result, such knowledge is dismissed which - from the perspective of contemporary science – seems outdated or – from the point of view of social expectations – does not contribute to progress in any way.

The trend which is discussed here fits well within the strategy of knowledge focused on the present and the future, implemented by educational institutions. From this point of view, reaching for (theoretical) roots of current knowledge is not useful in the process of subjecting the world nor does it permit solving of problems with which the contemporary population is struggling. It is assumed at this point that knowledge should face current challenges or even exceed the present – by providing answers to questions which appear on the horizon of the future times. The result of such outlook is the shortening of cognitive perspective which ultimately stifles the opportunity to construct a formation which would enable understanding of people and the world in which they function (cf. Koutselini, 1997, p. 92; cf. Kozyr-Kowalski 2005, p. 36–37).

6) Knowledge is fragmentary. Student is not presented with a broad cognitive perspective which would entail a complete set of facts related to a given subject, a field or a discipline. What is exposed instead are only the selected issues, aspects or extracts of the studied reality, temporal perspectives, while others are neglected or dismissed entirely. No attempts are made to produce a reasonably complete picture of the discussed thematic field. Comprehensive approach is no longer favored, while instead minute, often insignificant facts are highlighted, which function mainly on their own without any important contribution into the understanding of the whole. The constructed image of the world becomes ridden with ambiguity, cracks and gaps. The fabric of knowledge is full of holes, ripped and often disjointed. This does not provide an opportunity to view the studied issues in full perspective. It is often accompanied by unbalanced proportions between the events included in the school communication and the actual events. All these factors contribute to the difficulty in achieving objectivism and properly organized facts (cf. Stanley 1982, p. 590)⁴.

⁴ Such a state of matters on the domestic education ground is discussed by W. Wądołowski in his doctoral thesis: *Elementy polskiej tożsamości społeczno-kulturowej w wybranych podręcznikach języka polskiego dla III klasy gimnazjum [Elements of the Polish Socio-Cultural Identity in Selected 3rd Grade Textbooks for Polish in the Gymnasium]*, Lublin 2008.

A separate issue which should be touched upon at this point placing an emphasis on specialization and not on shaping of a thoroughly prepared intellectual formation and building of strong personality. School's concern is not directed towards educating students with broad horizons, capable of an open-minded attitude and reflectively approaching the surrounding facts, etc., but towards developing selected areas of their personality⁵, working on specific skills and preparing them to a narrow scope of activity and tasks. The employed practice aims at producing experts in narrow fields, people enclosed within limited framework of specialization. The point is to achieve such formation of educational institution graduates which would make them the motive force of civilization progress⁶. In this perspective, the very shaping of student is a secondary issue. In the light of the presented formulations it is not an unsubstantiated conclusion that student is largely treated instrumentally and it can ultimately be concluded that school systems are not assembled with students in mind but rather realize (in a conscious or unconscious manner) the strategies representing particular interests of various social forces (cf. Melosik 2002, p. 106–107).

7) Knowledge is superficial and limited in character⁷. Teachers are usually deprived of an opportunity to thoroughly present the issues included in school curricula. Thus, they limit their activity to referencing information contained in books and concerning achieved results of research, suggested models, schemes or divisions, etc. They do not, however, offer (at best, they clearly marginalize it) any method of arriving at these conclusions or constructing them. The material given to students is routinely simple and non-controversial – thus, it does not provoke them to an intellectual effort. It should be noted that such option is favored by those who are being educated and who expect that their educators will indicate a specific scope of knowledge to be learned, hoping that it is as narrow as possible. Clearly specified requirements liberate them from any deeper involvement in the mapping of the analyzed issues about which they are not passionate (which

⁵ A comprehensive approach to student is not possible as the educational system is not coordinated. There is no synchronization in pedagogical activities aimed at awakening a consistent formation in the following dimensions: intellectual (proper thinking, single logic, unambiguous rhetoric), emotional (unambiguous direction of emotional states and a congenial canon of sensory reception and evaluation), axiological (consistent system of values, norms and models of behavior) etc. (cf. Znaniecki 1994, p. 248 *ff*). Usually, various points of view are assumed to which schooling practice is then adjusted. It leads to intellectual and emotional anarchy as well as a world-view chaos.

⁶ A high level of specialization is one of the pillars of the knowledge-based economy (Drucker 1999, p. 43–44).

⁷ This applies mainly to the canon subjects and the so-called 'pure' sciences.

applies to an overwhelming majority of learners). Young people *en masse* are content with acquiring only such a scope of facts and to such a degree which is required of them. Exceeding teachers' and examiners' expectations is a rare occurrence indeed, despite the fact – and it should be stressed – that each year the threshold of these expectations is lowered (cf. Stanley 1982, p. 590; cf. Melosik 2002, p. 106; cf. Kozyr-Kowalski 2005, p. 36, 52).

8) Knowledge is practical in character. Knowledge does not provide the possibility of understanding but rather opens an opportunity to solve specific problems. Understanding becomes a secondary category, marginalized in work with students⁸. Its **place is taken by usefulness. The knowledge which is sought** after allows to overcome difficulties of practical nature, provides an opportunity to control the course of events and increases the effectiveness of actions, etc.⁹ Such perspective determines the criteria of what is considered important and what less so, what is worth striving for and what is only treated as a 'filler'. It is this knowledge which is pursued by students, to whom the answer to the question 'Why?' seems redundant and who defy theoretical, immeasurable and humanistic background in general. Such knowledge is desired by the participants of the labor market who realize that employers will require from them specific skills and familiarity with knowledge which is useful in various sectors of collective life, and thus knowledge which provides an answer to the question of 'How?' (How to overcome an obstacle? How to perform the ordered task? How to achieve a better result?). The prevalent opinion is that knowledge which is general, theoretical and which enables understanding does not constitute a sufficient motivation to undertake cognitive efforts (cf. Stanley 1982, p. 590; cf. Reilly 1989, p. 10; Labaree 1998, p. 6; Gumport 2000, p. 83; Ravitch 2001, p. 408ff)¹⁰.

A similar attitude can be observed even among people of science, including the greatest authorities in their fields. For example, such stance is illustrated

⁸ Ewa Narkiewicz-Niedbalec (2006, 227–230, 237–239) proves in her research that university education does not instill in its recipients the skill of 'deductive-nomological explanations'. In a test which she conducted, **approx. 80% of students were unable to apply such an explanation** (that is, they failed to demonstrate the understanding of facts from the given field). What is interesting, the same proportion is found among both 1st and 5th year students. This indicates that higher education does not contribute to the development of thinking and that it effectively continues the strategies realized on lower levels of education.

⁹ The usefulness and effectiveness of knowledge are features particularly valued in the knowledge-based economy (Drucker 1999, 43, 157).

¹⁰ This conclusions find their confirmation in the number of people who apply for 'theoretical' faculties in Poland in recent years. Philosophy, classical philology, theoretical physics, mathematics or even history barely manage assemble a full body of students.

by the statement from a famous English physics experts, Stephen Hawking. He writes, „I [believe] that physical theories are just mathematical models we construct and it is meaningless to ask if they correspond to reality, just whether they predict observations.”(Hawking 1997, p. 166). The quoted statement can be read as an expression of doubt in the power of knowledge as a method of understanding of reality or in the possibility of learning it. It should be noted here that the aforementioned author is not a practitioner but a theoretician *par excellence* (Ciesliński 2008, p. 59).

The above examples confirm that at present we are dealing with distinct tendency toward instrumentalization of knowledge. They attest to the contemporary longing for that which can be measured, verified and applied (Koutselini 1997, p. 90). It is also a tendency towards contextual knowledge (in which the context (of usage) decides what is significant, valuable, worth striving for) and not universal knowledge (which is characterized by a fixed cognitive horizon; aiming at understanding the world or its fragments) (Gumport 2000, p. 83).

9) Literary and rational character of knowledge is gradually replaced by a pictorial and emotionally charged one¹¹. Verbal discourse which entailed the requirements of abstract thinking was aimed at coherent and unambiguous description of the world as well as allowed for a precise explanation thereof. An image entails a rather liberal interpretation. The communication which it carries is not as sharp and unambiguous as the one communicated by terms. It leaves a large area for maneuvering to its interpreters: it creates a number of possibilities of various interpretations, it presents a range of judgments and opinions as well as opens a rich palette of likely associations. Under such circumstances, it is difficult to keep the detailed requirements of precision. Moreover, discourses based on visual forms are not always eligible for comparison, juxtaposition or adjustment¹².

Let it be noted that the employed means of expression operate to a larger extent in the area of emotional impressions than that of intellect. Thus, it is not a reflection, analysis, measuring or criticism but rather emotions, associations,

¹¹ It might be worthwhile to compare textbooks for primary and secondary (*gymnasium*) schools with those used in Poland 30 years ago by young people of the same age. Also the methods of teaching classes have changed – the traditional form of a lecture is gradually replaced by presentation, field trips, films, etc.

¹² E. Narkiewicz-Niedbalec noted in her research conducted among students of higher education institutions that in the studied group, narrative thinking is predominantly observed (corresponding to pictorial culture). It is discernable over **paradigmatic thinking**. (Narkiewicz-Niedbalec: 2006, p. 237).

images or intuitions which become the basis of cognitive references. The affective sphere begins dominating over the rational one¹³. The evoked para-rational states become the fundament on which the construction of student's knowledge is erected (cf. Szkudlarek 1993, p. 114–115, 146–147).

10/ The level of educational knowledge is lowered. At public schools, the educational requirements are reduced to the level of young people's low expectations, people who have minimum educational ambitions, who treat school as their unwelcome duty and who have been neglected in terms of their upbringing, while students who are passionate, who have a large intellectual potential, who are eager to learn are usually left to their own devices. Teachers do not have time to devote to them as their entire attention and all efforts are concentrated on weaker learners who require their unrestricted support. Lowering the requirements to the standards determined by this category of students, who are already a largest group within school communities, clearly reduces the level of educational knowledge and in doing so, it lowers the level of knowledge of the entire society (Hartman 2003; Zemło 2006, p. 82ff).

In terms of its quality, what also suffers is the knowledge employed on higher levels of education. Secondary and higher schools operating in today's age of the market is oriented on gaining the largest possible number of 'clients' which entails the adaptation of these institutions to the expectations of the clientele. This latter group includes a significant number of individuals with rather limited perceptual abilities. Still, schools' struggle to remain on the market and their effective rivalry with competition often consists in a strategy of lowering educational standards. In the conditions of mass pursuit of various diplomas and certificates, the minimum level of what is required of students is constantly reduced (Labaree 1998, p. 6).

One of the features characterizing modern times is the penetration of mass culture elements into the school knowledge. In many cases, a reference to the current discourse is an experience rooted within the ordinary world. The starting point is that which is more familiar and specific as well as the manner in which it is given to subsequently follow towards that which is less obvious and more abstract. The direction of educating runs from contextual approach towards a universal one. It should be noted, however, that frequently the initial stage is not exceeded. It is easier to move within the field of (trivial) specific elements

¹³ In many cases, this formula also governs scientific discussions. A convincing example of such situation can be found in the text by Mirosław Filipowicz (2008). Based on the example of a dispute between Polish and Russian historians specializing in the history of Russia, he demonstrates how stereotypes occlude rational arguments and how the circumstances win over objectivism.

than reality which must be recalled, imagined or conceptualized. More ambitious forms of knowledge begin to be replaced by those which are easier and which do not require any additional effort or are less sophisticated, etc. Ultimately, the ordinariness and the mass culture evidently impose the standards of school knowledge. An old Copernican rule is at work here, which states that better currency is replaced by a lesser one (cf. Szkudlarek 1993, p. 15, 119, 131, 133–134; cf. Bloom 1997, p. 384).

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We have presented a list of features of school knowledge. It is not definitive but it seems to include the more important – from the point of view of issues discussed – parameters which can be both identified and differentiated. We have assumed that the quality of educational knowledge is significant from the point of view of achieving by the society the state of the knowledge-based society. Let us, therefore, return now to the opening question: Does the knowledge which is created by educational institutions bring us closer to a society of that kind? In order to answer this question fittingly, one should first solve another issue expressed in the following question: Are the features listed above in detail indeed the first-rate qualities? Or, to phrase the problem more gently: Is the knowledge created by educational institutions aimed at achieving the ideal? The solution of this problem is crucial from the point of view of undertaken considerations. It is, after all, obvious that the knowledge-based society should be based on knowledge of the highest quality and not one which has a number of weak points and shortcomings¹⁴, just like the community of knights is comprised of men who are brave, just and honorable and not a cowardly, evasive and miserable mob.

Let us, therefore, look at the currently updated features of school knowledge which affect its character, confronting them with the states perceived as worth striving for.

1) Atomic knowledge – integrated knowledge. Atomization, isolation, dissipation, the lack of corresponding etc. are all features of immature knowledge. There are theories according to which the existence of these qualities in some form of a

¹⁴ In spite of the multiplicity of various criteria and evaluations, there is a set of values which can be deemed worth more than the others. Many contemporary experts avoid any association with them and never exhibit them in the stances which they take, or even go as far as to refute them, thus becoming advocates of absurd, i.e. voicing an opinion that a truth is not as important as the honing of skills. Thus, a following question comes to mind: what about the skills such as killing, perfect cheating, breaking the law, etc. – are they also above the truth?

theoretical communication makes it impossible for it to be labeled as knowledge. We only have to do with it when the form in question assumes the structure of a consistent, systematic and comprehensive approach. What occurs otherwise is joggling of facts, results and concepts which can be multiplied *ad infinitum* and which lack heuristic qualities when separated, nor do they lead to understanding. It is particularly important that at the initial stage of recognizing the world (which is experienced on all levels of the educational ladder) appropriate conditions be created for understanding thereof (Znaniński 1991, p. 421–429).

2) Open, chaotic knowledge – regulated, systemic knowledge. Scientific cognition (which in modern societies constitutes the model of cognition of the highest quality) sets several targets, including: 1) reducing the complexities of the world to simple and clear theoretical constructs; 2) explaining and interpreting of the world in a systemic manner; 3) logical inclusion of free observations into a consistent image; 4) discovering of the relationships and laws existing between individual phenomena; 5) attempts to create a communication in a manner free of contradictions (describing the world consisting in adjusting the facts rather than in contrasting them); 6) attempts to approach the world through the order existing within (Tatarkiewicz, 1986, 24–26, 34; cf. Znaniński: 1991, p. 434; Kamiński 1992, p. 225–229). The tasks assigned to science which are detailed above are at the same time the universally accepted standards of scientificity, which warrant the understanding of the world to the largest possible extent. Without them, chaos, confusion and obscurity occur. School knowledge, for which the scientific knowledge is a referential point, should emulate the evoked standards, although the presented herein portrayal of the school knowledge exhibits such features thereof which not only do not consider these guidelines but are headed in opposite directions.

3) Relativism – universalism. The competition of opposing theoretical and research options, negating of the existence of constant cognitive priorities, the lack of agreement as to the importance of the on-going conclusions etc. – all this engenders favorable conditions for relativism to be established within the space of educational knowledge as well as prepares a welcoming background for the emergence and development of skepticism. This does not encourage the creation of positive atmosphere within the school environment. It places students in the situation of confusion, it provokes doubts in human cognitive abilities as well as deprives of the motivation to become involved in an ‘intellectual adventure’, etc.

Moreover, it should be noted that the occurrence of relativism in all its forms as well as its consequences in the context of scientific knowledge (being a refer-

ence point for school knowledge) does not incite cognitive activities nor does it introduce any constructions which accompany such activities. In such case, as Popper stated, we are deprived of the basic factor regulating the research findings as well as the opportunities to hold a rational discourse, which opens the way for subjectivity, arbitrariness and indoctrination (Popper 1986: p. 369ff). Thus, the practice implemented in schooling institutions also in this case departs from that which is conducive to the achievement a more beneficial quality in the epistemic dimension.

4) Ambiguous, unfocused knowledge – precise knowledge. High standards of knowledge are guaranteed by the logical culture of the discourse. One of its elements is linguistic purism. It entails using unambiguous terms, coherence and cohesion of the utterance, precision of argumentation and avoiding verbosity. Adherence to these rules is the condition of achieving a transparent and rational image of the world (more understandable than that which appears in the case of a more ordinary approach) and this is the purpose of science, and thus, it is also the purpose of schooling which constitutes an ‘atrium’ through which scientific knowledge can be accessed (Twardowski, 1919; Ajdukiewicz, 1985b).

5) Un-rooted knowledge – rooted knowledge. There are several significant reasons supporting the reference to the foundations of modern knowledge. Such practice allows to demonstrate the genesis and development lines of notions, problems, theories, trends etc., while it also reveals the motives which were at the base of specific search and research programmes. This way, current knowledge is established more firmly and contemporary achievements, as well as disputes and discussions become better understood. Calling upon the tradition of knowledge reveals such areas of research to those who are interested which had not been previously penetrated by their predecessors. This allows for an orientation in the achieved results (not only those acknowledged to be fundamental and ‘timeless’) and in doing so, it enriches the cognitive horizon, thus providing an opportunity to awaken creative imagination and inspiration. No matter what arguments are given to justify the resignation from the roots of contemporary knowledge, they are not able to undermine the ruling which states that it is a manifestation of ignorance which does not suit a serious attitude to cognition (cf. Szacki 1983, p. 14–15).

6) Fragmentary knowledge – comprehensive knowledge. Comprehensive approach provides a perspective which prevents from getting lost and becoming confused within a specified area of facts – which is a hazard of an abridged approach. In the case of the latter, a detail may obscure the whole or sometimes even replaces it. This results in disappearance of a landscape, of which the given fragment is but a small fraction. The observer’s perspective becomes shortened

and narrowed down, which makes it difficult – if not downright impossible – for a full an objective vision to be achieved. Doubtless, familiarity with certain section of reality or applicable theory is indeed important but – as Hegel said – the fundamental meaning can only be achieved in reference to the whole. Comprehensive vision allows for a broad specter of elements pertinent to a given research area to be discerned, detailed and mutually linked. It is an indispensable condition of proper measuring and evaluating particular constituents as well as of the understanding thereof (cf. Hegel, 1994, p. 28–29).

7) Superficial knowledge – established knowledge. **One may be familiar with:** the course and consequences of some war activity, countries which contributed to the development of world culture, mathematical theorems etc., but knowledge is infinitely more valuable if the familiarity with these issues is accompanied by an orientation concerning: the conditions of battles, cultural context and ethos of artistic endeavors, methods of educating those theorems, etc.

Similarly, the value of knowledge acquired from others is nor the same as that of the knowledge which we achieve on our own by our own efforts. In the first case we are faced with the risk of thoughtless acceptance of the message, in the latter situation we have an opportunity to shape our own character and grow in the atmosphere of intellectual effort.

8) The ‘how?’ knowledge – the ‘why?’ knowledge. The ‘how?’ knowledge allows to function efficiently, albeit mechanically, within the world of problems. The ‘why?’ knowledge renders this functioning rational. It provides an understanding as to why a certain ‘how?’ works in this way and not another; why the applied method brings effects while a different one proved inefficient; why elements of a given set of cooperate with one another while other do not do so, etc. The foundations of such knowledge protect from incapacity and helplessness in case if a familiar formula or rule does not work. It also gives an opportunity to reproduce old systems and to enter into a new reality in a constructive manner. Furthermore, it generates an occasion to reach beyond the trivial and the banal, opening more profound cognitive perspectives, which is an effective measure against the awareness becoming instrumentalized and technicalized, as Heidegger warned.

8’) Practical knowledge – theoretical knowledge. Practical knowledge is important. It ensures basic conditions facilitating human functioning in a natural and social environment. It must, however, be supported by theoretical knowledge. It is this latter one which provides the former with significant discoveries, allows learners to understand the occurring relationships, helps them to anticipate future problems and prepare for a confrontation therewith, as well as indicates new

practical tasks. It should also be noted that the functions of theoretical knowledge reach beyond human biological dimension, associated with practical action. They allow to fulfill the needs of spiritual nature. Such needs make humans distinct from other living organisms. Such fulfillment constitutes not only their inner yearning (related to enrichment and growing) but also their destiny¹⁵ (Ajdukiewicz 1985 a; Tatarkiewicz 1986, p. 26, 29–30).

9) pictorial knowledge – literary knowledge. From the point of view of maintaining high standards of knowledge, there are at least two reasons why we can speak of the domination of literary knowledge over its pictorial equivalent. 1) Literary knowledge guarantees greater precision and accuracy of discourse (the features listed above are indispensable conditions which ensure proper quality of knowledge, the purpose of which is to recognize the world and which introduces into the secrets of various disciplines); 2) literary knowledge is to a larger extent devoid of emotional factor (scientific cognitive process is aimed at eliminating emotions and similar psychological states from cognitive structures – which should be as rational as possible) (Krapiec 1982, p. 183). Interpretations based on emotional factors are private and should not be seen as an interpretation of what is universally attempted as objective (Hempoliński: 2005, p. 80).

10) Low level of knowledge – high level of knowledge. We have now entered an age in which sees the increasing numbers of people bearing certificates issued by various educational institutions, with a particularly rapid growth amongst the graduates of higher education schools. It is not accompanied, however, by a parallel increase in the level of knowledge which they have at their disposal on leaving such educational institutions. It is beyond dispute that the knowledge-based society can be created only on solid foundations, such as, undoubtedly, a sufficiently high quality of the intellectual capital and not paper certificates. Such documents can be reproduced in any given number and equipped with them persons who paid the appropriate fee, although not necessarily spent the number of hours specified in the program in lecture halls and demonstrated the required knowledge.

3

Having analyzed the parameters which correspond to the educational knowledge realized at the moment in schooling institutions as well as having evaluated them from the perspective of knowledge of the highest quality, it can be concluded

¹⁵ One important issue should be added here. The imposition of standards of usefulness on disciplines which are theoretically inclined by nature, such as history, anthropology, philosophy, etc., leads to their degeneration. They either become entangled in praxism or became ideologies in service of various social forces (Reale 1994, p. 25–26).

that we are still far away from the knowledge-based society (with the – seemingly obvious – assumption that such society can only be achieved on the foundations of knowledge of the highest quality).

Educational institutions which shape the aforementioned features of school knowledge do not prepare the awareness formation of the contemporaries so that they are ready to create the knowledge-based society and function therein. The condition of school knowledge is far from the desired, ideal-oriented state. It can be said more – current development tendencies indicate that the disparity between the qualities of knowledge shaped by school and those which are characteristic of the knowledge-based society is going to become deeper, thus making the prospect of such society even more distant, instead of drawing it nearer¹⁶.

In order for education to contribute to creating such a state of society which would be of interest for us, considerable effort should be directed at increasing the quality of the intellectual ‘product’. Such efforts should lead to the knowledge acquiring qualities contrary to those which characterize it as of today. This requires the change of place of knowledge in the society. It must be granted the central position, it must become a reference point for all undertaken activity and not, as it is the case at present, be dependant on various social subjects (particular ministerial groups, corporations, employers, students, etc.) which dictate its parameters from the point of view of their own best interests. It prevents knowledge from achieving the quality which would bring it closer to the ideal. As soon as knowledge becomes the central value, its features will be infused with qualities contrasting with the ones currently established.

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¹⁶ Such statement does not mean that we are getting further away from the society in which economy is based on knowledge. Some of the parameters of knowledge detailed in this text, which are currently implemented in schools, seem to confirm that schools meet the expectations of such economy, thus contributing to the realization thereof.

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