

An Overview of the Polish School of Medical Philosophy from the 19th Century to Today

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Abstract: The Polish school of philosophy of medicine was established in the middle of the 18th century, like those in other European countries. In the genesis of the separation of philosophy of medicine from the universal standard of general philosophy, the main role was played by the professionalization of the job of the physician and the acceptance of the clinical medicine standard in European universities, as well as the needs of university and academic environments connected with the development of new scientific medicine methodology. In the European standard of philosophy of medicine, two streams were competing: minimalistic and maximalistic, out of which the former was about 1850 turned out to be more effective in inspiring both theoretical research and therapy. In the Polish medical environment, the influences of the minimalistic stream dominated considerably. The aim of the article is to present the most important facts and people connected with the development of the philosophy of medicine standard in the Polish scientific environment from about 1750 until the present.

Key words: Clinical medicine in Europe, philosophy of medicine, Ludwik Fleck.

1. Introduction

In the standard of academic medicine practised in European universities and also in scientific associations and academies emerging since the 17th century in subsequent countries of this continent until the middle of the 18th century, there seemed to be no need to formulate a professional philosophy which would be distinguished from the general stream of scientific philosophy of its times due to its topic [1]. Since the times of the Middle Ages, the theoretical basis of medicine in Europe was ancient philosophy subject to reinterpretation compliant with the canons of Christianity. In the 16th and 17th centuries, this philosophy was gradually displaced by various modern concepts, the followers of which were creating around themselves schools competing with each other [2-4]. This breakdown was reflected in the differentiation of the main directions of university

medicine modernization in which iatrochemistry was competing with iatrophysics, the speculative trend with the empirical one, the supranaturalistic trend with the naturalistic one, the mechanistic trend with the vitalistic one, and so on. However, until about 1750, that is, until the so-called clinical standard was established in European universities [5], the necessity of creating a philosophy of medicine understood on one side as a metareflection derived from the rules of medical practice and on the other side as the theoretical basis of this practice was not raised as a problem urgently requiring a solution. In the genesis of the formulation of a stream of philosophy of medicine separated from the main area of philosophical reflection in the European clinical environment, professionalization of the job of a physician was the most important [6-11] and its performance required thorough specification of theoretical rules defining the basis and limits of scientific practice, as well as somatization of the disease process which was with higher and higher certainty sought in the human body rather than outside

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of it (that is, without the need to refer to non-somatic or supernaturalistic elements). Consideration of disease as a process with natural causes and effects which is initiated by the influence of the external natural environment on the organism, disturbing correct functioning of individual systems or damaging certain areas was not for physicians equivalent to acceptance of philosophical materialism. Therefore, they appeared to create a philosophy of medicine as a field of knowledge including epistemological, anthropological and ethical justifications of this academic discipline without the need to get involved in disputes carried out in the university philosophy of that time between idealism and materialism, realism and sceptic school, and so on. While formulating the project of a philosophy of medicine, European physicians wanted also to avoid involvement in ongoing ideological disputes of a political nature, conducted between followers of liberalism and political conservatism. Emphasizing the professional nature of the job of a physician, they wanted to restrain themselves to specification of its theoretical basis, referring to a tradition of many centuries in which this basis is determined by philosophy only. However, bearing in mind the tempestuous nature of social disputes carried out in the second half of the 18th century in many European states in the period of enlightened absolutism, at the time of revolutions, Napoleon and the post-Napoleonic restoration of political conservatism, it was not possible for physicians to avoid the necessity of declaring themselves as part of one of the theoretical streams and this dispute dominated European academic environments until the last quarter of the 19th century. Two streams were developed in the second half of the 18th century and the bases of which could not be reconciled, where the first was connected with the philosophical standard of the Enlightenment [12-15], and the second one with anti-Enlightenment conservative reaction [16-20]. Both streams found their followers in Europe which led to a situation in

which it was impossible for almost half a century to agree on common theoretical and methodological bases for the whole of European academic medicine. The common starting point—development of the basis of a clinical standard in about 1750 in European universities, based on criticism of the existing status of European medical faculties in science and education—did not lead to the formulation in academic society of a single model of overcoming problems resulting from critical evaluation of the existing capabilities of medicine as science. For this reason, modernization of the university medicine standard which took place in Europe between 1750 and 1850 had a different theoretical and practical image, and disputes pursued by scholars concerned not only interpretation of observations concerning various aspects of the physical world, but also the very existence of these aspects which in some clinical schools were regarded as actually existing and the rules governing them investigated, and in others were denied any actual existence referring to the philosophy of medicine accepted in them, defining the basis of methodology [21]. For this reason, the philosophical diversity of European university medicine in the years 1750-1850 had considerable practical importance. In certain medical schools, the accepted philosophy of medicine favoured undertaking of research which in time led to essential cognitive results, and in others it halted this kind of research. The main area of dispute was the issue of the essence and causes of epidemic diseases with which the medical environment had been dealing since ancient times but which in the years 1750-1850 became—because of the demographic explosion in Europe and significant growth in the number of epidemics—one of the most important issues to be resolved. It is just this issue that became the cause of the success of one of the philosophy of medicine streams competing in European universities—in its basis referring to the period of so called Medical Enlightenment [22]. In medical schools connected with this stream, it was

possible not only to specify appropriate research questions which would determine a specific scope of clinical observation but also to provide answers to them which turned out adequate to reality that is to formulate the standard of bacteriology [23]. In medical schools based on a philosophy of medicine of a different basis, they did not manage to solve this problem in a satisfactory way, the reason being that research questions leading to the formulation of the bacteriology standard were actively blocked, presented as irrational and not referring to actually existing physical reality [24].

In the years 1850-1880, in European clinical medicine, the standard referring to the tradition of Medical Enlightenment was commonly received and after some time, its basic elements were implemented in the contemporarily binding standard of Evidence Based Medicine. Dissemination of the version of the clinical standard referring to the heritage of the Enlightenment resulted in the 20th century in the declined necessity of the existence of philosophy of medicine as a separate element of general philosophy. Until the middle of that century, the philosophy of medicine underwent metamorphosis in European universities, changing again into the course of the general history of philosophy, providing necessary cultural erudition to graduates of medical studies. Apart from this course, lectures in the field of medicine propedeutics, ethics and deontology were given, focusing on the issues of practical performance of the job, in particular, on the physician/patient relationship. The methodological basis of medicine maintained in the Evidence Based Medicine standard is presented to students within the programs of all theoretical and clinical courses, shaping their theoretical and practical approach connected with their practise of the job and scientific work.

As a consequence of the professionalization of clinical discourse which took place in the years 1750-1950 in Europe, as a part of which disputes concerning the realistic physical factuality of the

world and methods for its measurement and analysis and then theoretical interpretations disappeared, and also due to the full separation of the standard for natural and humanistic sciences in university education, the philosophy of medicine which was established in the second half of the 18th century ended its presence in the program of medical studies in the middle of the 20th century. In addition, the standard of relevant publications recommended in the education of students was changed. They are familiarizing themselves with studies introducing them into the thinking of the Evidence Based Medicine standard, in which some present this standard as a contemporary and binding 'philosophy' of performing the job of the physician. European, including Polish, students of medicine can also get to know earlier forms of the philosophy of medicine appearing in the years 1750-1950 in this continent from historical studies, published by historians of medicine interested in developing a theoretical standard currently binding in clinical teaching.

The objective of this article is to present the main streams which occurred after 1750 in Polish theoretical reflection in the field of the philosophy of medicine. Tendencies appearing in this period in Polish science referred directly to disputes conducted in European science of that time, which the author will try to demonstrate using selected examples regarded by him as representative of the output of the Polish scientific community in this area.

2. European Context of the Polish School of the Philosophy of Medicine

The philosophy of the European Enlightenment [25, 26] raised the issue of justifying the theoretical basis of medicine in a completely new way [27]. Until the middle of the 18th century, this basis was the philosophy of ancient Greeks subjected to reinterpretation compliant with the canons of Christianity. Plato and Aristotle outlined the field for discourse, defining also its limits and main arguments

in favour of a specific model of science, and within it a standard of medical science. Saint Augustine and Saint Thomas [28] followed their route, creating the bases of the two main streams of theoretical reflection in the field of natural science [29, 30]. Until the time of the Reformation, both streams coexisted with each other in European Christian philosophy, however the first of them—built on the grounds of Platonism and neo Platonism—dominated in Europe until the end of the 12th century, and the other gained an advantage in universities created in the 13th century [31]. In these schools, Thomism became an official scholarly philosophy which is reflected by the name given to it—scholastic philosophy [32, 33]. After three centuries of the dominance of scholastics, in 16th century it was rejected by secular humanists [34] and also by church intellectuals. The Reformation broke the relative unity of the Christian outlook on life existing in the Middle Ages [35] which resulted in the differentiation of teaching programs in education at all levels. In Catholic and Lutheran countries they were based on different bases of outlook on life which was essential for further development of European natural science [36]. The basis for philosophical reflection over nature in countries covered by the Reformation was Platonism and neo Platonism [37], while in the science of Catholic countries, it was still Aristotelianism in the depiction of Saint Thomas as well as other interpretators [38]. This situation provided the grounds for the creation of two programs of philosophical reflection over nature and also two modernization programs in the field of natural science. These models were incommensurable with each other and could not be reconciled, and their followers were getting into polemics concerning both the philosophical bases of science as well as specific scientific theories [39]. In the 17th century, they were joined by the third model, relating in its foundation to sceptical philosophy, also of ancient origin. It was English empirical philosophy [40] together with the concepts of 16th century Italian philosophers

creatively commenting on Aristotle and 17th century French philosophers, among whom the biggest influence on the development of clinical medicine was made by Descartes, that created a new field for discourse in natural sciences [41]. As a result of disputes carried out between the ancient and the modern [42] which led to the elaboration of the category of progress in European philosophical ideas, they dared not only to make shy modifications to ancient scientific and philosophical authorities, but also to formulate a postulate for the creation of a new model of European science. It was then that a dispute appeared about the relationship of ancient and modern European philosophy and of the old and new European models of natural science, resolved by 18th century intellectuals in favour of the present.

In the 17th and 18th centuries, in connection with the desire to create a new model of science, a dispute was pursued among European philosophers called the dispute of maximalists with minimalists [43]. The maximalists expressed the conviction that detailed sciences should be subordinated to general theoretical and world-view frameworks derived from philosophy, and minimalists regarded philosophy as a science for which the standard should be created as a result of the generalization of results from detailed sciences. The most important challenge for the modern philosophy of science was to formulate the standard for the new physics of Isaac Newton at the end of 17th century [44] which allowed courageous rejection of all the physical concepts of ancient times and the philosophical concepts associated with them, and the building of a new natural concept of the world adjusted to the one which in the middle of 18th century most European scientists regarded as realistic.

The reception of Newton's physics in natural science and its effective application in many practical engineering inventions [45] aroused in the first half of the 18th century the interest of physicians [46] and became the foundation of a reformation movement, the representatives of which aimed to establish a new

standard of medicine based on contemporary knowledge and research methodology. The supreme idea of this movement was verification of the entirety of medical achievement from ancient times until the middle of the 18th century and the creation of a new science based on experience and observation [47-49]. These were supposed to be interpreted according to rules compliant with Newtonianism [50]. The most essential of these included the introduction of cause-based interpretations (causalism) instead of aim-based interpretations (teleology), building scientific theories on the grounds of observation of relations taking place between material objects, explaining individual phenomena using the laws of nature and naturalism, and limiting the field of interest of scientific medicine to the area of human body [51]. So called *philosophia recentiorum* was introduced in European universities in the first half of the 18th century which presented the views of contemporary European philosophers rather than only comments on ancient philosophers. The basic issues which were discussed in the 18th century in the European medical environment included problems connected directly with the desire to create a new model of science. These were: (1) the issue of the essence of human knowledge and its limits; (2) the issue of the basis of medicine as science; (3) the issue of the theoretical basis of therapy; (4) the issue of so called subject-related reference, that is to what extent the clinical medicine standard is based on objective natural facts available to human cognition and to what extent it is a theoretical construct composed of empirical observations, interpretations variable historically and subject to influences of culture; (5) ethical issues connected with the theory and practice of medicine.

Since the issues regarded as vital in the European medical environment in the second half of the 18th century were on the margin of interest for the environment of professional philosophers of that time, a project was formulated to create a separate stream in the area of general philosophy defined as philosophy

of medicine. Its aim would be general reflection on the basis for performing the job of a physician and scientific and research practice connected with medicine. The philosophy of medicine originated in Europe in the second half of 18th century in two variants: maximalistic and minimalistic, corresponding to the main streams of general philosophy of that time. The first of these was maximalistic in nature and subordinated the methodology and methods of medicine to a priori assumptions and to a considerable degree determined the research result which was achieved by means of deduction. Medical theories and doctrines elaborated as a part of this stream were a priori in their nature with respect to experience and to significant extent based on speculation. The other stream which developed in the second half of 18th century in the European philosophy of medicine was minimalistic, perceiving the role of philosophy as meta-reflection on the results of detailed sciences, ensuring both the methodology and method-related foundations for empirical research conducted in medicine. Medical theories and doctrines developed as a part of this stream were empirical in nature, in achieving results they took induction into account, they were based on experience and observation, and since the middle of 19th century on strict rules of clinical experimentation. The goal of the philosophy of medicine, as perceived by followers of this concept, was to define precise rules for medicine as an experimental science which could distinguish clinical observations, experiences and experiments correct with respect to methodology from accidental and random observations and interpretations not based on sufficient methodological premises. The open nature of the stream described here contributed to considerably greater effectiveness of research conducted as a part of it and to real diagnostic and therapeutic successes. This contributed to its success in competition with the a priori and deduction-based stream and its elimination from European universities in the 60s of the 19th century.

3. The Polish School of the Philosophy of Medicine from the Middle of the 18th Century until 1939

At the beginning of these deliberations, it is necessary to specify the terms Polish academic medicine/Polish school of clinical medicine within which reflection concerning philosophical foundation of medicine was developing. From the middle of 18th century until 1795, Polish academic medicine was developing in two universities: in Cracow and Vilnius, since 1773 reporting to the Polish ministry of education working under the name of the Commission of National Education. In the years 1795-1918, Polish university education was functioning in the partitioning countries, Russia and Austria, in universities with Polish and (periodically) Russian and German language instruction. Given the necessity of educating medical personnel of native origin, prepared for the performance of medical practice among the Polish population, the Polish language of instruction was binding in Faculties of Medicine in the universities in Vilnius (1795-1842), Warsaw (1816-1832), Cracow (1795-1832 and 1867-1918) and Lvov (1867-1918), even though Poland had lost its independence as a state. Therefore, the term Polish academic medicine will be understood in this study as: (1) Medicine practiced until 1795 in the independent state of Poland, in the years 1795-1918 in universities with Polish language instruction functioning in the partitioning states, in the years 1918-2013 again in universities working in the independent state of Poland; (2) Medicine practiced by Polish graduates of foreign schools, publishing work in Polish scientific magazines and conducting doctors' practices in Polish territories; (3) Medicine practised by physicians of foreign origin, mainly French and German, practising in Polish lands for a longer period, publishing work in Polish scientific magazines and taking part in education at Polish universities. In considering the development of the standard of Polish philosophy of medicine, the contribution of physicians of French

origin who arrived in Polish lands during the period of Napoleon's wars and together with Polish physicians established the state system of public medicine is of fundamental importance. Under this system, the theory and practice of medicine was shaped by French models which contributed to the strengthening of influences from the French Enlightenment on Polish philosophical and medical reflection. The second source contributing to reinforcement of the same direction of philosophical and medical reflection in the Polish scientific environment was Austria, and more specifically the University of Vienna, the graduates of which constituted the bases for Polish scientific personnel in the Universities in Cracow and Lvov throughout the entire partition period. Both French and Viennese philosophies of medicine provided the basis for the main modernization stream of European clinical medicine which was permanently inculcated in Polish university centres. The third source of foreign influences on the Polish medical environment during the partition period was German medicine in its somatic version, identified with the French and Viennese philosophical and clinical streams. This established permanent premises for theoretical unity of the Polish medical environment during the partition years because in both domestic schools as well as foreign universities chosen by Polish medical students before 1918 the same standard was presented with respect to both the clinical field and philosophy of medicine.

The reception of modernization tendencies in European natural sciences began in Poland even before it lost independence. Modernization discussions in European science carried out in the 18th century also involve+++ng Polish scientists. From 1750 to 1773, they were mainly clerics belonging to the orders of Jesuits and Piarists. After 1773, that is, after liquidation of the Jesuit order by the pope, many of them—already as secular people—joined the movement for educational reforms in Poland. Their scientific views remained under the

influence of Enlightenment philosophy, both French and English, while at the same time they were compliant with the foundations of Roman Catholic anthropology. These views were reflected, among others, in publications by Wojciech Bystrzonowski in 1743 [52] and Jan Albertrandi in 1770 [53] which presented the philosophical perception of nature existing in the Polish philosophy of medicine in the following two centuries. The durability of this perception resulted from world-view premises, that is, the domination of Roman Catholic anthropology in the common Polish outlook on life, on which the scientific awareness of Polish authors was later built. It differs from the common awareness only in the interpretation of relationships between God and nature which is deistic in its nature. The major elements of this perception are as follows: (1) God created the world in the distant past in a one-time act of creation. He constituted so-called primary matter and laws of nature that single phenomena are subordinated to; (2) God assigned to the world laws according to which the whole nature is running in a self-acting manner, not requiring his further intervention. The world runs as a clock constructed by the Godly Watchmaker; (3) Divine intervention in the progress of natural phenomena are possible, however, they take place only in exceptional situations and have the character of a miracle; (4) One exception in this area is granting a soul to the human being still in the womb of the mother. Therefore, because of his spiritual and bodily nature, man is an exception among all other creatures; (5) Thanks to his inborn cognitive abilities, man may try to get to know the world of nature by means of his own efforts. He can create theories about it which he should verify by experience. Man has the right to get to know nature and subordinate it to his needs; (6) Man can and even should put his own effort in cognition and management of nature. Man is not only a passive participant in God's plan, executor of the God's intentions towards the world, but also an active co-author of the world of nature surrounding it. The

concept presented above was already from the middle of the 18th century the basis of education in the colleges of Jesuits and Piarists in Poland, and after 1773 in two Polish universities, in Cracow and Vilnius, the programs of which were reformed in the spirit of Enlightenment philosophy by the Commission of National Education. The Commission reformed also the programs of Polish high schools and introduced a secular state educational system. Until 1795, that is until the partition of Poland among three neighbouring countries, this program was taught in the Polish high school and university educational system for 30 years. In the years 1803-1831, this program was still the basis of education in universities in the Russian partition functioning with Polish language instruction in Vilnius and in Warsaw. After the partition, former reformers from the times of the Commission of National Education, Hugo Kołłątaj and Stanisław Staszic, took part in its reinforcement in Polish university science. The latter, in his study of 1786, ever more clearly than Bystrzonowski and Albertrandi emphasizes the importance of human causative activity in the process of the cognition and subduing of nature. He asserted that nature required arrangement by the man and subordination to human needs and interests. If left on its own, it may be dangerous to man. If the man neglects his obligation and right of power over the nature, he loses happiness and safety [54]. These types of views were favourable for successful reception of the somatic standard of clinical medicine in Polish academic medicine until 1831, in which emphasis was placed not only on recognition of the disease but on actively fighting and preventing it, including popularization of preventive vaccination. This prevention was not understood as counteracting any of God's inevitable verdicts (as was believed until the middle of the 18th century [55]), but as a right of man to follow his own mind to prevent risks coming from nature and not sent directly by the Creator. The naturalistic cognitive perspective also allowed the introduction of medical statistics in Polish

medicine of this period which became the basis for the evaluation of diagnostics and therapy.

The most essential elements of the clinical standard lectured in the early 19th century in universities with Polish language instruction, functioning already after the partition of Poland in the Russian partition area (Warsaw, Vilnius) and in the Free City of Cracow, connected with the minimalistic stream in the European school of medicine philosophy, can be concluded as follows: (1) Assuming the objective nature of the world and the permanent, repeatable nature of the relationship between objects or phenomena which are the subjects of interest for natural sciences; (2) Accepting medicine as science belonging to the area of natural sciences and limiting interpretations present in its standard to naturalistic and somatic elements; (3) Assuming the separation of the cognizing subject from the world being cognized by it, acceptance of the autonomous cognitive abilities of the individual and freedom of interpretation of empirical data; (4) Acceptance in explanation of scientific cause-related interpretations based on analysis of observations of material objects and relations appearing between them, rejecting purpose-focused interpretations as non scientific; (5) Basing natural sciences on empirical foundations and rejecting the a priori model of science; (6) Acceptance of quantitative methods in medical research, based on measurement of material objects.

From the above philosophical assumptions, the basic features of the standard of Polish clinical medicine in the years 1795-1832 were derived: (1) Medical theories and doctrines should be based on experiences and observations conducted by individual physicians; (2) Analysis of these experiences and observations should be the foundation for formulation of hypotheses which should undergo empirical verification compliant with strict rules of methodology; (3) The theoretical structure of medicine should aim at reflecting the objective reality of nature. Any hypotheses which cannot be verified

experimentally referring to the reality of the world cannot be regarded as scientific; (4) The physician should assume the position of a spectator with respect to observations and the results of his experiences who defines conditions of observation and then controls their results; (5) The subject matter of the physician's observations should be the human organism and its relations with the environment. The physician should examine the correct functioning of the organism and determine the causes of pathologies occurring, looking for their roots in the natural environment surrounding the organism; (6) Hence scientific observations in clinical medicine should be public in nature and it should be possible to repeat them under the same conditions, leading to the same results; (7) Since medicine is an empirical science and is based on experience and observations, it should be assumed that scientific cognition in this field of science is relative. Each medical theory and doctrine accepted in certain historical period as objectively reflecting reality can be questioned in the future when access is obtained to new facts and when their interpretation is formulated according to new improved principles of scientific methodology.

The philosophical justification for the clinical views expressed above in Polish academic medicine in the years 1795-1832 included the views of French and British philosophers, mainly of Condillac and Thomas Reid available in Polish translations and in the original languages. Inspiration was also taken from the extensive medical literature published in the German language but connected only with the somatic stream. Influences of the maximalistic German philosophy of medicine connected with the speculative non-materialistic standard were unnoticeable in the Polish medical environment.

After the liquidation of Polish universities in the Russian partition in 1832, the world-view assumptions described above were still popularized in numerous publications written by physicians. Even though, due to the small number of universities in the Polish

territories and breaks in their functioning caused by the policy of the partitioners, most Polish physicians had to study abroad before 1918, their scientific awareness developed mainly by means of literature even before commencement of these studies was identified with the ideological program of the European Enlightenment, avoiding however its atheistic implications. Therefore, the features of the Polish school of philosophy of medicine included conformity with Christian anthropology in Catholic perception, as well as activism, cognitive optimism, belief in the cognitive abilities of the individual and conviction about the autotelic value of scientific cognition. This kind of attitude was not connected with materialism and atheism as perceived by French materialists [56] but with the professionalization of medical discourse and its separation from theology. The deism of Polish philosophical discourse was connected with rejection of church pressure on development of the natural science standard. Although this appeared, it was agreeably rejected by Polish physicians as deriving from outside of the professional clinical discourse. Contrary to Polish general philosophy in which the stream of so-called church philosophy remaining under the influence of Catholic orthodoxy was developed in the 19th century, such a stream was not formed in the Polish philosophy of clinical medicine of this period because of total lack of acceptance of the need to create it in the medical environment. The demand for theoretical reflection in Polish clinical medicine was fulfilled by the philosophy of medicine.

Given the functioning of only a few universities during the partition period and since only a small group of graduates could receive professional philosophical education in them, with most of them not interested in the topic of medicine, Polish literature in the field of philosophy of medicine was dominated by amateurs as far as the number of titles is concerned. They were mainly physicians who on the margin of their professional activities, often at the end

of their lives, published their personal reflections on philosophical topics. It gave them splendour in their environment, however, this work did not have any major scientific value, considerably departing in its level from the professional debates of philosophers. In this context, the achievements of those authors who issued publications at the academic level before 1918 should be appreciated even more [57].

We can distinguish two streams in the views of philosophizing Polish physicians whose influences in the local scientific environment we may regard as relatively stable and applicable to all of Poland. The first of these was connected with the interpretation of relations between philosophy and medicine in the minimalistic spirit. This stream was closely related to the clinical medicine standard established in the second half of the 18th century and in the first decades of the 19th century, and on the grounds of this built theoretical reflection not only on medicine as science, but in general on science as a form of human awareness. Views held by representatives of this stream were anti-metaphysical in nature and were based on the philosophy of moderate scepticism, on the clinical experience of the individual physician who had to convince of his conclusions the scientific community surrounding him, accepting certain clinical concepts, as a part of which this researcher conducted his investigations. Followers of this stream in the Polish philosophy of medicine assumed the following theses: (1) Nature exists independently of us as cognizing individuals and functions according to laws which are unknown to us; (2) The subject matter of cognition in natural sciences is the natural world consisting of objects remaining in certain physical relation to each other, placed in the space, objects with identifiable permanent features; (3) Man and the human body which is the subject matter of medical research is just such an object. Therefore, it should be examined using the methods of the natural sciences and the conclusions of this research should be compiled in cause-related categories (causalism), free

of metaphysics and of finalist interpretations (teleology); (4) Medical cognition is relative and subjective in its nature because it is an expression of human beliefs about the natural world which is the subject matter of observations; (5) For the same natural reality which exists beyond us as individual personal cognizing individuals, it is possible to create many hypotheses differing from each other, out of which some are more and some are less connected with this reality; (6) Specialist scientists, focused in a certain school of interpretation, decide which of these hypotheses will be regarded as true at a given moment; (7) Various schools may interpret a given fragment of reality in different ways and individual physicians should know as many interpretations differing from each other as possible, and based on their own judgement they should choose those which they regard as the most convincing and practically effective; (8) Physicians are also obliged to know interpretations (hypotheses) regarded by them as erroneous or insufficient because their own interpretation also has the status of a hypothesis which may turn out to be erroneous or insufficient; (9) Therefore, they should be ready to reject any opinions which do not turn out to be sufficiently justified or practically effective, and also to accept opinions which can substitute for those rejected by science; (10) The theoretical foundations of medicine should be based on conviction about the stability of the physical world to which the human body belongs and the instability of medical theory and practice that refers to this world. In this perception, clinical medicine should be a lively science, susceptible to changes, ready to raise hypotheses, and to verify them by experience and observation, to reject those which did not pass such verification; (11) Clinical medicine should not surrender to authorities or to certainties accepted without proof, however it should accept the historical variability of scientific cognition which should be regarded as natural.

Publications presenting the assumptions expressed above were issued in the Russian partition until 1831,

mainly in Vilnius, in columns of such magazines as “Dziennik Medycyny, Chirurgii i Farmacji (Journal of Medicine, Surgery and Pharmacy)” and “Pamiętnik Towarzystwa Lekarskiego Wileńskiego (Memoirs of the Physicians’ Association in Vilnius)”. Magazines presenting this program included also numerous Warsaw magazines: in the years 1828-1829 “Pamiętnik Lekarski Warszawski (Warsaw Physician Journal)”, and in the second half of the 19th century “Pamiętnik Towarzystwa Lekarskiego Warszawskiego (Memoirs of the Physicians’ Association in Warsaw)”, “Tygodnik Lekarski (Medical Weekly Magazine)”, “Klinika (Clinic)”, “Gazeta Lekarska (Medical Newsletter)”, “Medycyna (Medicine)”, “drowie (Health)”, “Kronika Lekarska (Medical Chronicle)” and others.

The most outstanding and the most influential representative of the clinical stream in the Polish school of philosophy of medicine in the first half of the 19th century was Jędrzej Śniadecki [58-60], professor at the University of Vilnius, creator of the science of metabolism and the original concept of psychophysiology. In the second half of that century, Henryk Fryderyk Hoyer [61, 62] achieved a similarly influential position in Polish philosophy of medicine. These authors expressed theses concerning the constitutive content of the philosophy of medicine presented above in books and articles. Conviction about the liquidity and subjective nature of medical knowledge was the result of their observations in their own clinical practice which became the basis for theoretical reflection. As Prof. Śniadecki made the clinical medicine standard from the end of the 18th and first half of the 19th century based on experience and observation, inspired by the philosophy of Thomas Reid, a reference point of his philosophical and theoretical views, professor. Hoyer referred to the model of experimental medicine by Claude Bernard.

Publications on philosophical topics written by Polish physicians and connected with the clinical stream in medicine were issued also in the other two

partitions, Austrian and Prussian, in such magazines as, among others, “Rocznik Wydziału Lekarskiego w Uniwersytecie Jagiellońskim (Annual Magazine of the Faculty of Medicine in the Jagiellonian University)”, “Przegląd Lekarski (Medical Review)”, “Rocznik Towarzystwa Lekarzy Galicyjskich (Annual Magazine of the Physicians’ Association in Galicia)”, “Wiadomości Lekarskie (Medical Magazine)” and “Nowiny Lekarskie (Medical News)”. Both professors from universities and provincial physicians published their work in them. The subject matters of their philosophical discussions were epistemological issues connected with the dissemination of positivism and experimental medicine, ethical issues and the history of philosophy.

In the Polish environment of philosophizing physicians whose publications were connected mainly with deontological and ethical issues, attention should be drawn in the second half of the 19th century most of all to Tytus Chałubiński [63], physiatrist, practicing in Warsaw and Zakopane. He stood against excessive focus by physicians on research and the technical aspects of therapy. He popularized the model of medicine based on the deep personal relationship of the physician with his patients. He emphasized the importance of the psychological support provided to patients by the physician, the significance of the trust that patients have for their physician, and also the need for the physician to improve knowledge, at the same time maintaining modesty in the perspective of failures occurring in therapeutic procedures. The philosophical views of Chałubiński can be called the philosophy of values and joy of life that he instilled both in his patients and readers of his publications. Tytus Chałubiński is the best known philosophizing Polish physician and some of his publications are still renewed and used in the introduction to clinical medicine.

Another philosophizing Polish physician in the second half of the 19th century whose work is connected with ethical issues is Władysław Biegański

[64]. His studies concerning medical ethics still maintain their value due to the humanistic perspective contained in them demanding that relationships with the patient should be based on recognition of his/her value as a person and the respect owed to the sick.

In the Polish philosophy of medicine before 1918, attention should be paid to the environment of authors concentrated around the magazine entitled “Krytyka Lekarska” (Medical Critics) [65] in the columns of which work in the field of the theory of natural sciences and philosophy of science, including philosophy of medicine, were published. The founder and editor of the magazine, published in Warsaw, was Zygmunt Kramsztyk [66]. The group of authors collaborating with him included Henryk Nusbaum [67, 68], author of Philosophy of medicine, published shortly after Poland regained independence. Contrary to most Polish philosophizing physicians in the 19th century whose interest in philosophical issues was a part of the clinical stream initiated by Jędrzej Śniadecki and hence minimalistic in nature, the environment of “Krytyka Lekarska” perceived the philosophy of medicine in maximalistic spirit. The authors focused around the magazine believed that it was appropriate to include medicine in the area of broader philosophical reflection which should specify the ontological and epistemological basis of medical sciences. They also published articles about the philosophy of nature. The program of philosophical maximalism propagated by “Krytyka Lekarska” did not gain any broader popularity in the Polish medical environment. Since the 40s of the 19th century, positivist philosophy became common, becoming the foundation for the creation of the Polish variant of positivism called “Warsaw positivism”. The environment of “Krytyka Lekarska” did not develop any convincing alternative to this.

A specific feature of the Polish school of philosophy of medicine is its pro-social approach, committed to the improvement of health conditions in the population. In such medical magazines as

“Zdrowie (Health)” in Warsaw, “Służba Zdrowia Publicznego (Public Health Service)” in Cracow or “Nowiny Lekarskie (Medical News)” in Poznań, we can find publications presenting philosophical justifications for the attitudes of Polish intellectuals whose actions for the benefit of social good are described as necessary, natural and socially desirable.

After independence was regained in 1918, the authors of educational program in faculties of medicine located within Polish universities in Warsaw, Cracow, Vilnius, Lvov and Poznań introduced the philosophy of medicine as a separate course in the program of medical studies. This status was maintained only until 1924, and instead of philosophy of medicine Polish students had history of philosophy lectured by professors of humanistic background until 1939. Elements of philosophy of medicine were in this period lectured as a part of such courses as history of medicine and medical introduction. Among professors in the years 1918-1939 whose achievements were permanent and have maintained their importance up to the present, most of all Władysław Szumowski [69] should be mentioned, professor of the University in Cracow and author of the two textbooks [70, 71], which has been renewed until now.

In 1926, the magazine “Archive of History and Philosophy of Medicine” was established in Poland [72], the aim of which was to develop research in the field of medicine philosophy, and it has been published until now. This magazine, edited for many years by Prof. Adam Wrzosek [73], focused around itself a broad group of Polish authors and brought permanent contributions to Polish philosophical literature.

In 1935, the work of Ludwik Fleck [74] was published. The author issued it in Switzerland in German, counting on its easier popularization in Europe if it was published in Polish. In the 70s, this work was translated into English [75]. Up to the present, subsequent reprints have appeared, both in German and English, as well as in Polish. The author

of the most important monograph dedicated to the description of the person and work of Fleck as of now is Thomas Schnelle [76]. During the last half century, the methodology of Fleck had several schools of interpretation in Europe; in Switzerland there is an institute dedicated to analysis of his work, and a website was created in Poland on which one can post information concerning the reception of Fleck in literature and one's own articles on this topic, edited by Prof. Wojciech Sady [77, 78]. The worldwide career of Fleck was mediated by interest in his concept and by inspirations derived from Fleck's methodology by Thomas Samuel Kuhn [79].

The worldwide popularity of the views of Fleck [80] was brought by his proposal, while creating a new, contemporary philosophy of science, above all look at scientific practice to determine how it is followed by scientists rather than the theoretical ideas of science philosophers or methodologists in this regard [81]. Subjecting his own practice as a microbiologist to methodological reflection, Fleck formulated on the grounds of this a program of scientific research which referred in its roots to the views of Polish clinicians from the first half of the 19th century, because it presented the program of philosophy of science closely connected with clinical experience defined in the same way as by his predecessors. Summarizing the most important postulates of the Fleck's program, we can see this similarity. Fleck assumed: (1) Apart from us as cognizing personal individuals, the world of nature exists in which objective laws are applicable; (2) Researchers of the world—scientists—do not reach nature directly but through the mediation of theories which specify what they can see and define the method of cognition and the rules binding for scientists; (3) All these elements form the style of thought of a given group of scientists developed in a collective way by composing subsequent elements recognized according to a specific rule; (4) It is impossible to get to know the world outside of the established rules for cognition which specify what

image of the world we can create by their means; (5) Images of the same world created according to various rules will be incommensurable with each other. The theoretical program of Fleck is basically compliant with the Evidence Based Medicine standard, both in times contemporary to him and currently. This is favourable for its popularization among physicians. It differs from the views of 18th century clinicians by complete elimination of metaphysical elements. Polish clinicians from the turn of the 18th and 19th centuries and 19th century continuators of the standard developed by them still referred to metaphysical justifications, incorporating premises present in metaphysics and Roman Catholic anthropology in deistic perception in the structure of their concept of scientific knowledge. Fleck's concept does not include this kind of metaphysical reference. However, it assumes the implicit existence of the natural world in the same shape as Polish clinicians a century ago. There are cultural imputations in the structure of his concept that he probably was not completely aware of, taking them for granted.

4. Philosophy of Medicine in Poland after 1945

After the second world war, lectures of philosophy were resumed in the medical faculties of Poland. The subject was lectured by professors of the history of medicine as a separate course to medical ethics, also included in the mandatory program of studies. However, the philosophy of medicine was maintained as a mandatory course in the educational program for only two years, that is from the autumn of 1945 until the spring of 1947, and since that time has not appeared any longer in teaching in Polish university education. Polish medical students in the years 1947-2014 (as in other European countries) have obligatorily familiarized themselves with the history of philosophy, taught however not by physicians but by humanists, and the educational goal of this course is for graduates to obtain general scientific erudition.

Elements connected with professional medical standard, in the past present in lectures on the philosophy of medicine, found their place in the programs of such courses as introduction, medical ethics and history of medicine. Until 1989, most lectures in these courses in Polish faculties of medicine were given by physicians, but currently humanists dominate among the lecturers. This is the expression of the progressive professionalization of clinical methodology, the elements of which are presented during specialized training rather than so called humanizing courses.

The most outstanding physician after the second world who published a textbook connected with the philosophy of medicine was Prof. Tadeusz Brzeziński, lecturer of medical ethics and history of medicine in the Academies of Medicine in Łódź and Szczecin. His Medical ethics [82] contains reference to the classical scholar of Polish ethical thinking in philosophy of medicine, Władysław Biegański [83] whose book was a model and inspiration for Prof. Brzeziński. The position of Prof. Brzeziński in the Polish scientific environment can be compared with the position of Prof. Szumowski before 1939. They were both authors of history of medicine textbooks, both published works connected with the philosophy of this field of science. Their views developed awareness of methodological issues in many generations of Polish physicians.

After 1945, philosophy of medicine became in Poland the subject matter of historical and science studies research. The issues of philosophy of medicine in Poland are dealt with in the environment of authors connected with the IHN PAN (Institute of History of Science in the Polish Academy of Sciences) in Warsaw [84]. Since 1994, the magazine "Modern Medicine" has been published by this Institute, until 2002 edited by Doc. Zofia Podgórska-Klawe [85], and currently edited by Prof. Bożena Urbanek. In this magazine some articles about philosophy of medicine Prof. Jaromir Jeszke [86], Prof. Tadeusz Srogosz [87],

and Prof. Bożena Płonka-Syroka (in the years 1992-2002 fulfilling the function of deputy editor-in-chief) [88] have been published. The Institute of History of Science is a unit coordinating the work of a Poland-wide team of humanists managed by me conducting research in the field of anthropology of sciences (Anthropology Section in IHN PAN) and philosophy of science [89]. Publication of “Archive of History and Philosophy of Medicine”, created in 1926, is also continued [90]. Research on the philosophy of medicine is also conducted in contemporary Polish university centres, mainly in Warsaw (Prof. Kamila Bartnicka) [91], Poznań (Prof. Michał Musielak [92], Dr. Jan Zamojski [93], Dr. Zenon Maćkowiak [94], Dr. Monika Tamborska-Zedlewska [95], Dr. Jadwiga Wiertelwska-Bielarz [96]), Cracow (Prof. Andrzej Śródka [97]) and Wrocław (Prof. Bożena Płonka-Syroka [98], Dr. Jarosław Barański [99]) and Częstochowa (Prof. Tadeusz Srogosz [100], Dr. Norbert Morawiec [101]). These issues encounter interest from both physicians and philosophers, hence, they find their place in Polish general philosophy and specialized literature (among others, in the series Humanistic Studies in the Faculty of Pharmacy of Medical University in Wrocław, since 2008 edited by Bożena Płonka-Syroka) [102].

5. Conclusions

Summarizing the picture of Polish philosophy of medicine in the last two centuries, the following final theses can be raised: (1) For the last two hundred years the Polish school of philosophy of medicine maintained its basic directions of interpretation based on anthropology and Christian metaphysics in Roman Catholic perception; (2) Until the middle of the 19th century, these were directions knowingly chosen by authors in relation to the religion that they were actively practicing; (3) Since the middle of the 19th century, in connection with dissemination of positivist philosophy in the Polish medical environment and in

broad circles of Polish intellectuals, direct metaphysical references gradually began to disappear within the Polish school of philosophy of medicine; (4) However, the basic premises for construction of the concept of nature which existed in the awareness of most Polish intellectuals, including physicians, did not decline. They were present in the form of cultural imputations that is beliefs accepted as natural without the need to present a proof.

The Polish school of philosophy of medicine created in close connection with the clinical standard developed in the European medical environment in the second half of the 18th century throughout the entire period of its development, that is until the middle of the 20th century, preserved this connection in an unchanged form, which created a barrier to reception in this standard of both metaphysical and speculative concepts, as well as those scientific theories which could not match the anthropology and axiology recognized in the Polish scientific environment (such as social Darwinism, eugenics, race hygiene). The basis of the Polish school of medicine philosophy on clinical foundations and methodological scepticism also became a barrier to the reception of former and contemporary para-scientific concepts based on doubtful theoretical premises. These days, just this area of research of the Polish medical humanities which deals with certain issues present in the past in the philosophy of medicine standard seems most lively because of the number of publications dedicated to them. The axiology accepted in the philosophy of medicine, recognizing the priority of the patient's good among professional medical actions, makes contemporary Polish researchers seek deepened reflection on the health needs of Polish society and the possibilities of satisfying them through official medicine. As in the genesis of the philosophy of medicine, likewise in these days in reflection of other humanistic disciplines related to medicine, the primary role is played by the desire to provide professional care for patients at the best possible level.

Social sociology, sociology of medicine, sociology of health and disease, as well as medical anthropology (covering within their scope research on professional medical discourse, awareness of laymen and treatment streams in the standard alternative to the clinical standard) combine their standard cognitive elements with practical elements, thus joining the stream of reforms in clinical medicine, adjusting it to the needs and expectations of patients. This gives to these disciplines a certain axiological profile based on recognition of the right to life and health as one of the main and inalienable primary rights, determining the character of our contemporary civilization.

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