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HOLISTIC AND TRANSDISCIPLINARY CHARACTER OF CONTEMPORARY ACADEMIC EDUCATION[1]

INTRODUCTION

It would be hard to dispute the statement that the academic community has to face many present-day challenges. I would therefore like to refer one of them, namely the nature of academic education in which academics and students are directly involved. Teachers determine the quality of knowledge created in scientific research, which is then passed on to students, who consume this knowledge by creating their professional competences. Taking social sciences as an example, I would like to point out the need to recognise the holistic and transdisciplinary nature of knowledge used in academic education.

HOLISM

When reflecting on the essence of holism, or a comprehensive approach to the world, one may invoke words of one of the greatest scholars, Albert Einstein, who observed that:

[1] Originally published: Wiktor Żłobicki, "Holistyczny i transdyscyplinarny character współczesnej edukacji akademickiej", [in:] *Nowe strategie w kształceniu studentów. Dobre praktyki – rekomendacje*, ed. Ż. Kaczmarek, J. Morbitzer, Uniwersytet Medyczny im. Piastów Śląskich, Wrocław 2018, p. 13-36.

> A human being is a part of the whole called by us universe, a part limited in time and space. He experiences himself, his thoughts and feeling as something separated from the rest, a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty[2].

Albert Einstein's ideas and his theory of relativity made holism a major notion also in the humanities and social sciences. The term *holism* comes from the Greek word *holos* (entirety) and was popularised by Jan Christian Smuts, who in his book *Holism and Evolution* (1926) introduced the theory of cognition based on three pillars:

- man experiences the surrounding environment with all the senses – an observation inspired by Kantian philosophy;
- the perception of reality is holistic, rather than fragmentary, which means that the whole is something different and something more than the sum total of its components – a contention that draws on Plato's views;
- holism is a state of aspiration of a part to merge with the whole – the author owed this way of order in the world to Hegel's philosophy.

The postulate of holism can be illustrated by the example of a fragrant rose, which has thorns, stem, leaves and petals forming a flower cup. Therefore, although each leaf of the rose is a singular whole, and so is the stem or a single thorn, only their combination creates a beautiful plant. Is a single thorn or flower petal of the most beautiful rose a rose? Undoubtedly, the most beautiful rose will lose its charm if we divide it into components. Likewise, we can speak of a comprehensive knowledge of the world. In fact, understanding the world is not fully possible if you explain its existence – as is often the case in the educational process – with the knowledge accumulated in so-called study subjects. Physics, chemistry, biology, mother tongue or mathematics constitute fascinating fields of knowledge – but they are single fields only! For example, the phenomenon of the birth of man cannot be explained by mathematical knowledge alone. Still, without maths this cannot be done in a holistic way, either.

We should assume, then, that the holistic approach means a "need for a comprehensive and integrated approach to experience, irrespec-

[2] After: H. Dauber, *Obszary uczenia się w przyszłości. Perspektywy pedagogiki humanistycznej*, Kraków 2001, p. 78.

tive of whether they concern groups, objects or individuals, rather than their division into identifiable fragments"[3]. Following this line of reasoning, we may assume that human perception is tuned to holism. Such comprehensive images and experience linked to the needs we wish to satisfy contribute to our knowledge of the world at large. At the same time, we need to remember that human experience is geared towards the discrimination of opposites and is linked to an established dual tradition and to a mutual exclusion of contradictions. Is there, then, such a thing as objective knowledge? Can a description of an object in a manner shared by all objects tell us that the object really exists? Contemporary science may prove it and yet the object may be regarded as a token of a subjective, irrational perception and actually does not exist. This, too, can be proved in this way. There are, then, two opposite concepts of perceiving reality. From this point of view, creating pairs of opposites in one's consciousness can be considered a kind of falsification of reality. The unilateral nature of opposites should be replaced by their reciprocity and cyclicality, as evidenced, for example, by inhalation and exhalation, adolescence and aging. From this point of view, for example, the notion of *nothing* and *something*, or *emptiness* and *fullness*, are by no means isolated from each other, as is the case in dualistic reasoning, but are in a relationship with each other. The essence of this way of thinking is explained, for example, by one of the most important works of Eastern philosophy in which we find the following reasoning:

> Thirty spokes join the wheel nave
> And make of void and form a pair,
> And a wagon's put to use.
> Clay is thrown to shape a vase
> And make of void and form a pair,
> And a vessel's put to use.
> Door and window vent a room
> And make of void and form a pair,
> And a room is put to use.
> Thus the value of what is
> Depends for use on what is not[4].

[3] Ch. Sills, S. Fish, P. Lapworth, *Pomoc psychologiczna w ujęciu Gestalt*, Warszawa 1999, p. 11 [Ch. Sills, S. Fish, P. Lapworth, *Gestalt Counselling*, Winslow Press, Oxford 1995].

[4] Laozi, *Dao De Jing. The Book of the Way*, Berkeley, Los Angeles, London 2001, Stanza 11, p. 51.

The ideas of holism are moreover present in poetry. One of the greatest poets, Horace, defined the co-existence of opposites as follows:

> Whoever fears the opposite of these things marvels almost in the same way
> As the one who desires them;
> What is the troubling in each case is the alarm that results,
> As soon as an unexpected appearance startles either.
> Whether he feels joy or grief, desire or fear, what does it matter, if,
> When he has seen something better or worse than he had hoped,
> He becomes numbs and his eyes and mind and body are transfixed?[5]

Anthony de Mello justifies it in yet another manner, observing as follows:

> If I had spoken of my emptiness or even been aware of it would it be emptiness? Music needs the hollowness of the flute, letters, the blankness of the page, light, the void called a window, holiness, the absence of the self[6].

The idea of holism can also be applied with respect to the classical understanding of opposites, based on the concept of imbalance. This imbalance manifests itself, among other things, in emphasizing synthesis with violation of the role of analytical processes; rational, scientific knowledge separated from intuitive life wisdom; in rivalry that disregards cooperation, expansion that is not offset by stabilization processes, etc. Fritjof Capra[7] was trying to explain the lack of this balance in the cultural reality of the Western world. It should be noted that the scientific justification for the presence of the idea of holism in the humanities is based on the achievements of contemporary quantum physics and the theory of relativity. The infallibility of the Cartesian concept of dualism of spirit and matter, on which the scientific knowledge of the modern world was based, was questioned. The author regards this one-sidedness as the cause of the deep social, ecological, moral and spiritual crisis of the contemporary Western world and therefore refers to the philosophical thought of the East.

It should be emphasized that not only the views of the above representatives of modern quantum physics encourage us to draw on the richness of intellectual thought in the East. Contemporary philosophers, too, more and more often refer to the philosophy of the East. For

[5] F.K. Horacjusz, *Dzieła wszystkie. Gawędy, listy, sztuka poetycka*, vol. I, Warszawa 2000, p. 278.
[6] A. De Mello, *The Prayer of the Frog*, 1995, p. 49.
[7] See F. Capra, *The Tao of Physics. An Exploration of the Parallels between Modern Physics and Eastern Mysticism*, London 1991.

example, Leszek Kołakowski in an interview observed that Marcus Aurelius' stoicism about the essence of philosophy comes close to the truths proclaimed by Buddhist philosophy[8]. In another text he described the philosophical views of Heraclitus of Ephesus, whom he called *the preacher of eternal transformation*[9]. Heraclitus' beliefs regarding the essence of holism, popularised in maxims such as: "the road up and the road down is one and the same road" or "everything flows" or "everything is in a state of flux", or "you could not step twice into the same river" demonstrate the transformation of particular qualities into other ones, the interplay of opposites and their incessant transformation. By no means does it lead to chaos, since the transformation is subject to proportion and equilibrium. As Leszek Kołakowski confirms, "In everything we see a game of opposites, without which the world would fall into ruin"[10]. There are here such simple antonymies as the beginning and end on a circle, which can be located at any given point. There are those which involve a gradual transition of something into its opposite, such as cold and hot. There are finally those which trigger tension, as in archery. The action of opposites can be seen, for example, in the fact that water has varying effects on living beings: it is a good environment for oxygen uptake by fish, but not by humans, and so on. The above species will react differently to atmospheric oxygen, however. Therefore, in order to understand the essence of holism, it is extremely important to conclude from Heraclitus' philosophy that, in spite of widespread variability, the world is one and is in order.

SCHOLARLY DISCIPLINES

Basing on the distinctiveness of scientific disciplines is sometimes an expression of the strategy of those scientists who find it easier to defend the boundaries of their own speciality than of the need, resulting from the development of science, to get closer to other areas of knowledge and establish cooperation with their representatives. Meanwhile, the present day challenges us not only to search for and organize scientific knowledge, but also to transcend and relocate the boundaries of disciplines. This does not mean abandoning important

[8] See L. Kołakowski, "Sen, w którym żyjemy", *Przekrój* 2006, No. 33/3, p. 15.
[9] See L. Kołakowski, *O co nas pytają wielcy filozofowie. Seria I*, Kraków 2004, p. 29.
[10] Ibidem, p. 30.

landmarks in the topographies of individual scholarly disciplines, but the community of sciences may bring us closer to the ideal of integrated knowledge about the world.

For example, in both its theory and practice, pedagogy without transgressing the limits of its own field and applying the legacy of philosophy, psychology, sociology, anthropology, and political science would become an imperfect instrument of describing, diagnosing or intentional impacting another person. At the same time, however, it is impossible – without the risk of their deformation – to exclude certain areas of pedagogues' interests completely from the fields where the above disciplines are responsible for research. Hence, pedagogical discourses seem to be both relatively less stable and more susceptible to the impulses of change created by other disciplines. Therefore, today the issue of inter- and transdisciplinarity of pedagogy is also a question about the condition of this discipline, which cannot ignore the need – and often the necessity – to delineate, but also to cross its own boundaries and integrate knowledge from other fields, not only in the area of research and educational practice, but also in the area of theoretical reflection. Thus, today, in the face of the development of the humanities and social sciences, we see more and more clearly the illusion and blurred boundaries of disciplines, the weaknesses of many theories and the flickering ambiguity of notions used by scientists. Admittedly, discipline should be regarded as a dominant feature of practicing science, but it should be remembered that disciplines of knowledge are not so much a reflection of nature, but rather a social and cultural product perpetuated by 19th-century processes of social modernisation[11].

According to Leszek Koczanowicz, the division into disciplines of science was augmented by

> specialization processes, which caused the separation of disciplines from each other and from their shared mother, i.e. philosophy. Such a breakdown turned out to be inevitable; the very act of constitution of a discipline requires above all a gesture of rejection of what is not that discipline. Such negative identification is an obvious part of any identity, and the closer the identities are, the more effort must be put into distinguishing them.

[11] See J. Mittelstrass, *Stichwort Interdisziplinarität. Mit einem anschliessenden Werkstattgespräch*, Basel 1996, [after:] A. Maihofer, "Inter-, Trans- und Postdisziplinarität. Ein Pläoyer wieder die Ernüchterung", [in:] *Quer denken – Strukturen verändern. Gender Studies zwischen Disziplinen*, ed. H. Kahlert, B. Thiessen, I. Weller, Wiesbaden 2005, p. 196.

> Exploration of the distinguishing features of each discipline, which will contribute to its precise definition and separation from other more or less related fields of knowledge, resulted in the fact that the most important thing was to prevent other points of view and cognitive perspectives from interfering in a given science[12].

The relation between philosophy and psychology is a spectacular example referred to by the author. The ties between these sciences were broken when behaviourism evolved from psychological theory into an ideology of examining the objective determinants of behaviour of what had previously been described as the world of man and his creations. Attempts to explain human behaviour by means of a theoretically and empirically complicated introspective psychology were replaced by technologically oriented behavioural knowledge about the ways of behaviour modification[13].

IS IT TRUE THAT THE WORLD HAS PROBLEMS AND UNIVERSITIES HAVE FACULTIES?

The academic community sustains the structure of scholarly disciplines, which often proves a stumbling block for the knowledge development process. It was aptly commented on by Garry D. Brewer, who observed that "the world has problems while universities have faculties"[14]. It seems, therefore, that one of the responses to the increasingly obvious knowledge crisis has been the crossing of boundaries between disciplines. A multifaceted analysis of this phenomenon can be found in the twelfth volume of interdisciplinary studies on gender issues, entitled *Quer denken – Strukturen verändern. Gender Studies zwischen Disziplinen*[15]. As one of the co-authors of this work, Sabine Kark, writes, a review of literature on sociology and the history of knowledge indicates a lack of a clear understanding of the concept of disciplinarity[16]. For instance, disciplinarity is seen as the first principle of creating

[12] L. Koczanowicz, "Interdyscyplinarność – między rabunkiem a dialogiem", [in:] *Interdyscyplinarność i transdyscyplinarność pedagogiki – wymiary teoretyczny i praktyczny*, ed. R. Włodarczyk, W. Żłobicki, Kraków 2011, p. 36.

[13] See ibidem, p. 36-37.

[14] See G. D. Brewer, "The Challenges of Interdisciplinarity", *Policy Sciences* 1999 No. 32, p. 328.

[15] *Quer denken – Strukturen verändern*, op. cit.

[16] S. Hark, "Inter/Disziplinarität. Gender Studies Revisited", [in:] *Quer denken – Strukturen verändern*, op. cit., p. 69-70.

and organizing scholarly knowledge, but an opposite view sees it as a stabilizing agent of routine in science. The former approach, aired by Burton R. Clarke and Rudolph Stichweh, assumes that a scholarly discipline is the "fundamental unit of inner differentiation of scholarly *knowledge*". As a consequence, from the point of view of the process of knowledge development, one can indicate criteria of its formation into a scholarly discipline:

- a sufficiently homogeneous nature of the communication between researchers forming the scientific community;
- representation in textbooks of the backbone of scientific knowledge in the form of codified and agreed core concepts;
- variety and topicality of the problems addressed;
- a set of research methods and paradigms;
- discipline-specific structure and institutionalization of research careers[17].

In turn, Ellen Messer-Davidow believes that there are three constitutive functions of any discipline: production, regulation and reproduction[18]. The first is to create science subjects, i.e. areas of interest and research topics, and to "produce" science professionals, i.e. researchers who make up a structured environment with professors at the top and underpaid assistants at the bottom of the hierarchy. The regulatory function serves the organisation of scientific knowledge with the aid of specific instruments and the formation of the structure of the science community[19]. The reproductive function related to the continuation of the process of knowledge formation on the basis of scientific accomplishments and re-creation of the science community.

[17] These views were aired by: Burton R. Clark, *The Higher Education System: Academic Organizations in Cross-national Perspective*, Berkeley, Los Angeles 1983 as well as Rudolph Stichweh, *Wissenschaft. Universität. Professionen*, Frankfurt 1994, [after:] S. Hark, "Inter/Disziplinarität. Gender Studies Revisited", op. cit., p. 73.

[18] E. Messer-Davidow, *Disciplining Feminism. From Social Activism to Academic Discourse*, Durham, London 2002, [after:] S. Hark, "Inter/Disziplinarität. Gender Studies Revisited", op. cit., p. 75-76.

[19] The production and regulation aspect of a discipline was highlighted by Timothy Lenoir (earlier than Ellen Messer-Davidow). According to this Author, this serves the purpose of mapping out unique scholarly territories, regulating the assignment and distribution of academic privileges, resources, and goods – (T. Lenoir, "The discipline of nature and nature of disciplines", [in:] *Knowledges. Historical and Critical Studies in Disciplinarity*, ed. E. Messer-Davidow, D.R. Shumway, D.J. Sylvan, Charlottesville, London 1993, [after:] S. Hark, "Inter/Disziplinarität. Gender Studies Revisited", op. cit., p. 76).

Referring to the above-mentioned second thesis on disciplinarity as a stabilizer of routine in science, one must note the justified anxiety concerning the fact of whether science in its internal, disciplinary diversity copes with the challenges of contemporary, increasingly complex reality? We must also mention the still unresolved discussion of scientists as to whether in this situation the borders of individual disciplines should be sealed, extended or transcended?[20].

PEDAGOGY AS A SCHOLARLY DISCIPLINE

This dilemma applies likewise to pedagogy, whose status – i.e. the limits of it as a discipline have been much debated after the socio-political breakthrough of 1989. On the one hand, pedagogy celebrates its educational triumph, since it has enjoyed enormous popularity as a university major and, as Zbigniew Kwieciński observed, "has transformed from a university Cinderella subject to a true hit of academic studies of the fifteen year period after 1990"[21].

On the other hand, against the background of this spectacular success, the science of pedagogy is still being discussed, and its achievements are often marginalised by representatives of other humanities and social sciences, despite the strong link between the theory of pedagogy and, among others, humanist and postmodernist concepts. As Antoni Smołalski rightly pointed out, pedagogy with due respect refers to the many areas whose conceptual network and scientific achievements it uses but gets little if any respect in return[22]. Zbigniew Kwieciński pointed to one more property of the borderlines of pedagogy as a scholarly discipline; he asked a question: "Can one be a successful pedagogue as a scholar and teacher without prior mastery of its fundamental canon, with zero knowledge at the onset of one's academic career?"[23]. In reply, the Author referred to the names of many professors of Polish pedagogy who hold master's and doctoral degrees in other disciplines, including economics, mathematics, chemistry, psychology, military sciences, theology, geography, biology and

[20] *Quer denken – Strukturen verändern*, op. cit., p. 32.
[21] Z. Kwieciński, *Między patosem a dekadencją. Studia i szkice socjopedagogiczne*, Wrocław 2007, p. 67.
[22] A. Smołalski, *Paradygmaty i historiozofia pedagogiki*, Wrocław 2009, p. 153.
[23] Z. Kwieciński, "Pedagogiczne zero. Zastosowania problemowe, epistemiczne i magiczne", *Nauka* 2004, No. 2, p. 16-17.

history. The flexibility of the boundaries of modern pedagogy is therefore due to the creative presence of professors such as: Kazimierz Denek – earlier a Ph.D. in Economics, Stefan Kwiatkowski with an M.Sc. in IT, Zbyszko Melosik whose first degree was in Political Science and Lech Witkowski, with a Master's degree in Maths.

In the past, too, pedagogy was open to concepts which originated on other disciplines. One cannot conceive e.g. of current humanistic pedagogy without its eminent inspirators, e.g. Janusz Korczak or Carl R. Rogers. The contribution to pedagogy of Janusz Korczak – a physician and Carl R. Rogers – a psychotherapist must be at least cursorily mentioned here. Janusz Korczak, a paediatrician by profession and a writer and essayist by passion, saw the need for transcending the limits of one's own prime discipline. His professional experience of a man connected with medicine sparked an interest in pedagogy, which he generously gifted with numerous volumes of his works; despite the passage of years, they continue to inspire pedagogues to this day[24]. The fact that Janusz Korczak transcended the limits of his medical education and shifted towards pedagogy is evidenced, among other things, by the foreword to one of his most famous texts from the beginning of the 20th century:

> The main place in medicine is occupied by the science of recognition. The student examines a number of individuals, learns to look and - noticing the symptoms - to explain them, interconnect and make inferences on their basis. If pedagogy wants to follow the path paved by medicine, it must develop educational diagnostics based on the understanding of symptoms. What fever, coughing and vomiting is for the doctor, smiles, tears or a flush is for the educator[25].

Referring to a typical clinical observation, Janusz Korczak was a co-creator of emerging humanities and a promoter of modern pedagogical thought. In another publication, analysing the problems of adolescence, Janusz Korczak expressed his conviction that "the period of adolescence should cease to be the focus of medicine, which took care of its physical and material side, and shift to pedagogy, tasked with taking care of

[24] See e.g. the multi-volume edition of Janusz Korczak's writings, published in Warsaw by Oficyna Wydawnicza Latona [J. Korczak, *Selected Works*, transl. J. Bachrach, National Science Foundation by the Scientific Publications Foreign Cooperation Center of the Central Institute for Scientific, Technical and Economic Information, Warsaw 1967].

[25] J. Korczak, "Momenty wychowawcze", [in:] *Dzieła*, vol. 7, Warszawa 1993, p. 361.

its spiritual side"[26]. He stressed, therefore, that medicine and pedagogy should not only be mindful of their separate nature, but also of the shared subject of studies. Importantly, Janusz Korczak decided to become a pedagogue under the impact of his practice as an educator during summer camps for young people and in the orphanage.

Another example of transcending the borders of a discipline one represents was a famous psychotherapist, co-founder of humanistic psychology and person-centred education, Carl R. Rogers, who became an active member of the New Education current after 1968 and laid the foundations of person-centred education. He assumed that the human being is born with a unique developmental potential and a strong desire for realising it, i.e. with a tendency for self-actualisation[27]. Human needs, desires and drives manifest it and serve the development of the individual, whereas all distortions of development result from the negative experience of a dysfunctional social environment. The universal character of Carl R. Rogers' focus on the person helped to define the optimum learning conditions, and thus development criteria. Fundamental here is the conviction of the huge potential of each and every student, which in a significant manner determines the role to be played by the person facilitating the learning process. Of key importance, then, is Carl R. Rogers' idea of *facilitation*, or support of the learning process, with the preservation of the subjective nature of the teacher-student relation[28]. As a consequence, the features of person-centred education are as follows:

- the teacher identifies with the idea that each person wants to learn and has belief in his or her role of the *facilitator*;
- the program, planning and financing of such learning is the joint responsibility of all the stakeholders: the *facilitator*, the students, their parents and school authorities;
- the *facilitator* offers access to learning resources (source texts, books, other people's experience, etc.);
- the student by him- or herself or in cooperation with other learners selects, creates and develops a curriculum and takes responsibility for its effects;

[26] J. Korczak, "Szkoła życia", [in:] *Dzieła*, vol. 4, Warszawa 1998, p. 222.

[27] See C. R. Rogers, *On Becoming a Person. A Therapist's View of Psychotherapy*, New York 1995, p. xix.

[28] The original source of the *facilitation* concept in education is, naturally, Carl R. Rogers' person-centred psychotherapy.

– there is a climate conductive to learning and learning from one another;
– the content of the curriculum is important yet not the most important, since students' success is "the learning progress, how to learn what they want to know";
– students reach their goals via self-discipline which replaces superimposed discipline[29].

Thus, if we assume that the basic activity of any organism is growth and development, the teacher, rejecting the traditional concept of guiding the learning process, focuses primarily on supporting the process. In the proposed creation of a person-centred education process as an alternative to traditional schooling, Carl R. Rogers invoked his experience as a psychotherapist, which is not the only instance of therapists' interests in pedagogy[30].

MULTIDISCIPLINARITY – INTERDISCIPLINARITY – TRANSDISCIPLINARITY OF PEDAGOGY

The achievements of pedagogy are therefore associated with the presence of many figures representing various specialties. Today, pedagogy has its place at universities, but at the same time it is entangled in a complicated arrangement between a variety of disciplines of knowledge. Representatives of German pedagogy comment on these complex relations and claim that the relations between the disciplines reflect the notion of multidisciplinarity (often referred to as pluri-disciplinarity), interdisciplinarity and transdisciplinarity[31].

Multidisciplinarity is characterised by a joint approach to a certain question by various disciplines, each of which retains full autonomy and does not take advantage of the effects of cooperation for changes in the structure of its own theory or methodology. Interdisciplinarity, in turn, denotes not only joint action of at least two (sub)disciplines,

[29] C.R. Rogers, A *Way of Being*, New York 1995, p. 309-310.
[30] This is done also by, e.g. Gail King, the author of the publication *Counselling Skills for Teachers* (Buckingham 1999). Despite the much-promising titles, the book should not be read as a lecture or a self-help manual on therapy, but rather as an incentive for teachers to take the effort to improve their professional competence. Sharing her experience of a counsellor, the Author addresses the skills indispensable in teachers, such as: listening, paraphrasing, reading bod language, showing emotions, empathy, etc.
[31] A. Maihofer, "Inter-, Trans- und Postdisziplinarität. Ein Plädoyer wieder die Ernüchterung", op. cit., p. 185-202.

but also creation of shared terminology. Interdisciplinary cooperation may involve engagement in various topics, resulting in the modernization of knowledge in each discipline, sometimes also resulting in the emergence of a new (sub)discipline. Transdisciplinarity means the rejection of the limits of one discipline and conducting a research process on the basis of shared theoretical assumptions. Transdisciplinary work contributes to defining and solving complex problems, develops a trans-disciplinary theory and is effective where single disciplines fail, e.g. to solve complicated problems of the natural environment. According to Heike Kahlert, transdisciplinarity in science became simultaneously a challenge and a fact when the first sputnik was launched into orbit in 1957[32]. The event ushered in a crisis of traditionally perceived knowledge; this crisis has continued to date, as witnessed by the Wissenschaftsrat approach. In one of its official documents, this highest scientific body in Germany stressed that e.g. the development of transdisciplinary skills is of key importance for the creation of new higher education offer[33]. It is therefore appropriate to agree with the assumption that the professional credibility of contemporary pedagogues must be built from a broader perspective than their own discipline. This is because pedagogy is expected to meet the increasingly complex challenges resulting from dynamic changes in social reality. These expectations, often contradictory, are formulated both by representatives of the world of politics, represented e.g. by educational authorities, and by educational stakeholders. i.e. students, parents and teachers, who are aware of their role. In a sense, therefore, pedagogy may appear to be a "hostage" to these expectations. No wonder, therefore, that Hannah Arendt places an exceptionally high demand on teachers as the most numerous professional group in the society, one that requires knowledge which is not only strictly pedagogical – because "with respect to the child the teacher is as though a representative of all adult inhabitants of this world, pointing out the details and saying to the child: 'This is our world'"[34]. All the more so, there is a pressing need for the exploration and intensification of dialogue with

[32] H. Kahlert "Wissenschaftsentwicklung durch Inter- und Transdisziplinarität: Positionen der Frauen- und Geschlechterforschung", [in:] *Quer denken – Strukturen verändern*, op. cit., p. 28-29.

[33] *Wissenschaftsrat: Empfehlungen zur Einführung neuer Studienstrukturen und -abschlüsse* (Bakkalaureus/Bachelor-Magister/Master) in Deutschland, Berlin 2000, p. 21, www.wissenschaftsrat.de/download/archiv/4418-00.pdf (access: 22.03.2015).

[34] H. Arendt, *Between Past and Future*, London 1968, p. 194.

philosophy, anthropology, psychology, sociology and more and more often with social therapy and psychotherapy.

Such a trans-disciplinary approach to competences is offered by Gestalt in pedagogy, defined in relevant literature most often as Gestaltpädagogik, Gestalt pedagogy or character pedagogy[35]. Gestalt is one of the currents of humanistic pedagogy, an exemplary case of pedagogy transcending its borders. The leading motif, a kind of passport entitling to a trip in both directions is holism, i.e. a holistic view of education, which not only legitimizes the implementation of philosophical, psychological and psychotherapeutic content in the structure of pedagogical knowledge, but also allows Gestalt teachers to explore the fields reserved until recently only for specialists from the above areas. The sources of the Gestalt current in education can be found in the American "free schools" movement, which appeared in the first half of the 1960s as a response to the authoritarian and excessively technological education system. The following decade saw the intensification of the process of incorporating into scientific pedagogical knowledge of the experiences of various - earlier and later - currents of psychology, represented, for example, by humanistically-oriented psychologists such as Carl R. Rogers, Abraham Maslow and Ruth Cohn, founders of character psychology, e.g. Max Wertheimer and Kurt Lewin and precursors of Gestalt therapy, Fritz and Laura Perls and Paul Goodman. The first in Europe comprehensive book on Gestalt in education, by Hilarion Petzold and Georg I. Brown (collaborators of Fritz Perls), introduces the proposal of the use of Gestalt therapy in education and upbringing and furnishes a description of experience with its use in teachers' lifelong learning process[36]. It was an important step towards deepening the understanding of pedagogy, broadening its boundaries and accepting the right of educators to explore psychological and psychotherapeutic knowledge. At present, Gestalt in education is a holistic (comprehensive) concept, extensively drawing on sources originating in anthropology, existential philosophy, the philosophical systems of the East, phenomenology, psychology and Gestalt psychotherapy. As a consequence, competence development by Gestalt pedagogues transcends

[35] Gestalt in education is addressed in my monograph – see W. Żłobicki, *Edukacja holistyczna w podejściu Gestalt. O wspieraniu rozwoju osoby*, Kraków 2008.

[36] H. Petzold, G.I. Brown, *Gestaltpädagogik. Konzepte der integrativen Erziehung*, München 1977.

standard occupational learning, takes more time, requires the transcendence of borders of traditionally understood pedagogy and is run for a few years in professional Gestalt psychotherapy centres by certified trainers and psychotherapists.

In modern pedagogy, we have more and more examples of the fruitful use of opportunities to verify discipline boundaries, both in terms of their transcendence and expansion. A concrete example of the diverse relationships between specialists in different disciplines of knowledge is provided by Elżbieta Łobacz-Kloosterman[37]. Drawing on the UK experience concerning care over visually impaired children and their families, the Author indicates three differing models of cooperation between specialists: multidisciplinary, interdisciplinary and transdisciplinary. Under the multidisciplinary model, specialists dealing with a particular problem in the child rarely communicate with one another. Each of them works individually, focusing on an isolated aspect of the child's development. For example, a speech therapist is responsible for verbal communication, a typhlopedagogue is answerable for the improvement of the child's visual functions, etc. Under the interdisciplinary model, specialists, too, carry out their tasks individually, but are in regular communication with one another. In turn, the transdisciplinary model is underpinned by the collaboration of all specialists at every stage of work with the child, i.e. diagnosis, creation and realization of an individual program of supporting the development of a blind child, evaluating and modifying therapy, and cooperating with the parents. We deal, then, with a holistic approach to the functioning of a small blind or visually impaired child and his family and the shared responsibility of each team member for the implementation of the comprehensive therapy program.

CONCLUSION

The above reflections related to holism and limits of a discipline are but a small contribution to a more general debate on the present and future of academic education. The knowledge worked out by successive

[37] M. Smith, N. Levack, *Best practices for VI teachers serving students with visual and multiple impairments. A resource guide*, Austin, TX 1997, p. 13, [after:] E. Łobacz-Kloosterman, *Możliwości realizacji transdyscyplinarnego modelu wspomagania rozwoju małego dziecka z niepełnosprawnością wzrokową*, [in:] *Edukacja bez granic - mimo barier*, t. 2 *Przestrzeń tworzenia*, ed. T. Smal, A. Zduniak, Wydaw. Wyższej Szkoły Bezpieczeństwa, Poznań 2008, s. 318-324.

generations of scholars does not keep up with complex and often unpredictable reality, which the authors of the Club of Rome report aptly called the "human gap". Global issues such as the economic crisis, energy resources of our planet, the greenhouse effect, natural and humanitarian disasters in many parts of the world legitimize the existence of this gap, defined as the "distance between the growing complexity of the world and our ability to address it"[38]. Hence, perhaps, more and more frequent attempts to combine strictly scientific knowledge with meta-scientific and para-scientific knowledge, the creation in the mass media of a new practice of removing philosophers, sociologists, psychologists and asking instead politicians, sensation-seeking journalists or financial analysts to explain the world to a mass audience. Perhaps, then, referring to the immortal statement by Socrates: "I know I don't know", which admittedly corresponds to the highest level of human consciousness, it pays off to be more flexible in approaching disciplinarity and its limits and turn to holism and transdisciplinarity in science.

BIBLIOGRAPHY:

Arendt H., *Between Past and Future*, Penguin Classics, London 1968.

Botkin J., Elmandjra M., Malitza M., *No Limits to Learning. Bridging the Human Gap*, Pergamon Press, Oxford 1979.

Brewer G.D., "The Challenges of Interdisciplinarity", *Policy Sciences* 1999 No. 32.

Capra F., *The Tao of Physics. An Exploration of the Parallels between Modern Physics and Eastern Mysticism*, Harper, London 1991.

Dauber H., *Obszary uczenia się w przyszłości. Perspektywy pedagogiki humanistycznej*, transl. J. Marnik, M. Wawrzak-Chodaczek, Impuls, Kraków 2001.

Hark S., "Inter/Disziplinarität. Gender Studies Revisited", [in:] *Quer denken – Strukturen verändern. Gender Studies zwischen Disziplinen*, ed. H. Kahlert, B. Thiessen, I. Weller, VS Verlag für Sozialwissenschaften/GWV Fachverlage GmbH, Wiesbaden 2005.

Horacjusz F.K., *Dzieła wszystkie. Gawędy, listy, sztuka poetycka*, vol. I, transl. O. Jurewicz, Państwowe Wydaw. Naukowe, Warszawa 2000.

Kahlert H., "Wissenschaftsentwicklung durch Inter- und Transdisziplinarität: Positionen der Frauen- und Geschlechterforschung", [in:] *Quer denken – Strukturen verändern. Gender Studies zwischen Disziplinen*, ed. H. Kahlert, B. Thiessen, I. Weller, VS Verlag für Sozialwissenschaften/GWV Fachverlage GmbH, Wiesbaden 2005.

[38] See J. Botkin, M. Elmandjra, M. Malitza, *No Limits to Learning. Bridging the Human Gap*, Oxford 1979.

King G., *Counselling Skills for Teachers*, Open University Press, Buckingham 1999.
Koczanowicz L., "Interdyscyplinarność – między rabunkiem a dialogiem", [in:] *Interdyscyplinarność i transdyscyplinarność pedagogiki*, ed. R. Włodarczyk, W. Żłobicki, Impuls, Kraków 2011.
Kołakowski L., *O co nas pytają wielcy filozofowie. Seria I*, Znak, Kraków 2004.
Kołakowski L., "Sen, w którym żyjemy", *Przekrój* 2006, No. 33/3.
Korczak J., "Momenty wychowawcze", [in:] *Dzieła*, vol. 7, Oficyna Wydawnicza Latona, Warszawa 1993.
Korczak J., "Szkoła życia", [in:] *Dzieła*, vol. 4, Oficyna Wydawnicza Latona, Warszawa 1998.
Kwieciński Z., "Pedagogiczne zero. Zastosowania problemowe, epistemiczne i magiczne", *Nauka* 2004, No. 2.
Kwieciński Z., *Między patosem a dekadencją. Studia i szkice socjopedagogiczne*, Wydaw. Naukowe Dolnośląskiej Szkoły Wyższej Edukacji TWP we Wrocławiu, Wrocław 2007.
Laozi, *Dao De Jing. The Book of the Way*, transl. M. Roberts, University of California Press, Berkeley, Los Angeles, London 2001.
Lenoir T., "The discipline of nature and nature of disciplines", [in:] *Knowledges. Historical and Critical Studies in Disciplinarity*, ed. E. Messer-Davidow, D.R. Shumway, D.J. Sylvan, University Press of Virginia, Charlottesville, London 1993.
Łobacz-Kloosterman E., "Możliwości realizacji transdyscyplinarnego modelu wspomagania rozwoju małego dziecka z niepełnosprawnością wzrokową", [in:] *Edukacja bez granic - mimo barier*, t. 2 *Przestrzeń tworzenia*, ed. T. Smal, A. Zduniak, Wydaw. Wyższej Szkoły Bezpieczeństwa, Poznań 2008.
Maihofer A., "Inter-, Trans- und Postdisziplinarität. Ein Plädoyer wieder die Ernüchterung", [in:] *Quer denken – Strukturen verändern. Gender Studies zwischen Disziplinen*, ed. H. Kahlert, B. Thiessen, I. Weller, VS Verlag für Sozialwissenschaften/GWV Fachverlage GmbH, Wiesbaden 2005.
Mello A. de, *The Prayer of the Frog*, Gujarat Sahitya Prakash, 1995.
Messer-Davidow E., *Disciplining Feminism. From Social Activism to Academic Discourse*, Durham, London 2002.
Mittelstrass J., *Stichwort Interdisziplinarität. Mit einem anschliessenden Werkstattgespräch*, Basler Schriften zur europäischen Integration, Basel 1996.
Petzold H., Brown G. I., *Gestaltpädagogik. Konzepte der integrativen Erziehung*, Pfeiffer, München 1977.
Quer denken – Strukturen verändern. Gender Studies zwischen Disziplinen, ed. H. Kahlert, B. Thiessen, I. Weller, VS Verlag für Sozialwissenschaften/GWV Fachverlage GmbH, Wiesbaden 2005.
Rogers C.R., *A Way of Being*, Houghton Mifflin, New York 1995.
Rogers C.R., *On Becoming a Person. A Therapist's View of Psychotherapy*, Mariner Books, New York 1995.
Sills Ch., Fish S., Lapworth P., *Pomoc psychologiczna w ujęciu Gestalt*, transl. E. Bielawska-Batorowicz, Warszawa 1999.

Smołalski A., *Paradygmaty i historiozofia pedagogiki*, Teson – Agencja Poligraficzno-Wydawnicza Andrzej Tekieli, Wrocław 2009.
Smuts J.Ch., *Die holistische Welt*, Berlin 1938.
Stichweh R., *Wissenschaft. Universität. Professionen*, Surkamp, Frankfurt 1994.
Wissenschaftsrat: Empfehlungen zur Einführung neuer Studienstrukturen und -abschlüsse (Bakkalaureus/Bachelor-Magister/Master) in Deutschland, Berlin 2000, http://www.wissenschaftsrat.de/download/archiv/4418-00.pdf (access: 22.03.2015).
Żłobicki W., *Edukacja holistyczna w podejściu Gestalt. O wspieraniu rozwoju osoby*, Impuls, Kraków 2008.
Żłobicki W., *Pedagoga rozważania o granicach dyscyplin wiedzy*, [in:] *Interdyscyplinarność i transdyscyplinarność pedagogiki – wymiary teoretyczny i praktyczny*, ed. R. Włodarczyk, W. Żłobicki, Impuls, Kraków 2011.

Abstract:

Nowadays, in academic education, we are becoming more and more aware of the crisis of scientific knowledge, knowledge which does not answer the global problems resulting from the increasing complexity of the world. This situation confronts scientists with the challenge of not only looking for comprehensive knowledge, but also crossing and moving disciplinary boundaries. It seems that the structure of knowledge disciplines, which has its roots in the nineteenth century – as well as the boundaries set between them, constitute a barrier to the development of knowledge. It is worth showing more flexibility in the division of disciplines and flexibility about their boundaries and turn to holism and transdisciplinarity in science.

Keywords:

holism, disciplinarity, knowledge, science, development, borders, education

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Utopia a edukacja, vol. 2, Pedagogiczne konteksty społecznych wyobrażeń świata możliwego, ed. R. Włodarczyk, Wrocław 2017, http://www.bibliotekacyfrowa.pl/publication/92816.

Utopia a edukacja, vol. 3, Nadzieje i rozczarowania wyobrażeniami świata możliwego, ed. K. Rejman, R. Włodarczyk, Wrocław 2017, http://www.bibliotekacyfrowa.pl/publication/92817.

Codzienność jako wyzwanie edukacyjne, vol. 1, ed. M. Humeniuk, I. Paszenda, Wrocław 2017, http://www.bibliotekacyfrowa.pl/publication/84040.

Codzienność jako wyzwanie edukacyjne, vol. 2, Refleksyjność w codzienności edukacyjnej, ed. I. Paszenda, Wrocław 2017, http://www.bibliotekacyfrowa.pl/publication/94613.

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Sukces jako zjawisko edukacyjne, vol. I, ed. M. Humeniuk, I. Paszenda, W. Żłobicki, Wrocław 2017, http://www.bibliotekacyfrowa.pl/publication/84168.

Między ekskluzją a inkluzją w edukacji religijnej, ed. M. Humeniuk, I. Paszenda, Wrocław 2017, http://www.bibliotekacyfrowa.pl/publication/94553.