LUMEN 2014

The New Paradigm of Science Suitable for the 21st Century

Wojciech J. Cynarski* *

*Department of Sociology and Cultural Research, Chair of Cultural Foundations of Physical Education, Tourism and Recreation, Faculty of Physical Education, University of Rzeszów, A. Towarnickiego Str. No. 3, 35-959 Rzeszów, Poland

Abstract

The work has a strictly theoretical character. It concerns a new, proposed paradigm of science, or more generally, also culture. What should it be like? First, above all, humanistic, putting in the centre of attention a personal man. And cultural - in a double meaning: 1) taking into account the socio-cultural examined facts and processes, 2) because it is impossible to separate the phenomenon of science from the field of culture. Cultural paradigm, which also takes into account the historical identity and traditions, respecting the cultural core of European civilization. Also not countercultural, not against civilization. The paradigm is to be finally systemic and holistic. This includes on the one hand, the overall treatment of a man (as a psycho-physical being; ontology) and the world, on the other hand, the avoidance of reductionism in research (methodology). We should not lose the aspect of time (temporal), relationships (relational), the context of events (contextual) and especially ethics, values (axiology) and evaluation.

The author presents theoretical applications of the specified paradigm for the social sciences (selected subdisciplines of sociology), the field of education (pedagogy) and multi-disciplinary science (the science of physical culture, emerging science of tourism). Contrary to preserved till today the nineteenth-century institutional structure of science, the field of inter- and multidisciplinary sciences is what best meets the objectives of the new paradigm of science.

© 2014 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/3.0/). Selection and peer-review under responsibility of the Organizing Committee of LUMEN 2014.

Keywords: methodology; education; humanistic approach; holistic approach

* Corresponding author. Tel.: +4817-872-1844; fax: +4817-872-1861.
E-mail address: sp_walki@univ.rzeszow.pl; sp_walki@ur.edu.pl
1. Introduction

Sources of differences and controversies, especially among the representatives of the humanities, and particularly relevant to research factors Kuhn called paradigms. "I name in this way, generally recognized scientific achievements that for a time provide the scientific community model problems and solutions." (Kuhn, 1968, p. 12) Kuhn's paradigm is close to the concept of "cognitive perspective"; it is conditioned by the needs of society and culture. Overall, on the scientific progress the author of The Structure of Scientific Revolutions wrote as follows: "... discoveries and inventions in science are usually in themselves revolutionary in character. For this reason, this requires flexibility and open-mindedness, which indeed has even determined man capable of alternative thinking. So let's take for granted that these are the qualities necessary. If the number of scholars was marked not with them, and to a large extent, there would be no scientific revolutions, nor the subsequent progress of science." (Kuhn, 1985, p. 318).

Theoretical perspective to the deliberations of this study will be given to Mircea Eliade's new humanism, Erich Fromm's radical humanism and personalism, philosophy and sociology of culture, plus some more references to the philosophy of science and epistemology. Eliade's new humanism is introduced into the world of intercultural dialogue. Man strives for happiness, but one of the most versatile needs is sacrum (Eliade, 1978). The time and value of this sphere are eternal. Religion, in addition to the language and history, is an essential component of personal and national identity. Cultural heritage makes us feel, for example, the Poles. Only the left-wing fashionable ideologies of postmodernism time are trying to convince the public that such a fundamental component of identity is sexual orientation.

Wojciech J. Cynarski (2002) introduced the concept of "jopek" to show the type of man who in the world of extreme commercialization is trying to "sell himself well". The opposing pattern represents the ‘warrior of truth’, the kind of man every man of science should be. Are the followers of relativism right in claiming that there are many (individual) truths and roads leading to them? Then, apart from science, also the justice system would make no sense. About relativism Indian philosopher Krishnamurti said once the following words: “The idea that there are separate paths to the truth, that truth has different aspects, it is unreal; it is the speculative thought of the intolerant trying to be tolerant.” (Krishnamurti, 2011, p. 107).

Among postmodern mumble, we find different opinions. Some of them are celebrating multiculturalism. We are to be citizens of Europe and the world, and our country, Europe and the world will meet this vision of multiculturalism. Contempt for traditional institutions is accompanied by the promotion of a new society: extremely selfish individuals. It is probably why Emile Durkheim hated liberalism. And the idea of equality among cultures? From the perspective of radical humanism - it definitely does not exist. Cultures and civilizations are: 1) friendly to man, 2) aggressive, but non-destructive, 3) there are also those extremely destructive and necrophilic (Fromm, 1973/1992). The latter can be compared to the "culture of death", which John Paul II opposed the civilization of life (John Paul II, 2005). E. Fromm's "biophilia", this is the love of life, is associated with the attitude of "to be".

Many researchers agree that we, the western civilization, are going through a difficult crisis of morality and identity. And in the age of globalization it comes to meetings, conflicts (or collision), and intercultural dialogue. Are they a threat, as said Huntington (1996), or a kind of hope (Cynarski, 2002)? Should lost values be rediscovered in ideas of new or non-European countries (see: Szmyd, 2011), or rather in the cultural heritage of Europe (John Paul II, 2005)? Andrzej Grzegorczyk (1999) writes about the uniqueness of Europe, its vocation to great things. So maybe there is something to fight for, not necessarily militarily. Among these values are science and scientific institutions.

2. Methodology

In the methodology of the humanities, according to S. Amsterdamski, “well known and widely used is the notion that the social science theories are determined (...) by the historically and sociologically determined 'points of view', 'cognitive perspective', which include social ideologies, value systems co-determining the selection of facts, impose their interpretation, locating them in the context of other data, etc.” (Amsterdamski, 1968: p. 197).

Attempts at hermeneutic analysis of the literature, description and explanation of the issues require using a new paradigm in epistemology. Now, we reject the nineteenth-century positivist paradigm with its reductionism
(including research and the man himself), the principle of 'no evaluation', the myth of objectivity in social studies, etc. A new, humanistic and systemic paradigm must comply with the principle of humanistic coefficient (Znaniecki, 1934, 1952). Moreover, to avoid value judgments is not only wrong, but socially dangerous. Modified research approaches should be accepted and recognized in their systemic, contextual and the temporal dimensions (Cynarski, 2001). At the same time barriers resulting from the politicization of science, such as the so-called ‘political correctness’, or a mix of science and ideology, should be rejected.

All scientists should always go towards the truth, look for the truth and explore it. The popular ideologies are often very distant from the truth. The author thinks e.g. about postmodern/postmodernistic nonsense or language of political correctness. We should choose an appropriate ontology. Because of a false foundation gives also wrong, incorrect results and interpretation. For instance, materialism (as ideology) and the materialistic approach causes the situation in which only body exists, without a spirit. And our reality happens to be incomplete.

It is a recognition of the author's own and the type of project (as below).

3. A new paradigm of science, culture and society

According to the author, the new paradigm of science, culture and society should be:

3.1. Humanistic

Even today in some social sciences and humanities there is a lingering nineteenth-century paradigm of scientism, preferring reductionist approaches, narrow specializations and partial statistical analyses based on the model of the natural sciences. Meanwhile from around the middle of the twentieth century there has been an anti-positivism breakthrough. A paradigm of overall, systemic approaches is gradually gaining scholarly recognition. At the same time man is to be treated as a personal, physical and psychological being, with his/her own aspirations and choices (Fromm, 1976/1989; Capra, 1982; Heller & Życiński, 1988; Wyka, 1993; Wilber, 2001, p. 20).

Generally, in the sciences of man, culture and society, we should move away from the demarcation of scientific disciplines (a residue of the nineteenth-century institutionalization of learning) and reductionism in the study of particular phenomena. Particularly considering the fact that in social sciences evaluation should not be avoided, because it is not only wrong, but also dangerous. We also know that both the researcher (his knowledge and belief) will affect the test results, as well as the attitudes of respondents which modify researchers’ views. There is no objective observer. The researcher must take into account the "humanistic coefficient", introduced by F. Znaniecki (1882-1958) as the basic standard methodology i.e. it should describe cultural reality as it appears to the members of the community of that cultural system.

In relation to classified concepts of instinctivism, behaviourism, psychoanalysis and Marxism the approaches coming from the perspective of humanistic psychology are interesting (Fromm, 1973/1992, 1976/1989), and particularly the humanistic sociology (Znaniecki, 1919, 1934, 1952; Bierstedt, 1969).

3.2. Cultural and dialogical

Paradigm should be cultural, also not countercultural. We reject the ideologies of anti-civilization, withdrawing us in the realm of social order - in the name of satisfying selfish desires - the ancient eras. We should derive from the root of European culture: achievements of Greece, Rome and Christianity. Contrary to positivist ideas, we should take into account the value and valuation (value judgments). Social sciences are incomplete without evaluation, and sometimes socially dangerous.

We should reach the universal values or particularly valuable achievements of foreign cultures, but without losing our cultural core. It is difficult to say whether this will emerge some new cultural synthesis, as Eliade thought about. It is for example, to think about whether education in the countries of East Asia is better than the models preferred in countries of Western civilization (cf. Chua, 2011). Now, through discipline and hard work you can probably achieve more than by indulging in pleasures and avoiding the unpleasant.
Humanism, personalism and symptoms of human treatment stem from the Christian tradition. Man has to be the centre of attention. This does not mean that he can do anything. Ideologies claiming to be progressive in many cases are a serious threat to the survival of society and culture in the basic institutional aspects: nation and family.

Recognition of cultural, it is also going beyond low, hedonistic consumerism and extreme commercialization, which are propagated through simplified language codes and images (Cynarski, 2013b). We should in a scientific work forward messages about high culture, symbolic and rich in content of normative ethics.

3.3. Systemic, holistic

The new paradigm breaks some old patterns, but does not so much displace the old ideas of reality and science, as supplement them. It is recommended to include group of interdisciplinary research and synergistic pursuit for synthesis of knowledge in sciences concerning humans and culture. Systemic recognition of human and culture also requires systemic, non-linear and holistic thinking, not in terms of structures, but in net processes and relationships. Only the use of the theory of systemic thinking and logic\(^1\) that goes beyond the limits of sensory capabilities (common sense imagination) allow the development and effective use of the systemic meta theory (Parsons, 1951, 1971; Laszlo, 1995; Cynarski, 2001; Luhmann, 2004).

The set today by Fromm (1976/1989) ‘new humanistic science on man’ was made in the concept of Anthropology of psychophysical progress (Cynarski, 2000). At the same time the systemic concept of pedagogical theory was created, e.g. Holistic pedagogy (Szyszko-Bohusz, 1989). The ‘holistic pedagogy’ is especially a new look at the relationships between teacher and pupil. They are to be based on trust and friendship.

Holistic treatment is also a perception of a man in his personal, mental and physical being. Holistic recognition of a man with both his physicality, mentality and spirituality, results according to a move away from materialistic patterns (cf. Femiak, 2012; Kielar, 2012).

4. Applications for social sciences and area of education (pedagogy)

New science should regard socio-cultural analysis and prefer multi- and interdisciplinary approaches. In this way the were created: ‘Humanistic Theory of Martial Arts’ and the ‘Anthropology of Martial Arts’ (Cynarski, 2013a; Zeng, Cynarski, & Lisheng, 2013, pp. 9-54). In a centre of attention is here a man, who follows the ‘warrior’s pathway’. Normatively it is the moral, noble way, made of ancient heroes, knights, and samurai. At the same time it is a way of improving personal, individual transgression and transcendence.

The ‘Anthropologic-Systemic Theory of Tourism’ was developed in a similar way (Cynarski, 2010, 2012). A tourist takes the self-realizational trip, entertaining or non-entertaining. The purpose of the trip may also become gaining non-material and timeless values. If this trip is motivated by cognitive, educational and personal improvement goals could it not be a tourist trip? There will probably be more and more such trips. The premise here is the fact of improving the level of education of the population and in result it leads to an increase in prevalence of self-creational needs. And in this case we must not reduce the needs of tourists, the sacred or spiritual. We are interested in the physical effort (corporeality), and needs, motives and aspirations.

Sociological reflection on the non-sport forms of psychophysical culture goes beyond the scientific exploration of the sociology of sport and sociology of physical culture. It should be rather described as the sociology of psychophysical systems of self-realization (cf. Bette, 1999; Cynarski, 2011b). Indeed, in the very broad sense of the concept of sports, including psychophysical systems of self-realization practices from eastern or south-eastern Asia, here may be it taken into account, e.g. as a vehicle of cultural dialogues (Cynarski & Obodyński, 2005, 2008; Cynarski, 2011a; Tokarski, 2011).

The pedagogy of martial arts (Szyszko-Bohusz, 2003; Wolters, 2005; Cynarski, 2011a; Saldern, 2011; Figueirredo et al., 2013) teaches self-control and self-discipline, respect for elders and tradition, tolerance for foreign cultures. A student acquires knowledge and skills, builds both the potential of positive health and self-esteem. This improves

\(^1\) The author recommends a study of the paradoxical logic and non-classical logics (Cynarski, 2002-2003).
relationships. These ideas can further enrich the pedagogy of sport and the theory of physical education (Cynarski, Obodyński & Zeng, 2012). Because this is education for physical culture combined with moral education.

Already praised by Aristotle ethical virtues, as reason and wisdom, courage / fortitude, and temperance, justice and friendship are universal. They grow from the ancient cultures of warriors and sages among the achievements of many generations. Even today they are worthy of dissemination.

5. Areas of inter- and multidisciplinary

Newly-paradigmatic science of the 21st century will create areas of breaking the nineteenth-century schemes and requiring a broader knowledge of scholars. These include the science of agriculture (Wilson & Morren, 1990), sciences of physical culture2, emerging only sciences about tourism, and e.g. a new medicine with the system theory of health (Capra, 1982, pp. 171-565; Astin et al., 2003).

Sport science, or more broadly, physical culture sciences, represent a continuum stretching from the humanities and social sciences of sport, the discipline of biomedical and biotechnical. Perceiving human holistically sport science can not lose the humanistic dimension (cf. Osiński & Kiwerski, 2005; Pawlucki, 2007, 2012; Kosiewicz, 2010; Ponczek, 2011). They should not be pigeon-holed as health sciences (as in Poland), or as pedagogical sciences (as in Slovakia). For they are the avant-garde of science of the 21st century. A representative of sport science should have knowledge about man in his biopsychosocial functioning. In particular, a specialist in the martial arts science should have further knowledge about the cultural contexts of martial arts.

In sport sciences erroneous ontology of logical positivism and reductionism caused confusion of the dimension of spirituality. The result is a lack of proper preparation of a player. Meanwhile, the spiritual dimension of training was already present in the ancient martial arts (shin-gi-kai: spirit-body-technique) and in Budo. Jigoro Kano recommended "to put mental and physical energy" (Murata, 2013). Thus, the theory of sports should take into account physical, psychological (e.g., mental) and spiritual training (Pasterniak & Cynarski, 2013). In addition, erroneous and socially dangerous is permissive treatment of sports ethics (cf. Johns, 1998; Kosiewicz, 2010).

Physical culture sciences and sport sciences are derived from the theory of physical education. Their practical application is realized through pedagogy. Pedagogy of physical culture / sport is both part of pedagogy and of sciences of physical culture / sport. Similarly – the sociology of physical culture / sport and some other humanistic disciplines. Detachment from humanities would be bringing this science down to the thematic area in kinesiology.

In turn, tourisms science can not be based solely on economic aspects, management, geography of travel, tourist information and analysis of behaviour of function and dysfunction, not to lose the man-the tourist himself (Obodyński & Cynarski, 2006; Cynarski, 2010; Lipiec, 2011). Reductionist and behavioral approaches, from the perspective of humanities, are considered wrong.

Conclusions

Only a holistic perception of human and system testing will give us knowledge to meet the requirements of today's challenges. The new paradigmatic science suitable for the 21st century will create areas of breaking the nineteenth-century schemes and requiring a broader knowledge of scholars.

Contrary to preserved till today the nineteenth-century institutional structure of science, the field of inter- and multidisciplinary sciences is what best meets the objectives of the new paradigm of science. The new paradigm must be humanistic, cultural, systemic and holistic.

References

---

2 ‘Physical culture’ is an area of issues related to the physical activity of man. It comprises such areas as: sports, physical recreation, rehabilitation, physical education, active forms of tourism, martial arts and systems of psychophysical practices. This concept is present, for example in the definition of Budo philosophy (Matsunaga et al., 2009, p. 16). Physical culture in literature was variously defined: in the past mainly in a reductionist way, e.g., by the category of the pro-corporal behaviour (Krawczyk, 1995, pp. 27-28), currently by linking with other areas of culture (Szyrko-Bohusz, 2011, p. 165).
Osiński, W. & Kiwerski, J. (2005). Stanowisko Komitetu Rehabilitacji, Kultury Fizycznej i Integracji Społecznej PAN w sprawie polityki badań naukowych i rozwoju kadry w dziedzinie nauk o kulturze fizycznej. *Sport Wyczynowy*, 5-6, 5-12 (in Polish).

Parsons, T. (1951). *The Social System*. New York: Free Press.

Parsons, T. (1971). *The System of Modern Societies*. Englewood Cliffs, N.J.

Pasterniak, W. & Cynarski, W. J. (2013). The possibilities of spiritual sports training. *Ido Movement for Culture. Journal of Martial Arts Anthropology*, 13(4), 49-51.

Pawłucki, A. (2007). *Homo sportivus*. Forum Akademickie, 11. Retrieved from http://www/forumakad.pl/archiwum/2007/11/58_homo_sportivus.html (in Polish).

Pawłucki, A. (2012). Physical culture sciences. In W. J. Cynarski, J. Kosiewicz & K. Obodyński [Eds.], *Sport in the Context of Social Sciences* (pp. 9-24). Rzeszów: Rzeszów University Press.

Ponczeł, M. (2011). Czy historia kultury fizycznej oraz inne dyscypliny humanistyczne nauk o kulturze fizycznej mogą mieć pola badawcze i metodologiczne. In J. Dźiereń [Ed.], *Z wybranych zagadnień metodologii i organizacji kultury fizycznej oraz, rehabilitacji i turystyki w Polsce* (pp. 19-31). Płock: Wydawnictwo Naukowe Novum.

Salder, M. von [Ed.], (2011). *Meisterung des Ichs. Budo zur Gewaltprävention?* Nordstedt: Books on Demand GmbH (in German).

Szmyd, J. (2011). *Reading the present: The anthropological, ethical and educational prospect*. Kraków: Krakowskie Towarzystwo Edukacyjne – Oficyna Wydawnicza AFM (in Polish).

Szyszko-Bohusz, A. (1989). *The Holistic Pedagogy*. Wrocław: Ossolineum (in Polish).

Szyszko-Bohusz, A. (2003). Theory of Genetic Immortality in relation to the holistic education and martial arts. In W. J. Cynarski & K. Obodyński [Eds.], *Humanistic Theory of Martial Arts - Concepts and Problems* (pp. 17-23). Rzeszów: Rzeszów University Press (in Polish).

Szyszko-Bohusz, A. (2011). Review of the book. In W. J. Cynarski [Ed.], *Selected Areas of Intercultural Dialogue in Martial Arts* (pp. 164-167). Rzeszów: Rzeszów University Press.

Torkarczyk, S. (2011). Where West meets East in martial arts. In W. J. Cynarski [Ed.], *Selected Areas of Intercultural Dialogue in Martial Arts* (pp. 46-55). Rzeszów: Rzeszów University Press.

Wilber, K. (2001). *The eye of spirit: An integral vision for a world gone slightly mad* (3rd ed. expanded). Boston – London: Shambhala.

Wilson, K. & Morren, G. E. B. (1990). Systems approaches for improvement in agriculture and resource management. Macmillan.

Wolters, J. M. (2005). Budo-Pedagogy. *Ido – Ruch dla Kultury / Movement for Culture*, 5, 193-205.

Wyka, A. (1993). *The social scientist to experience*. Warsaw: IFiS PAN (in Polish).

Zeng, H. Z., W. J. Cynarski, & X. Lisheng (2013). *Martial Arts Anthropology, Participants’ Motivation and Behaviours. Saurbrücken: Lambert Academic Publishing.*

Znaniecki, F. (1919). *Cultural Reality*. Chicago.

Znaniecki, F. (1934). *The Method of Sociology*. New York.

Znaniecki, F. (1952). *Cultural Sciences. Their Origin and Development*. Urbana.