Martial arts science expert's career path shown on the example of Professor Stanisław Sterkowicz (1951-2018)

Roman Maciej Kalina 😳 1ABCD, Bartłomiej Jan Barczyński 😳 2ABCDE

¹State University of Applied Sciences in Nowy Sącz, Nowy Sącz, Poland ²Archives of Budo, Warsaw, Poland

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Abstract

Professor Stanisław Sterkowicz's career of is an example of balanced academic development (regarding his scientific, didactic and administrative-organizational achievements) and the consistent combining creative passions with practical activity having high health-related, utilitarian and social significance. Professor Sterkowicz belonged to few experts in the world with high and unique competence in such branches as methodology and motor activity involving martial arts and combat sports, equal to the highest scientific qualifications. His highest organizational achievement, beyond his academic activity, was promotion of the Korean martial art, hapkido.

As a master of martial arts and a researcher, whose approaches to research were based on interdisciplinary knowledge, Professor Sterkowicz also dealt with problems of martial arts training from the point of view of philosophy, ethics, psychology, pedagogy and, to some extent, praxeology. His several important papers focus on self-defence training, based mainly on the Korean hapkido martial art and implementation of hapkido training and other martial arts for security and military personnel. Professor Sterkowicz successfully divided his professional life into his family life and work for his Alma Mater, which was the University of Physical Education in Cracow (from student to professor) – dedicated to theory and practice of martial arts. His last passion was enhanced by the contribution to the development and promotion of the Archives of Budo and the science of martial arts on a global scale. Professor Sterkowicz's most remarkable scientific success involved the frequently applied by researchers worldwide original Special Judo Fitness Test (SJFT), adapted to physical exercise typical for judo fight. His scientific achievements include 6 books and over 350 research and methodological papers, dedicated mainly to combat sport and martial arts.

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Bartłomiej Barczyński, Archives of Budo, Aleje Jerozolimskie St. 125/127 room 601B, 02-017 Warsaw, Poland; e-mail: barczynski@wp.pl

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Authors' Contribution:

- A Study Design
- □ B Data Collection **★ C** Statistical Analysis
- **D** Manuscript Preparation
- E Funds Collection

INTRODUCTION

Acceptance of a new science (subdiscipline) by the global researchers' community (including the role of the institution dealing with research evaluation) is possible when at least three basic criteria are met. These are: (1) acceptance of the theory that precisely identifies the new area of research exploration [1]; (2) a certain number of competent experts who are able to develop this theory and verify the most important hypotheses; (3) social acceptance and even the demand for such knowledge (social impact) [2, 3]. Stanisław Sterkowicz excellently understood the innovative, educative and social mission of the *Archives of Budo* and the emerging science of martial arts (Figure 1).

The aim of this paper is a synthesis of Professor Stanisław Sterkowicz's scientific, didactic and organizational career as an example of balanced academic development (in terms of the research, didactic, administrative-organizational, innovative-implementation, coaching, social and international citizenship domains and the consistent combination of creative passion with practical activities, extremely important from health-related, utilitarian and social points of view.

PERSON OVERVIEW

Professor Sterkowicz belonged to few experts worldwide characterized by high and unique methodological and motor competences in martial arts and combat sports as well as the highest scientist's skills.

After MSc graduation (1974) at the Department of Physical Education, the University of Physical Education in Cracow and, two years later, empowerment of II class judo coach, Professor Sterkowicz's first research-related interests focused on exercise adaptation in men and health-related aspects of judo. The conclusion that he had adequately understood the mission of the emerging subdiscipline of physical education long before the inclusion of sport science, which is now a separate discipline, in one common area of knowledge together with medical and health sciences, is justifiable.



Figure 1. Professor Stanisław Sterkowicz (1951-2018) – source: website of the Bronisław Czech University of Physical Education in Cracow, Poland.

RESEARCH ACTIVITY

The doctor's thesis, written under supervision of an outstanding researcher, professor Lesław Dec and defended in 1982 pertained to accidents in judo in the light of the multifactor epidemiological analysis. Apart from these issues, the thesis includes an assessment of karate and ju-jitsu competitors. This was a period of a high and still present interest in oriental forms of movement among young people worldwide. The deep insight in the issue of training optimization for people practicing combat sports at very high levels resulted in the development of other research directions such as: approaches to physical, technical (acquiring specific motor skills adapted to individual predispositions), tactical and mental preparation and approaches to controlling the effects of this preparation. The habilitation internship at the Faculty of Wrestling, Moscow Institute of Physical Culture and Sports was an important period of widening the interdisciplinary knowledge of the above issues an methodological experience (1985-1986) and participation in numerous courses and seminars abroad.

The habilitation thesis of 1992 *Characteristics* of selected indicators of the level of preparedness of karate athletes [4] was also a summation of his research results. This was the first scientific monograph in the world including complex presentation of the issues of recruitment for karate at high level of sport championship. The value of his paper, however, clearly exceeds the aspects of professional training and sport competition requiring extreme adaptation to such specific forms of exercise. The author provided multiple empirical arguments being the fundamentals for determining the criteria of karate and other combat sport and martial arts practice on a recreational level (pro-health).

As benefits a genuine master of martial arts and a researcher whose research approaches are based on interdisciplinary knowledge, Professor Stanisław Sterkowicz also dealt with the issues connected with martial arts training (assuming that "every combat sport is martial arts but not vice versa") [1], related to philosophy, pedagogy and partly praxeology. His several important studies focused on the issue of self-defence training, mainly based on the Korean martial art, hapkido [5, 6] and implementation of these workouts and other martial arts in staff security and military staff training [7-9]. The high level of the projects implemented by Professor Stanisław Sterkowicz as well as his numerous publications attracted attention of experts worldwide dealing with this rarely described issues which are, on the other hand, essential due to the scale of the phenomenon and its connotations with all dimensions of health - somatic, mental and social. Professor Sterkowicz was invited to collaborate with specialists from Austria, Brazil, Canada, Croatia, England, France, Japan, Portugal, Spain and the USA. The quantitative effect is documented by numerous co-author publications, together with the specialists in renowned journals, belonging mainly to the category: sport science and sport medicine [only sample references: 10-18]. The paper written by Matsumoto et al. [13] was cited 286 times when the text was being edited.

The measure of these publications included two, important in our opinion, elements. The first one was co-authorship of overseas experts, raising the reliability level of the research, especially when identical methodology and research tools are applied, raising the quality of comparative analysis. The second one was the impressive number of citations documented by *Web of Science* (1,224 till the end of 2019) and *Hirsch Index* 16.

The frequently applied by researchers worldwide original Special Judo Fitness Test (SJFT) [19], adapted to typical for judo physical exercise, is Professor Sterkowicz's most distinctive expressive achievement [only sample references: 20-28] - apart from the total number of his scientific theses, which for many years have been the fundamentals for analysis of the phenomena related to man's adaptation to different forms of combat involving direct types of battles between men. Professor Sterkowicz was first to verify empirically the justifiability of combat sports division with the team of co-authors, based on scientific criteria of combat sports. Thus, he provided important evidence-based arguments that the so far used divisions based on historical and geographical criteria (European and Far East combat sports) are useless when assessing the correlations between morphofunctional properties of people starting a given combat sport training and their future achievements in sports or when tracing the adaptive changes due to many years repetitions of long-term exercise determined by the specificity of a given combat sport (e.g. involving blows and avoiding blows, knocking a competitor out of balance or constraining their movements in other ways, etc.).

Professor Stanisław Sterkowicz belonged to the generation that obtained their PhD title during the first year of the Martial Law in Poland. Many years of limited contacts with scholars from other countries, the objective inability to publish papers in renowned foreign journals and a number of other obstacles had proved to be the factors that could be effectively overcome. Professor Sterkowicz provides the evidence for his most important scientific achievements, documented by the high Impact Factor as well as the impressive number of citations, after being appointed as professor (2003). This is probably the most important evidence that he did not treat his degrees and scientific title instrumentally. Only the favourable circumstances allowed him realizing his creative passion and to materialize what is most valuable in science, namely sharing knowledge with others.

TEACHING ACTIVITY

Professor's didactic achievements are closely related to the main trend in his research activity. He has trained many judo instructors and coaches of ju-jitsu, karate and hapkido, both in Poland and abroad. He also regularly improved his didactic skills (the professional title of II class ju-jitsu and karate coach) as well as his motor skills, documented by high champion grades in hapkido (5 dan), judo (2 dan), ju-jitsu (10 dan) and karate (1 dan). His publications include 6 books, [namely: 4, 5, 29, 30] and over 350 scientific and methodological publications dedicated mainly to combat sports and martial arts. He was a promotor of three doctors of sports science and many times participated as a reviewer in promotional procedures for doctoral degrees as well as assistant professor and professor titles. His active participation in numerous congresses, conferences, and scientific and methodological symposia in Poland and abroad for over forty years was an indirectly significant input in occupational and scientific development of young teams.

Professor Sterkowicz's scientific and didactic achievements were combined with his organizational and administrative activity, being in a close relationship with the main trend of his scientific and educational interests. In his Alma Mater, the University of Physical Education in Cracow, he was head of the Department of Combat Sports, next, of the Faculty of Combat Sports and between 2012 and 2016, he was head of the Institute of Sports. He was the originator and organizer of several express conferences devoted to the issue of professional activities of a coach combat sports [31].

ORGANIZATIONAL ACTIVITY

However, in our opinion, the most important organizational achievement of Professor Sterkowicz, beyond his academic activities, is the promotion of hapkido, Korean martial art in Poland. In Hapkido Chronicle in Poland we read: "In 1991, during the international Seminar on Martial Arts in Budapest, Stanisław Sterkowicz (having already black belts in judo, karate and jujitsu) met Grandmaster Sam Plumb (6 Dan) (the chief of the European Hapkido Alliance) and watched his Hapkido presentation. The show raised his interest, therefore, he decided to go to England for a sixweek internship. There, he trained 3 times a week. Grandmaster Plumb admitted Professor Sterkowicz into the European Hapkido Alliance and authorized him to represent this organization in Poland. On his returning to Poland, he set up the first sections (...)". Soon after that, the closest members of Professor



Figure 2. Professor Stanisław Sterkowicz with his daughter Katarzyna Sterkowicz-Przybycień (4 dan hapkido) and her husband Rafał Przybycień (4 dan hapkido).



Figure 3. Professor Stanisław Sterkowicz's granddaughter and her parents demonstrate during one of the hapkido promotions "family training for fun" [4].

Sterkowicz's family from two generations became fascinated with hapkido (Figure 2 and 3).

Professor Stanisław Sterkowicz's achievements in the field of promoting hapkido in Poland can be compared to the scientific, didactic and organizational achievements of Professor Ewaryst Jaskólski [32], who opened our minds to motor originality, philosophy and judo ethics – he left in 2007, was a reviewer of promotional works by Stanisław Sterkowicz.

INTERNATIONAL CITIZENSHIP

The recognition of Professor Sterkowicz's scientific, didactic and organizational achievements by the international environment is confirmed by numerous invitations to chair the scientific committee of the most prestigious conferences on combat sports and martial arts or to preside over thematic sessions.

Aspecial merit, particularly for Professor Sterkowicz's activity in research field, was his appointment for one of the four editors of topical sections, called into life by *Archives of Budo* Editors, being the only specialist journal of science on a global scale, dedicated mainly to health-related aspects of martial arts that, since the beginning of its foundation, has been evaluated by Journal Citations Report (in 2018 *Impact Factor* 1.551).

He also associated his social and civic engagement with the role of a scientific editor of the Archives of Budo and the Archives of Budo Science of Martial Arts and Extreme Sports. He paid particular attention to the level of reviews, often facing poor quality of opinions, lack of commitment and a correct understanding of the role of experts invited by the editors to evaluate manuscripts. He stood out for his commitment and dedication, often reaching for innovative solutions. He attached great importance to reviews made in the audio version is an important testimony and educational material for the editors, going beyond the conventional framework of scientific opinion. He was happy to share his knowledge, taking care of editorial team development. The in-depth reviews submitted, combined with source, statistical analysis and excellent knowledge of combat sports and martial arts, have built the prestige of both journals.

SOCIAL IMPACT

For his contribution, Professor Sterkowicz received a special award from the *Archives of Budo* community at an international gala to celebrate the journal's 10th Anniversary, held during the III World Scientific Congress of Combat Sport and Martial Arts in Rzeszow, Poland (October 15-17, 2014) – Figure 4.

For his work Professor Stanisław Sterkowicz received many prestigious awards and distinctions, including the Knight's Cross of the Order of the Rebirth of Poland "Polonia Restituta", the Gold and Silver Cross of Merit and the Medal of the National Education Commission.

He was a member of European Hapkido Alliance (Polish representative) and the International Association of Researchers International Judo Federation.

CONCLUSIONS

Prof. Sterkowicz shared his life masterfully between his family, Alma Mater the University of Physical Education in Cracow (from student to professor), theory and practice of martial arts. He established this latter passion with his contribution as a Scientific Editor, in the development and promotion of the *Archives of Budo* and the science of martial arts, on a global space.

On October 23, 2018, Professor Stanisław Sterkowicz's body rested in the family tomb at the Rakowiecki Cemetery in Cracow. On May 25, 2019, representatives and founders of Krakow's martial arts schools met at the Old Town Youth Culture Centre in Cracow to commemorate the Master and founder of hapkido in Poland (1992) – Figure 5. Professor Sterkowicz's scientific, didactic and social passions are continued by his daughter, assistant professor Katarzyna Sterkowicz-Przybycień, the expert on an interdisciplinary approach to the science of martial arts.



Figure 4. The jubilee bonus awarded to Prof. Stanisław Sterkowicz in acknowledgement of exceptional accomplishments and development of the science of martial arts as well as in recognition of merit for outstanding activity for the Archives of Budo popularization, awarded at an international gala on the occasion of the journal's 10th Anniversary.



Figure 5. Certificate of Appreciation awarded to Professor Stanisław Sterkowicz in recognition of the commitment, dedication and contribution to the development of hapkido throughout Poland and as one of the longest serving Master of the European Hapkido Alliance.

REFERENCES

- 1. Kalina RM. Teoria sportów walki. Warszawa: Centralny Ośrodek Sportu; 2000 [in Polish]
- 2. Kalina RM, Barczyński BJ. Archives of Budo Science of Martial Arts and Extreme Sports – A reason for this new branch journal. Arch Budo Sci Martial Art Extreme Sport 2013; 9: 1-9
- Barczyński BJ, Kalina RM. Science of Martial Arts - Example of the Dilemma in Classifying New Interdisciplinary Sciences in the Global Systems of the Science Evaluation and the Social Consequences of Courageous Decisions. Proceedings of the 6th International Conference on Applied Human Factors and Ergonomics; 2015 Jul 26-30; Las Vegas, USA. Procedia Manuf 2015; 3: 1203-1210
- Sterkowicz S. Charakterystyka wybranych wskaźników określających poziom przygotowania zawodników karate. Kraków: Akademia Wychowania Fizycznego im. Bronisława Czecha; 1992 [in Polish]
- Sterkowicz S, Madejski E. ABC Hapkido. Ilustrowane elementy kompletnego systemu samoobrony. Kraków: Firma Handlow-Usługowa 'Kasper'; 1999 [in Polish]
- Sterkowicz-Przybycień K, Przybycień R, Plumb S et al. Hapkido: Korean martial art. In: Kalina RM, editor. Proceedings of the 1st World Congress on Health and Martial Arts

in Interdisciplinary Approach, HMA; 2015 Sep 17-19; Częstochowa, Poland. Warsaw: Archives of Budo; 2015:. 207-211

- Sterkowicz S, Chwała W, Ambroży T. Zdolności motoryczne warunkujące rezultaty w teście podstawowej umiejętności samoobrony. In: Korzeniowski L, editor. Kształcenie pracowników ochrony: założenia programowe. Kraków: Liport LFK; 2001: 154-169 [in Polish]
- Sterkowicz S, Gula M. Przesłanki modyfikacji wspolczesnych programów w zakresie samoobrony. In: Rakowski A, Chodala A, Kalina RM, editors. Sporty ekstremalne w przygotowaniu żołnierzy i formacji antyterrorystycznych. Warszawa: Polish Scientific Physical Education Association. Section of Physical Education in the Army; 2003; 6: 62-63
- Sterkowicz S, Sikora J. Physical preparation for service in the police field unit. In: Sokołowski M, editor. Contemporary tasks, problems and perspectives of physical education in the army. Warsaw: Polish Scientific Physical Education Association. Section of Physical Education in the Army; 2009: 91-100
- 10. Sterkowicz S. Characteristics of selected factors and results of bouts during the Third World Open Karate Tournament in Tokyo'84, January 20-22. Mas Oyama's Kyokushin Karate 1985; 8(1): 6-8

- 11. Almansba R, Franchini E, Sterkowicz S. Uchikomi avec charge, une approche physiologique d un nouveau test spécifique au judo. Sci Sports 2007; 22: 216-223 [in French]
- Franchini E, Sterkowicz S, Meira Jr CM et al. Technical variation in a sample of high level judo players. Percept Mot Skills 2008; 106: 859-869
- Matsumoto D, Yoo SH, Fontaine J et al. Mapping expressive differences around the world – The relationship between emotional display rules and individualism versus collectivism. J Cross-Cult Psych 2008; 39: 55-74
- Sertic H, Sterkowicz S, Vuleta D. Influence of latent motor abilities on performance in judo. Kinesiology 2009; 41(1): 76-85
- Pocecco E, Ruedl G, Stankovic N et al. Injuries in judo: a systematic literature review including suggestions for prevention. Br J Sports Med 2013; 47(18): 1139-1143
- 16. Sterkowicz S, Sacripanti A, Sterkowicz-Przybycien K. Techniques frequently used during London Olympic judo tournaments: A biomechanical approach. Arch Budo 2013; 9(1): 51-58
- 17. Santos L, Fernandez-Rio J, Ruiz ML et al. Threedimensional assessment of the judo throwing techniques frequently used in competition. Arch Budo 2014; 10: 107-115

- Calmet M, Pierantozzi E, Sterkowicz S et al. Judo rules: searching for a wind of changes. Int J Perform Anal Sport 2017; 17(6): 863-871
- 19. Sterkowicz S. Test specjalnej sprawności ruchowej w judo. Antropomotoryka 1995; 12: 29-44 [in Polish]
- Franchini E, Nakamura FY, Yuri TM et al. Analise de um teste especifico para o judo. Kinesis 1999; 21: 91-108 [in Portuguese]
- Sterkowicz S, Zuchowicz A, Kubica R. Levels of anaerobic and aerobic capacity indices and results for the special judo fitness test in judo competitors. J Hum Kinet 1999; 21(2): 115-135
- 22. Iredale F. Determining reliability in a judo specific fitness test. Proceedings of the World Judo Research Symposium, 3rd IJF Conference; 2003 Sep 9; Osaka, Japan. Osaka: International Judo Federation; 2003
- Sterkowicz S, Franchini E, Heinisch H. Special Judo Fitness Test performance in high level judo players. International Judo Federation; 2005 Sep 6; Cairo, Egypt. Cairo: International Judo Federation; 2005: 49

- 24. Franchini E, Del Vecchio FB, Sterkowicz S. A special judo fitness test classificatory table. Arch Budo 2009: 5: 127-129
- 25. Franchini E, Del Vecchio FB, Sterkowicz S. Special Judo Fitness Test: development and results. In: Warnick JE, Martin WD, editors. Advancements in the scientific study of combative sports. New York: Nova Science Publishers; 2010: 41-59
- Franchini E, Sterkowicz S, Gabrys T et al. Energy system contribution to the special judo fitness test. Int J Sports Physiol and Perf 2011; 6(3): 334-343
- 27. Sterkowicz-Przybycień K, Fukuda DH. Establishing normative data for the Special Judo Fitness Test in female athletes using systematic review and meta-analysis. J Strength Cond Res 2014; 28(12): 3585-3593
- 28. Sogabe A, Sterkowicz-Przybycień K, Maehara K et al. Effect of preferred body stance side on the performance of Special Judo Fitness Test in Japanese judo athletes. Arch Budo 2015; 11: 1-6

- 29. Sterkowicz S. Ju-jitsu: wybrane aspekty walki obronnej. Kraków: Akademia Wychowania Fizycznego im. Bronisława Czecha w Krakowie; 1998 [in Polish]
- Sterkowicz S, Ambroży T, editors. Ju-jitsu sportowe: proces szkolenia (podręcznik trenera). Kraków: European Association for Security; 2003 [in Polish]
- 31. Sterkowicz S, editor. Czynności zawodowe trenera w sportach walki. Pierwsza Ogólnopolska Konferencja Naukowa "Czynności zawodowe trenera w sportach walki"; 1997 Jun 28; Kraków, Poland. Kraków: Akademia Wychowania Fizycznego im. Bronisława Czecha; 1999
- 32. Kalina RM. Professor Ewaryst Jaskólski (1932-2007). A prominent scholar in the field of combat sports and martial arts. Arch Budo 2007; 3: 54-56

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