

Helmut Kogel

The Relationship between Budo and Medicine

Idō - Ruch dla Kultury : rocznik naukowy : [filozofia, nauka, tradycje wschodu, kultura, zdrowie, edukacja] 2, 245-252

2001

Artykuł został zdigitalizowany i opracowany do udostępnienia w internecie przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej bazhum.muzhp.pl, gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

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Medycyna holistyczna

Helmut Kogel urodził się w 1951 w Aachen (Niemcy). W latach 1970-76 studiował medycynę na tamtejszym uniwersytecie. W 1976 otrzymał tytuł doktora nauk medycznych, a w 1995 – profesora nadzwyczajnego. Wykładał na uniwersytetach w Aachen, Kolonii i Ulm. Specjalizował się w chirurgii ogólnej, chirurgii naczyniowej i wewnętrznej. Od 1992 ordynator oddziału chirurgii ogólnej i naczyniowej w Lippstadt Dreifaltigkeits-Hospital. Prof. Kogel jest jednocześnie nauczycielem *karate* i *kobudō* (3 dan) i zaawansowanym praktykiem japońskiego *jūjutsu* oraz filipińskiego *arnis*, które ćwiczy pod kierunkiem wybitnych współczesnych mistrzów.

Pracę recenzował prof. dr hab. med. Ryszard Cieślik (IWFIZ UR). Wskazał, że Autor analizuje destrukcyjny efekt ataków na miejsca wrażliwe oraz dokonuje komparatystyki zasad medycyny europejskiej i azjatyckiej. Zdaniem prof. Cieślika „praca jest ważna i wnosi wiele nowych dla nauki polskiej elementów”, toteż uzyskała w recenzji ocenę bardzo dobrą.

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The Relationship between Budo and Medicine

I. The Historical Development of Budo

The knowledge of the historical development of Budo is the most important prerequisite for the comprehension of the role of medicine in ancient and actual Budo of the modern time. It would go beyond the aim of this issue to explain details of all historical aspects. For this I restrict the report on essential facts. In this context it is not useful to look too much for philosophical characteristics of Budo. Above all a realistic view of Budo arts must lead to a profound understanding. In order to know this it is necessary to talk about the history and the development of Martial Arts, and the different intentions of medicine in Europe, the USA etc. and traditional medicine in East Asia (above all in China and Japan), about the relationship between Budo Arts and practice, and the development of Budo as sport nowadays and last but not least the role of Budo Arts in accompanying the whole life.

I.1. The Way of Budo Arts in Asia

The exact way of the development of Martial Arts in Asia is only partially known. Similarities of Martial Arts in different countries such as China, Japan, India, Korea and others are an argument for a common origin. Budo was intensively connected with the knowledge of traditional Asian medicine, the knowledge of specific neurophysiological mechanisms, of health and science of nature medicine. In former times the primary intention of Martial Arts would have been the defence. Nevertheless Martial Arts early got some elements of meditation and philosophical meaning. Martial Arts have been developed in countries with a typical universal view of life. In connection with this there was an intention of some people to live in harmony with the nature. Zen Buddhism and the practice and development of some monks in Martial Arts and Budo had an important influence. This may be a reason for the special way of Budo in connection with traditional medicine and the instruction during several generations. Especially a great part of these universal aspects of Budo has definitively been lost until today. A part of these old secrets (breathing techniques, reflex zones, neural points) can be detected in some old Katas in different Budo disciplines. Later on we will discuss this item. Monks of China, merchants of China and Korea should have introduced culture, Buddhism and Martial Arts to Japan, beginning on the Ryu Kyu islands (Okinawa) (6). Very early reports have been found in a document from China from around 200 BC to 200 AD. The cultural exchange was intensified in the 6th century AD.

I.2. The Martial Arts of the Samurai

The samurais were loyal soldier of their princes. They had practice in all kinds of Martial Arts, that means Iaido, Kyudo, Jujutsu and others. At the same time Ninjas developed their own secret techniques, different from the practice of the samurais. Many different wars in

ancient Japan lead to injustice and terror. The codex of honour of the samurai got under pressure. In its artificial world the old dynasties did not notice that the influence of some samurai families became bigger and bigger. In the 12th century AD. they had control of Japan. The Tokugawa family ruled in Japan for 300 years with the residence in Kamakura. During this time there was peace, a great advantage for the development of culture, commerce and Martial Arts in form of Budo.

I.3. Budo as Martial Art in Our Time

At the turn of the 20th century they systematically began to work out different Martial Art specialities. The big system was artificially divided into different disciplines such as Judo, Karate, Aikido, Kobudo, Iaido, Kyudo, Nihon Jujutsu etc. These developments are closely associated with names such as Kano, Funakoshi, Ueshiba and more. It was a shame that the knowledge of traditional medicine and meridian and reflex system in connection with martial arts was lost in most instances. Philosophical aspects combined with the code of honour of the samurais became of greater importance. For Kano and someone else the intention of training the body became of greater importance. The Second World War was a very bad time for Budo. First the philosophical meaning of the last years in Budo had to be substituted with real fighting techniques (6). Aikido did not seem to be suitable for soldiers. They concentrated on Shotokan Karate with a reduced number of techniques. During the occupation of Japan by the USA after the Second World War, Martial Arts were forbidden for several years. Only a small group of Japan experts took the knowledge of the different Budo disciplines. No wonder that medical aspects have been forgotten in many cases.

I.4. Competition in Budo sport

In order to make Budo more popular it was necessary to put emphasis on Budo as sport. Therefore the different Budo disciplines had to be changed in a decisive manner. The aim of the reform was to enable young people to become successful athletes as quickly as possible and win competitions. The training had to be modified. There was not enough time to be occupied with the different parts of Budo as they had been taught in former times, such as a variation of techniques, a universal training method, attention to medical aspects, physiological knowledge. Fatal blow-techniques could not be applied in competitions and as a consequence they were not taught any longer in many cases. Rules for competitions had to be clearly defined. That was a lot of work. This development is – for example in Karate Do – associated with the name of Nishiyama. People who were interested in Budo differed from the trainees of former times. The instruction of fatal blows and kicks and destructive techniques had to be stopped because the reliability of the trainees turned out to be a risk in the different legal situation. Budo became incomplete. The parts of Budo such as real application, medical background, philosophy and sports have been divided.

II. Modern Medicine and Budo

II.1. Medical Aspects of the Training

II.1.1 Qualification of the Instructor

Budo instructors who have good knowledge of medicine especially of physiology are an exception. Their knowledge is normally restricted to basic knowledge of first aid and an extract of Kuatsu. Above all the training of young people and top athletes may cause injuries to sinews and cartilages in later life. The instructor must have a real feeling for anatomic peculiarity, individual motion patterns and limits of the body. It is necessary to train children and young people in a different way than adults, not only because of psychological aspects but also because they are not yet fully grown. This is another reason why profound knowledge of medicine is necessary for an instructor. Even handicapped people can be trained in some martial arts. Martial arts can be practised by people who are handicapped because of

Contergan or by students with spastic movement disorders. Successful training of such students proves superb performance and the work of a master. The methods of Karate training divides the control of the body into 4 squares (median arrow and transversal arrow). By this training an enormous effect can be achieved. It is strictly forbidden to neglect individual limits of the student because of damages of the body in later life. The knowledge of specific alterations depending on age is very important. Moreover physiological and psychological parameters must be respected to induce a development of motion. A great feeling of the instructor is mandatory to look for the relationship between loading, adaptation and increasing performance (3). The instructor has a great medical and social responsibility for his students. The aim of western medicine is concentrated on looking for pathological process. Prevention is underestimated.

II.1.2. Sinews and Joints

Wrong stress causes a great danger for sinews and joints, because movements in Budo sports have many thousand repetitions. Extensive hip exercises can explain some special problems for training. Stretching of the hip beyond the anatomic limits causes injury. The architecture of the pelvis and the hip show some differences according to sex, race and also individual characteristics. The angle of the hip of men is steeper, the pelvis smaller than of women. Therefore women have some advantages in stretching exercises of the hip and are not so much in danger of chronic injuries. Asian people also have advantages compared with Europeans in respect of the anatomy of the hips. After pathologic stress the ligaments of the hips become flabby and cause dangerous osteoarthritis for hips and knees in later life, above all by rapid movements with deceleration. The classic mawashi geri, with the standing leg in 90° angle, causes enormous stress for the inner knee ligament and inner meniscus. Hyperlordosis of the spine during wrong gymnastics is responsible for damages in intervertebral disc. Hyperextension of the elbow especially in women leads to early osteoarthritis. The number of examples can be continued at will. It is easy to understand that the injuries caused by false training can be extensive. It is not a normal fact that grand masters such as H.Kanazawa remain quick and elastic until an age of 70 years. Clever and skilful training is so necessary as well some good genetic requirements. Many of the experienced Budokas know people with injuries of the body in later life. That's the reason why many Budokas have to refrain from sport at the age of 40 years. Chronic injuries of the spine and the knee are the main reason for this.

II.1.3. Injuries of Vessels and Nerves

Extreme deceleration as trauma of the neck and shoulder for example during a rapid punch with sudden stop causes an overload of the body and leads to jam of the nerves in typical locations such as foramina intervertebralia, thoracic outlet and some others. Also violent fall, wrong tumbling and overload of the body are dangerous (typical example: the technique of Kata guruma in case of overweight of the partner). Extensive muscles in the region of the shoulder, a too big biceps or muscles of the forearm can cause a compression syndrome of the nerves. Surgical operation is often mandatory. Typical anatomic bottleneck situation for the vessels (for example the adductor channel or the popliteal fossa) lead to pathological changes of the arteries and acute or chronic occlusion if muscles are overloaded. Dissection of the femoral artery can also be seen caused by rapid kicks. In such cases with acute arterial occlusion there is a danger for the limb. It should also be mentioned that wrong press breathing can cause chronic damages of the brain. Last but not least injuries of nerves and vessels are also possible during partner training and competition, for example during dislocation of shoulder, elbow or knee joint. Also fractures of clavicle, upper arm and thigh can cause acute injuries of vessels and nerves. Injuries of the brain, the carotid artery or of the heart seldom occur but have to be mentioned.

II.1.4. Damages of Inner Organs

Wrong nutrition, the fact that you do not drink plenty of liquids during intensive training and doping can cause malfunction and definitive damage of liver and kidney. Therefore a good

condition of an athlete can only be saved by looking for healthy and reasonable living conditions. Injuries of the lung can be caused by falling down on the back, by punches onto the thorax, by broken ribs and broken sternum. Press breathing leads to an overload of the small blisters of the lung as a consequence they can burst. Kicks and punches on the lower ribs, in the upper abdomen or on the back may cause a burst of liver, spleen and kidney. These injuries can be seen above all in Tai boxing.

II.2. Medical Aspects of Atemi Points

In respect of modern medicine and anatomy the effect of some Atemi points can be explained. But the number of points are only a small part of the effective Atemi points known in Asian theories. In the Asian Budo art more than 200 of such points are known. They are sensible reflex points and enable to practice the so called Dim Mak or Kyosho techniques (8). According to the European view the effectiveness of attacks to outlets of the nerves in the region of the head, the neck and the vertebral column can be explained by medical mechanisms. A punch in the glomus organ of the carotid artery can cause cardiac arrest. Defined points on the bones of the arm, shinbone and spine are also known as target for attacks. Injuries of the genital region induce a vasovagal shock. Pressure to the eyes produces vomiting because of a stimulation of the vagus nerve.

Attacks to the solar plexus or the region of the heart can cause a circulatory failure and/or a breakdown of breathing.

III. Asian medicine and Budo

III.1. Differences between European and Asian Medicine

Medicine in the modern world has put emphasis on the art of diagnosis and the treatment of illnesses. Modern medicine has tended to focus too much on developing highly complicated techniques whereas the Asiatic medicine has focused on an earlier point, namely on the prevention of illnesses. A universal view of the world and the body and different experiences with the pathophysiology of the organs lead to another way of solving problems, a strange way for European people (2). The definition of the so called status of health, common in European science, is wrong for the Asian point of view. In their opinion health is a result of different energies, that means it is not a status but a dynamic process. Important elements of this philosophical view of nature are the theory of the five elements, the model of the meridians, the theory of Yin and Yang and the science of Daoism. According to Chinese ideas the whole universe is constructed of five elements such as fire, iron, wood, earth and water. All things are related to these elements, seasons, forms, beasts, energy, climate or colours (1,2,4).

III.2. Principals of prophylactic attitude

Above all the traditional medicine in Asia has focused on the prevention of illness. That is why in Kempo and Karate Do the exercises contain special sequences with psychological and physiological background. Correct training shall increase the stream of energy. In consequence the trainee should profit by positive influences on his health and mental power. The healing powers of such exercises for handicapped people have been already mentioned. Interactive relations between fight and health or fight and illness have been respected in the former experiences. But many facts of these theories have been lost since those days or remained hidden for western countries. It is as impossible to learn these secrets in a short time, as it is impossible to learn acupressure or acupuncture in only one course. So it takes a lot of years to get good knowledge in traditional Chinese medicine (2,4).

III.3. Definition of the "State of Health"

In the theory of traditional Asian medicine (in China and Japan) health is not a state but a result of interaction of different energies. For this health is not a static procedure but a

dynamic one. It can be influenced by changes from outside. Therefore for us it is possible to direct health in many situations and to correct some malfunctions. In this theory we can find elements such as Yin and Yang, the five elements, the meridian model and theory of Dao. Yang is compared to the powers of the sun, it is the energy for life, too much of this energy causes destruction. Yang is as the power of the water or the shadow; too much of this energy has also destructive effects. The best Yang energy is available in the morning, because everything begins, also the spring, because the nature arises (1). The phases of life can be seen similarly. These elements can be detected in the smallest details of our world and life. That means, life is a result of numerous different streams of energy. This theory is similar to scientific theories applied in astrophysics and particle physics. Only the tools to describe these energies are different.

III.4. The theory of Dao

Doaism is a theory of the nature, the overcoming of the ego. The character of the nirwana or the “nothing” has contributed a lot to the understanding of the spiritual life in Asia. From a medical point of view diet, breathing, training and gymnastics are important elements of this theory. The power of life the so called CHI is composed of Chi in breathing (Gong-Chi) and Chi of food (Gu-Chi). The essence of Dao, that means being of the nirwana is based on the interaction between the contrast of Yin and Yang. In these senses we can see parallel thinking as described in astronomy and quantum physics (matter and antimatter).

III.5. Meridians

Twelve lines (Meridians) in projection on the body are assigned to different organs (2,4,8). These connections cannot be explained by science in modern medicine. Many of the lines and some points on them have connections to nerve tracts. It is not clear in any case if these nerves send signals to the central nerve system and if these signals are diverted to the inner organs. In some cases it is known. Such mechanisms could explain the connections. According to this system more than 200 atemi points are well known. GV 21 is a point on the top of the head. A strong blow on this point can cause sudden death. GV 26 is situated directly under the nose. A blow on this region can massively disturb the sense organs and it causes great pain by irritation of the N.trigeminus and N.facialis. If the cells behind the nose are destroyed eyes and nose are out of function and massive bleeding in the region of the skull base can occur (Fig.1). TW 17 behind the ear has a correlation to the gallbladder. A strong blow on these points can cause unconsciousness and a critical condition because of organic disorder. These are only a few examples. One can imagine that the knowledge of these mechanisms is not good for everyone.

III.6. Reflex Zones and Kata

In most Katas you can find correlation to Atemi points and reflex zones. In this sense the stabilisation of morote uke can be explained by contact with reflex zone of the tendon on the forearm, the atemi points LI 18 and LU8 on the forearm for soto ude uke (Fig.2), CV17 in the technique of uraken and CV 23 in the kata of Heian Godan (Fig.3). But Katas are shown today by many Budokas without the knowledge of the sense of the mentioned secrets. In these cases the kata is nothing else but ballet.. The meaning of the nerve points LU8 and H6 is as important as to respect the correct angle by practice of Kote Gatame (Fig.4).

IV. Budo a Companion for Life

In this sense Budo is much more than sport, more than a martial art or an instruction of traditional moving patterns. Budo can accompany you throughout your life (7). Budo helps to understand and to realize a correct feeling for health, a knowledge that is difficult to impart in another way. The consequent education in a healthy life is a welcome aspect of Budo. Budo helps to form a strong personality, it helps to have greater knowledge of one's own body and

about the health risks. Katas of different Budo arts train breathing, body strength, mind and spirit until old age.

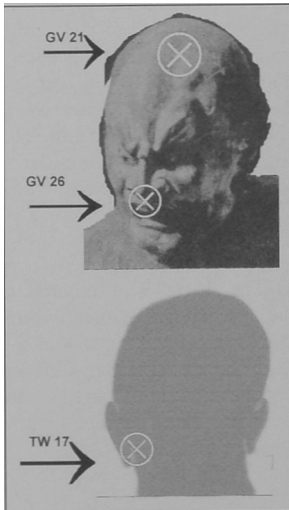


Figure 1: GV 21 is the Atemi Point on the top of the head. When a punch is strongly executed for example with the elbow it can cause sudden death. Blow to GV 26 under the nose breaks the bone of the skull base and the small cells behind the nose. The sense organs are disturbed. Blow to TW 17 causes dangerous organ disorders. It is the zone for the gall bladder.

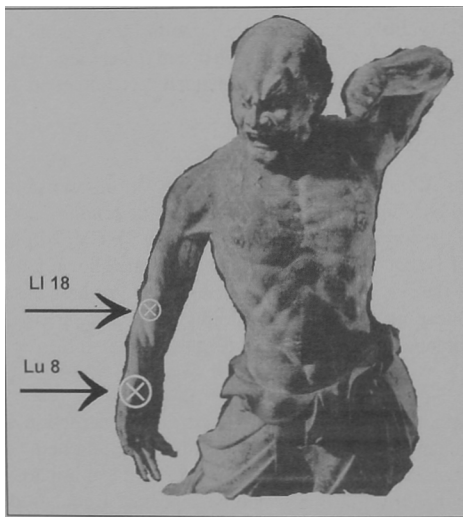


Figure 2: Li 18 and Lu 6 are Atemi point for example for Soto ude Uke. Li 18 contains the profound fibre of the radial nerve, Lu 6 the superficial fibre. If these points are hit strongly, the arm is suddenly without any power.

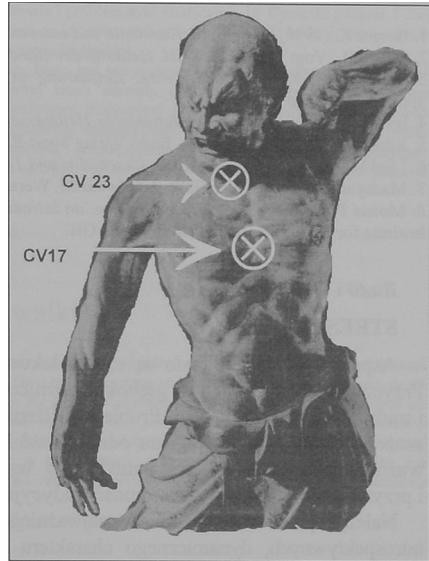


Figure 3: CV 23 are Atemi points in the Kata of Heian Godan. Cv 17 shocks breath and heart, CV 23 blow can cause lost of conciousness.

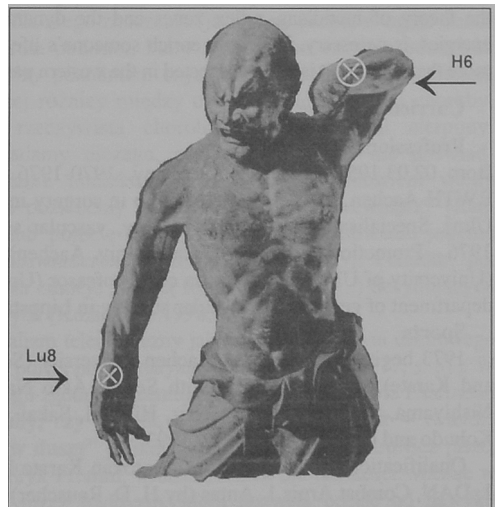


Figure 4: H 6 and Lu 8 are pressed for example by practice of Kote Gatame. It produces a lot of pain and reduces the power of the arm.

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Budō i medycyna

STRESZCZENIE

Aspekty medyczne *budo* są często lekceważone i w związku z tym słabo rozpoznane. Przyczyniają się do tego głębokie różnice pomiędzy współczesną medycyną zachodnią i tradycyjną medycyną Azji. Problem zbliżenia do azjatyckiej medycyny postrzegany jest jako szczególnie trudny z uwagi na odmiennosc historycznego rozwoju. Lecz dla trenera równie ważna jest wiedza na temat medycyny współczesnej (anatomia, psychologia sportu) jak i przynajmniej częściowa znajomość tradycyjnej medycznej wiedzy Dalekiego Wschodu.

Należy przez to rozumieć najważniejsze tezy Tao, teorię meridianów, obszarów introspektywnych, dynamicznego charakteru zdrowia regulowanego przez przepływ różnego rodzaju energii. Tylko w ten sposób *budo* może stać się sposobem na lepsze życie aż do późnych lat. *Budo* to o wiele więcej niż sport, za który często uważa się je w świecie zachodnim.

SUMMARY

Medical aspects are often neglected in Budo and are not well-known. Profound differences in modern western and traditional Asian medicine contribute to this problem. The approach to the science of Asian medicine is rendered more difficult because of the historical development. But for a coach his knowledge of modern medicine (anatomy, sports physiology) is as important as greater knowledge of a part of traditional Asian medicine. That means knowledge in essential theses of Dao, the theory of meridians, reflex zones and the dynamic flow of health, influenced by different energies, is necessary. Budo can enrich someone's life until his old age only in this way. Budo is more than sport as it is often suspected in the western part of the world.

Curriculum vitae

Professional

Born 02.03.1951 in Aachen Germany. 1970-1976 Study of medicine in the University of RWTH Aachen. Since 1976 fellowship in surgery in different Universities (Aachen, Cologne, Ulm). Specialisation in general surgery, vascular surgery, visceral surgery and Phlebology. 1976 – Promotion to medical Doctor (Univ. Aachen). 1989 – Venia legendi in general surgery (University of Ulm). 1995 – extra ord. Professor (University of Ulm). Since 1992 Chief of the department of general and vascular surgery in Lippstadt Dreifaltigkeits-Hospital gem.GmbH.

Sports

1973 begin with Karate in Aachen University (Society for development in Aikido Jujutsu and Karate), study of Karate with Sensei Akio Nagai (Cologne), Kawasoe, H. Kanazawa, Nishiyama, Shirai, H. D. Rauscher, Higushi, Sakai, Nobetsu and others, intensifying Jujutsu, Kobudo and Combat Arnis since 1993.

Qualification by the IMAF in: Shotokan Karate 3. DAN, Kobudo 3. DAN, Nihon Jujutsu 1. DAN, Combat Arnis 1. Antas (by H. D. Rauscher).