The Judo Paradox

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Abstract

When judo is presented as an eminently educational sport, numerous deaths observed in Japanese dojos raise questions concerning the dangerousness of the discipline. First, a literature review will examine research on the topic, the methods used, the results obtained as well as their limits. These data will then be compared with statistical elements collected in France, which provide an almost exhaustive view of the daily activity of practitioners over the long term. The Haddon matrix is a precious help in specifying the causes of trauma in sport and in proposing an accident prevention policy in judo from an ecological perspective. The problem posed here is primarily that of the balance between sport judo and recreational judo; but it is also a public health and child protection issue that affects the future of the method founded by Kano Jigoro.



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The Judo Paradox

The many serious accidents in the country of origin of Kano's method reveal a paradox. In the Land of the Rising Sun, the educational aims of the founder of judo are contradicted by the westernized vision of those who only perceive the sporting dimension and the quest for medals. The long list of traumas from 1983 to 2015 that caused 121 deaths and left serious damage to too many other young judokas¹ is as unbearable as it is unacceptable. Despite the significant efforts made by the All Japan Judo Federation (AJJF), some cases still remain. As demonstrated by the negative reaction of the population to the reintroduction of judo in school curricula², this observation reveals the image of a violent and dangerous practice and casts shame on a discipline symbolizing education and character building. The purpose of this article is to examine in detail the degree of danger in judo, the nature and level of the risks involved, to identify the causes and to propose an injury prevention policy.

Is sport judo safe?

Professor Uchida Ryo of Nagoya University and the Japan Judo Accidents Victims Association (JJAVA) have been very active in alerting the public to the aggressions committed against young practitioners by teachers who are only concerned with results and whose excessive demands were inaccessible to their students (Uchida, 2013). Numerous scientific studies have followed that have studied more particularly the causes of trauma and subdural hematomas causing often irreversible lesions. Results from these studies have indicated that injured students are young beginners, that they suffered from violent throws imposed by stronger and older opponents, that the teachers were either directly involved or that they showed neglect or disinterest in student complaints. The age of the injured and the seriousness of the accidents is confirmed in an epidemiological study published in *The American Journal of Medicine* under the title "Catastrophic head and neck injuries in Judo Players in Japan from 2003 to 2010", by Kamitani Takeshi, Nimura Yuji and their colleagues, a group of recognized experts in medicine and judo (Kamitani et al., 2013).

Initiated by the problems of Japanese judo, the accidentology of judo has become an international concern. A literature review conducted by Elena Pocecco brings together a large number of surveys based on accident reports in official championships (Pocecco et al. 2013). Taken as a whole, the injury figures recorded are between 6.4 and 8.9%. Some long-term studies have been published such as those conducted in France between 1993 and 2002 which are based on a panel of more than 200,000 fights between 150,000 athletes in official competitions (Frey et al., 2019). Findings show that risks decrease as the level of the expertise of judo players increase. Injuries are more frequent in the cadet and junior categories at the local and regional level unlike senior categories at the national level. This study shows that 50.68% of lesions affect the upper limbs, 27.06% the lower limbs and 10.72% the spine. The authors stated: "All of the results presented show that judo is not a high traumatic risk sport. In fact, 2,267 injuries or 0.99%, represents a very low proportion

http://judojiko.net/eng/

Petition to the Ministry of Education and the Secretary General of the Democratic Party regarding compulsory implementation of martial arts in junior high schools (http://judojiko.net/eng/news/190.html)

considering the commitment and determination of the judokas during the competitions." They added: "there is no difference between the two sexes in the incidence of injuries. These are the same with the same preferential damage". Regarding severe injuries, they mentioned over the 9-year period, three serious cases of quadriplegia, which authorized the authors to declare "judo remains a moderate risk sport".

The various studies converge and make it possible to conclude that sport judo has a low percentage of medical interventions for lesions whose number and severity remain reduced. Similarly concerned about the problem, international organizations have also carried out the same investigations. Maximilien Jung in collaboration with the European Union and the International Judo Federation (IJF) conducted long-term research on international matches that brought together a total of 24,317 athletes (Jung, 2017). The IJF Medical Commission drew a definitive conclusion out of a study supposed to "reveal the truth" about judo injuries and affirming "the sport of judo is SAFE" (IJF, 2017). But is this "the truth"? Even if the aim of official bodies is legitimate, how significant is this?

Is recreational judo safe?

There is indeed a fundamental difference between leisure or recreational judo practiced in clubs mainly by children and adolescents and sport judo oriented towards competition. To make a statement solely on the basis of a research on injuries during judo contests would be to ignore two fundamental points. First, athletes who are engaged in sport events are in an egalitarian context. They are submitted to sport rules with age and weight classes. Their fight is under the supervision of a referee enforcing safety behaviours and prohibiting any dangerous techniques or aggressive gestures. Both fighters are equally, physically and psychologically, prepared. When an accident occurs, a dedicated medical unit intervenes immediately and provides the necessary follow-up. Second, only a small percentage of judo players take part in official championships. In France, for instance, statistics show that at the local level, for those under 12, the average participation rate is between 3 to 5%, raising to 30% for 12 and 18 years old and 9% for the eldest. At the regional level, the rate drops to 15% for those under 15. It remains stable for cadets and juniors and falls to 4% for seniors (FFJDA, 2014...). Taking this into consideration, it is necessary to deepen investigations by including data from dojo practice.

Since the 1960s, one of the characteristics of the organization of sport in France has been the obligation for sports institutions to take out insurance in order to guarantee the safety of their members. Thus, all the injuries of the French judo federation members are declared to the insurance company with which it has an agreement. Since the 2000s, French judo membership has been above 500,000 with some variations (2000/2001: 548,613; 2011/2012: 595,066; 2019/2020: 511,629). Consistently, members under 15 make up around 70%, and female members around 26-28%. Access to the recorded data from the 2005/2006 sporting season to today gives a global outlook that encompasses the accidentology related to judo in France. In 2005/2006, 6,620 accidents were declared by members, *i.e.* a rate of 1.13%. Over the years, this rate has fallen continuously: 2009/2010, 0.93%; 2014/2014, 0.82%, 2018/2019, 0.66% (FFJDA, 2003...). A first observation shows that the majority of injuries occur during training practice for 60 to 80% (depending on the year), for 10 to 20% during official contests, and also during various circumstances (travel, changing rooms, etc.) for the remaining percentage.

The reimbursements paid to members allow a different appreciation of the dangerousness of judo. The highest allowances primarily concern knee injuries, followed by

dental injuries. Serious cases like death from heart failure, quadriplegia or hemiplegia happen quite infrequently and only with advanced and adult players (one to two cases every two or three years). Close examination of these numbers highlights the low rate and severity of injuries that are reported. These mainly affect practitioners aged 12 to 18. In 9% of cases this occurs during self-practice. In 25%, when practicing with a partner, the injury is self-inflicted. The injury is inflicted by opponents in the remaining 66%. Two-thirds of the injured wear a colored belt (*kyu*), one-third wear a black belt (*dan*). Over the long term, the gender ratio offers a slight growth in female practitioners' injuries, which goes from 24-26% between 2005 and 2009 to 31-32% today.

Reckless judo or reckless teaching?

French figures show greater injury frequencies in November, January and March, which corresponds to competition periods, and therefore to an increase in intensity in training and fights. In Japan, Uchida clearly demonstrated the influence of a context oriented towards the exclusive search for performance: "Students and teachers both aim at victories in competitions, and parents endorse teachers to work hard for these clubs. Everyone is caught up in after-school clubs. Banners and trophies are displayed to show good results while mass media covers schools and students with outstanding performances. Schools become training centers for athletes while clubs present such shows. [...] People excited with emotional drama in the performance of students are an additional element causing zealousness in club activities. [...] According to the data received by the Ministry of Education and Science, about 1/3 of corporal punishment cases they identified in 2015 occurred during after-school club activities. Unscientific instruction and violence are harbored in clubs". (http://judojiko.net/eng/news/483.html)

From this observation, the scientific studies carried out by Japanese doctors conclude with proposals in favor of a better mastery of *ukemi* (falls), by strengthening neck muscles, by wearing protective helmets or by using a carpet underlay allowing for better shock absorption (Maruyama, 2013). Some go so far as to demand that the teaching of certain techniques such as *osotogari* (large outer reap) be banned.

These apparent solutions start from a presupposition to which I oppose an epistemological critique. Indeed, the dominance of an inappropriate logic of effort and pain is by no means called into question. The implicit acceptance that young practitioners, in this case of much lower physical level and ability, may face opponents who abuse their superiority is questionable. The main issue is not a lack of fall mastery. It is a matter of violence and the lack of control of projections made with the intent of causing harm. The trauma caused cannot be described as accidents that by definition are unforeseeable events. Nothing is unpredictable in aggressive and repeated actions imposed on much weaker and more fragile opponents. This renunciation of the educational values of the Kano method indicates the failure of the teacher in charge of the training session, the teacher whose pedagogical capacities and professional skills thus show their limits, the teacher who has forgotten that the *gokyo* established in 1920 under the direction of Kano chose *de ashi barai*, a sweeping technique, as the first *waza* (technique) to be taught, because a slipped fall does not endanger the beginner.

An ecological approach

The Haddon Matrix provides a widely used framework for understanding the origins of accidents. It defines an accurate process to identify and distinguish different factors (host,

agent, environment) and different chronological stages (pre-event, event, post-event). In the field of sport, it is a synthetic and promising tool to implement programs to reduce the risk of injuries (Vriend, 2017). Because recreational judo and sport judo cannot be compared, an ecological prevention policy integrating cultural, social, economic, political and legal factors makes it possible to broaden the hitherto majority view of a medical approach. An ecological approach is not just a matter of technology, but also of philosophy. It represents a new life-affirming mindset for a sustainable future, here the future of the method of Kano Jigoro. In that perspective, the pre-event period and the ethics of the person in charge of the training session are the main focus.

In the late 1880s, Kano's way of thinking and teaching was ground-breaking (Murata, 2005, Kodokan, 2009). The topic of this paper is not about pedagogics, but no one can ignore how much judo teaching is conservative and has remained traditional, based on a teacher's demonstrations and senior authority. Rare are the teachers experimenting new teaching strategies made out of research in the area of motor learning such as, to mention just a few examples, problem solving, paired teaching or task difficulty. The only area where scientific research has been the subject of a growing interest is high-performance. Judo didactics neither received great attention nor even consideration. The alleged innovation of the recent *Kodomo no kata* (*kata* for children) does not seem likely to bring any novelty to the educational field. The opposition between the combatants which constitutes the very essence of the combat is non-existent. The forms displayed only reinforce the analytical and artificial approach in a conservative way of teaching judo ignoring the evolution of the sciences of motor learning and the expectations of today's youth.

Hierarchy is the strength and weakness of judo. The rank system, *senpai-kohai* (senior-junior) relationships, and today sporting titles have made judo a dominant-dominated system that can lead to fulfillment as well as submission. Kimura, Hirano, Okano are just a few of the Japanese champions who have marked the history of the discipline with hard training. This scheme spread all over the world. Frenchman David Douillet, twice Olympic champion, declared: "Pain is part of training [...] It is a measuring tool. There is no good training without pain [...] Now it's over, I never want to hurt myself again" (Douillet, 2008).

At the turn of the 21st century, judo is nothing like the original Kodokan method nor the 1930s system used to promote a samurai-like ideology. New practitioners, new finalities, new goals, new techniques mean new behaviours and new methods of teaching. In the 1970s, French judo initiated a Copernican revolution in education, mainly under pressure from the rejuvenation of its membership. Yamashita Yasuhiro, Director of Education of the IJF between 2003 and 2007, endeavored to change the pedagogy for young practitioners publishing a DVD in five languages sent worldwide (IJF, 2006). These efforts are thwarted by the accentuation of the tendency to implement contests for younger and younger judo players.

Education before competition

Judo is a late specialization sport. Despite this, several countries do not hesitate to organize national championships for children under 12. The international federation has set up a world championship for cadets (15-18 years old). As a direct consequence many teachers train their young students as adults and teach *shime waza* and *kansetsu waza* (arm locks and strangling techniques) much too early at the risk of irreversible sequelae in a period when body growth is far from being over. Added are dietary demands to fit weight

classes and moral pressures that sometimes lead to the loss of self-esteem or to the abandon of judo. All these teachers are not to blame. Some have such a professional status that the results of their students in competition are part of the institutional requirements they must meet. However, it cannot be ignored that judo is a late maturity sport. On the eve of the Olympic Games, only 16% of the athletes who have climbed to a Cadets world podium since its first edition in 2009 in Budapest, are on the world top 8 of the IJF weight classes ranking list. The probability that a cadet champion will confirm his or her results at the Olympic Games is therefore very low.

Sport judo is not the enemy. The quest for performance is a noble issue. But, such an adventure must remain a personal choice. It has to be made by athletes themselves with the help of their entourage and this decision must not jeopardize their health, studies or social life. The number and the severity of judo injuries is directly linked to the mismatch between the abilities of students and the aspirations and skills of their coaches. This is the meaning of the campaign led by the All Japan Judo Federation against the "Victory at all costs" mentality of some of its teachers. Judo is a direct and physical confrontation activity. Injuries are inevitable. However, the level of risk must remain low and severity measured. The question of trauma in judo goes beyond the simple medical field. It belongs to that of the teaching and coaching expertise in other terms of public health and child protection. The initial and in-service training of judo teachers appears to be a crucial problem that is insufficiently considered. The reduction of injury risk in judo involves to comply with higher standards and implies the improvement of teacher preparation and continuing development. This brings together all the actors of the system such as the State, the Ministry of Education and Sport (MEXT in Japan), universities and sports organizations. In extreme cases, the law must be strictly enforced to eliminate bullying and corporal punishment.

Conclusion

Teaching young practitioners cannot be improvised. Adolescence is a time of turbulence and turmoil, of physical and psychological upheavals that demand special expertise and attention. The Asian origins and the founder's conceptions surround the Kano method with a dimension envied by leaders of many disciplines. However, judo is not in itself educational; instead, the way it is taught makes it educational, or not. In the absence of a didactic reflection adapted to the current cultural and social needs, conservatism dominates and the necessary Copernican revolution replacing the central place of the technical knowledge by that of the progress of the pupil is too slow to adapt judo teaching to an increasingly younger population with new expectations and, as a whole, with less and less interest in sporting achievements.

The educational originality of the Kano method rests on two pillars: the social control of violence and the euphemization of combat in Norbert Elias words and the historical and cultural background of Japanese civilization steeped in distinction and of self-control. A "sustainable" judo requires a better risk control and an adaptation to the new uses of the body of current generations. Kano's legacy is fragile. Sport judo and recreational judo have their future linked by a delicate balance that must be maintained between traditions (often reconstructed) and modernity.

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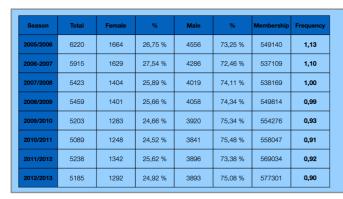
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Circumstances	2009/10	2012/13	
Training session	73,45 %	70,43 %	
Competition	17,5 %	20,60 %	
Tournament	7,8 %	6,30 %	
Others	0,97 %	1,16 %	
Travel	0,22 %	0,08 %	

Judo injuries in France (2005/2013)







Season	Total	Female*	%**	Male*	%**	FFJ membership	% Frequency
2014/2015	4477	1230	27 % (0,84%)	3247	73 % (0,81%)	543913	0,82 %
2015/2016	4419	1136	26 % (0,74%)	3283	74 % (0,82%)	578277	0,80 %
2016/2017	4091	1011	25 % (0,62%)	3080	75 % (0,78%)	579664	0,74 %
2017/2018	3522	1127	32 % (0,71%)	2395	68 % (0,63%)	571202	0,65 %
2018/2019	3415	1060	31 % (0,68%)	2356	69 % (0,65%)	534958	0,66 %

- ${}^{\star}\, \text{FFJudo membership}: \text{female members /} \sum \text{members: 27-29\%, female members /} \sum \textit{kyu} \text{-under black belt-members: 30-33\%}$
- **x % **(y%)** x % percentage of injuries/ \sum judo members y % percentage of injuries / \sum female players or / \sum male players)



