Perceptions of Time and Adaptive Strategies in Sports Competitions

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ABSTRACT: Time is cultural; sport is cross-cultural and universal and requires a specific temporality which can be either in consonance, or in dissonance with worship time. How then would the adaptive strategies of time of subjects of nonwestern culture be spread, which perceive time as their own, at the time of sport practice? It is to this question that this article would provide a response. We attempt to show that the modes of adaptation by assimilation can signify congruence between the perception time of the sportsman and required temporality for the sporting success. But we attempt also to highlight that the mode of adaptation per integration, where two contradictory temporalities are revealed (cultural and sporting), does not signify a mismatch, but a time lived according to the mode of coexistence perceptions, that one which is announced by anthropologists, specifying a feature which particularizes Arab-Muslim societies.

KEY WORDS: temporal culture, sporting time, consonant perception of time, dissonant perception of time, acculturation, adaptive strategies, Judo, Tunisia.

I. INTRODUCTION

Sports competition of Tunisian subjects concerning time is registered within the general problems of works on the anthropology of time underlining its dimension cultural (Hall, 1984, 1990, Grossin, 1996) and revealed, regarding the Arab-Muslim area by Massignon (1951) and Maghrebian by Meziane (1975). Sport is characterized by a specific temporal framework, impregnated of the features which characterize time in Western societies (quantitative, unilinear and rational). The cult of performance (Ehrenberg, 1991), set up as the central value of sport, defines a chronosophy of time (Pomian, 1984), i.e. a direction of the time whose implicit ontology is marked by the ideology of progress and the uninterrupted ascension (Ardoine & Brohm, 1995, p. 56); this time is opposed to the discontinuous time, which prevails in the non Western cultures. Meziane (1975), speaks about the empirical apprehension of time to indicate that, in Maghreb societies « lived time is much less one duration (dahr) which is passed [within the bergsonien meaning of the term], the discontinuous succession of punctual moments (waqt) specific », (p. 230). It is the « Milky Way of moments » about which Massignon (1951) speaks, a kind of constellation of discontinuous moments of which each one « must be lived in an instantaneous, intense, privileged and shared way » (Madaoui, 2005). That refers to the polychronic character of the already announced time by Hall, for which, the individuals belonging to this system « seldom perceive time as “wasted”, and rather regard it as a point than a ribbon or a road » (1984, p. 58).

Sport in Tunisia is the product of acculturation (Ben Larbi and Errais, 1985; 1986); it is the result of direct and continuous contact of two cultures in a particular historical context, marked by colonization. Acculturation directly raises the question of adaptive behaviors generated by a situation of cultural contact (Berry, 1989; Camilleri & Visonneau 1996; Abbou, 1995). From these behaviors of the sportsmen rise – according to Berry- modes of acculturation which are declined according to well differentiated methods: assimilation, integration, separation or marginalisation (Berry, 1989). This approach to the time-sport equation is eager first to stand out in relation to two ideas: A representation of time maintained in occident, inherited the classical science, which regards it as an absolute reality and a universal data independent of space (Newton, 1687); it is registered within a positivist long tradition which proceeds by an objectification, conferring at the time of observable and measurable qualities. This statute of “universal neutrality” is disputed by Einstein who associates relative character with time. That one, following a representation of modern sport, firmly rooted in common sense, according to which it would also raise of the universal (and it would cross all cultures) and of the suprahistorical (would cross all ages) and which would result in the assertion defended by B. Jeu (1977): “from every time and every place, men practiced sport”. Today, one knows since the work of Ulmann (1977) and Elias (1994) for example, that temporality of sport is attested; it is a historical fact pertaining to modernity. Time is cultural; sport is cross-cultural and universal and requires a specific temporality which can be either in consonance, or in dissonance with worship time. How then would the adaptive strategies of time of subjects of nonwestern culture be spread, which perceive time as their own, at the time of sport practice?
It is in the approach temporal perceptions (Usunier and Valette-Florence, 1991) sportsmen, to release the forms of adaptation which they deploy in a situation marked by the coexistence of two temporalities: that of the sport, circumscribing a specific temporal framework, and that which concerns the temporal culture of the subjects concerned. The appreciations of time in Tunisian judokas belonging to various levels of expertise (national selection and regional selection), raises the question of the adoption methods of sportsmen concerning with the nonwestern cultures, of sports timeframe. For the sportsmen reaching a higher qualification level (national expertise) also the question of their more or less great conformation with these frameworks of perception arises. It is in fact the answer to the following questions:- Is the perception of the time of the high level sportsman-judokas in consonance or in dissonance with the temporality of sport? And which links does it keep with cultural time?- What kinds of adaptations deploy judokas in response to a situation where these two temporalities, cultural and sports meet?

II. METHODS

The changes which occur in the behavior of sportsmen can indicate:
- A strong adhesion to the temporal sport frame so that the adaptation takes place by a high degree of change by assimilation, to conform to the time of sport (linear, continuous, oriented towards the future);
- A bivalent adhesion according to which the contact with sports generates the adoption of adaptive strategies per integration, i.e. by the maintenance of its cultural identity of the time and the adoption of temporality specific to the sport, necessary to the realization of good performances.

1- Referring to different adaptive strategies analyzed by Berry (1989), it is postulated that: The practice of a competitive sport should generate a reconciliation of the temporal behavior of the athlete's sport timeframe (consonant perception of time) and an adaption by assimilation but with a variation in the level of expertise, gender and category of practice. That means that they deviate from the models inspired of their culture of origin and endorse the temporal structure characteristic of the sport. The various constitutive dimensions of the concept of time perception forged by Usunier and Valette-Florence (1991) are used to check this conjecture; they are declined according to the linearity and the viability of time, temporal projection, time obedience and temporal persistence. The eight sub-dimensions (two for each dimension) and the items of the questionnaire represent the factors permitting to classify the judokas according to the adaptive strategies which they develop. Several combinations are possible:

- A sportsman raises a model of adaptation by assimilation when its answers indicate that it opts for an economic and organized time (dimension of linearity and viability of time), a time directed towards the future with a disinterest for the past (dimension of temporal projection), a time mastered and felt like useful (dimension of time obedience), finally, when he states himself tough and not very inclined to search fast results (dimension of temporal persistence). As such orientations circumscribe a consonant perception of time, supposed to be favorable to sport success.
- On the one hand, a sportsman develops a model of adaptation with integration when its answers indicate that it maintains elements of his temporal culture, at the same time as it adopts the temporal framework characterizing the sport; indeed, it cumulates contradictory styles: economic time – unorganized time, future orientation – passed orientation, mastered time – useless time, tenacity – preference for the fast results. As such orientations circumscribe a dissonant perception of time, supposed to be unfavorable to sport success. In addition, a sportsman develops a model of adaptation by separation when its answers indicate that he maintains elements of his temporal culture without adopting the specific time of the framework in which he finds himself. Lastly, a sportsman develops a model of adaptation by marginalization when its answers indicate that he manages neither to keep the elements of his temporal culture nor to adopt those relating to the temporal framework of the sport.

The effect of the expertise level: The more the sportsman is expert, the more he adopts sporting time and consequently he adapts by assimilation. A perception of the time which concerns an adaptation by assimilation, distinguishes sportsmen classified as “elite”: compared to the judokas of the regional selections, they announce a style of behavior characterized by the abandonment of their cultural time to adopt the temporal framework of the sport. A perception of the time which concerns an adaptation by integration, distinguishes the sportsmen of the regional selections: compared to those classified as “the elite”, they announce a style characterized by the maintenance of their temporal culture and the adoption of the temporal framework of the sport.

Gender effect: Girls tend to retain the acquired tradition and in this case the temporal representations, boys are more permeable and more inclined to change. Consequently, the first adapt by integration and the second by assimilation. A perception of the time which concerns an adaptation by assimilation, distinguishes the sportsmen from the sportswomen: judokas boys are more likely to comply with the temporality required for sports (unilinear, continuous, progress-oriented). They adopt a linear time and organized, oriented towards the future and show themselves as obedient and tenacious to time. Sportswomen opt for a more moderate style, even
hybrid: they make coexist contradictory times, not organized and economic, past and future, at the same time felt like useless and controlled and prefer fast results, but show themselves as tough.

**The effect of belonging to a particular age category:** Gradually as they evolve in the various categories of age, the judokas impregnate sporting time. Consequently, the modes of adaptation which they deploy become transformed while moving from integration towards the assimilation and that is more visible among boys. A perception of the time which concerns an adaptation by assimilation distinguishes the sportsmen belonging to the senior category. Those pertaining to the junior section are characterized by an adaptation by integration.

This work proposes to highlight forms in which the temporal identities and their variability appear from the closest to the most distant time of the Tunisian temporal culture. The variety of assessments of time will help to highlight the adaptive strategies used by the judokas and determine more or less proximity to the time frame of the sport. For this purpose, the various temporal styles characterizing the groups of the investigation will be subjected to an interpretative reading integrating the model of Berry (1989) with an aim of describing the adaptive strategies of the sportsmen and the modes of acculturation which derive from it.

2- Sample: 78 high level judokas, forming the Tunisian national elite (34 girls and 44 boys) and 109 judokas (37 girls and 72 boys), pertaining to the regional selections of the Sfax city, concerned with the categories seniors, juniors and cadet, have taken part in this study. We precise that the judokas having the quality of the elite sportsman recognized as such by the authorized federal structures of the considered sport. All judokas, without exception, belong to this level of expertise were involved in this study. In addition, the judokas belonging to the regional selections are also subjected to precise criteria entitling them to be recognized as belonging to this level of expertise. A sample from approximately 15% of the total population of the judokas of the regional selections of the city of Sfax answered the questionnaire and was selected while following the non probabilistic technique.

Table 1: Number of respondents distributed by level of expertise, categories of age and gender.

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<td>Regional</td>
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<td>Total</td>
<td>67</td>
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**Criteria of inclusion:** All the judokas belonging to the national elite of judo are included in the study. The judokas evolving in the clubs of the city of Sfax and pertaining to the regional selection are also included. Criteria of exclusion: Two clubs in the outskirts of the city of Sfax are excluded from the study. The judokas of the regional selections of the city of Sfax answered the questionnaire and was selected while following the non probabilistic technique.

3- The questionnaire: It is the scale of perception of time established by Usunier and Valette-Florence (1991) with four dimensions and eight sub-dimensions. 29 items composing the scale considered. We attempt to precise that the two authors had conducted prior to the development of the final scale above-indicated, a cultural validation of a preliminary scale consists of 22 items, with a sample of Tunisian students: "The time styles scale was replicated in a number of national contexts (France, Germany Tunisia, Vietnam) "(Usunier JC and P. Valette-Florence, 2007, p. 348). They then had established an Arab version of the scale and had administered so that it was requested half of the sample to answer a French version of the scale and from other half to answer on a scale translated into Arabic. The results highlight in particular that the declarations of the students having answered the French version tend towards values close to the French culture, while those who were invited to do so from their mother tongue tended to adopt choices in harmony with their culture of origin. Not having been able to reach the Arab version adopted by Usunier and Valette-Florence (1991), we carried out by ourselves, the translation while following the methodology recommended by Vallerand (1989).
4- Modalities of passation: We have chosen to present the scale in its original form matching the Likert scale to 7 points (from strongly agree to totally disagree). Judokas covered by the survey were approached on the training grounds or training centers, this direct contact has the advantage of giving the opportunity to explain to the subjects the objectives of the questionnaire and the specific instructions related to it. It was indicated to them, for example, to avoid as much as possible the neutral answers.

5- Analysis method:

5-1: Note on the coding of the data and the calculation of scores of sub-dimensions, dimensions and overall perception of time.
- A score is assigned to each response in terms of the sub-dimension so that if a subject gives the answer "strongly agree" to item 4 "I have nostalgia for the past" the 7 score will be assigned.
- It was then carried out to the inversion of the scores of sub-dimensions with negative polarity so that the average score of each dimension is obtained by calculating the average of the scores of sub-dimension with positive polarity and the reversed score of under-dimension with negative polarity. It was agreed to indicate by positive polarity, any assertion which corresponds to sporting time (consonant perception of time) and conversely (cf. figure 1).
- The score of the overall perception of time is obtained by calculating the average of the scores of four dimensions.- In order to identify the adaptive strategies of the subjects, was carried out to the calculation of the average of the cores of the sub-dimensions with positive polarity, indicating a consonant perception with sporting time (economic time, future orientation, control of time and tenacity) and that relative to sub-dimensions with negative polarity, indicating cultural time and a dissonant perception with sporting time (unorganized time, past orientation, uselessness of time, fast results).

5-2: Definition of modes of adaptation from obtained scores: the modes of adaptation are determined starting from the average scores of sub-dimensions with positive polarity and those of under-dimensions with negative polarity whose combination makes permits to release the four following adaptive strategies:
- Adaptation by assimilation characterizes subjects who drop by acculturation, the time markers relating to their culture of origin and adopt the time frame of the sport. We consider that a subject belongs to this mode of adaptation when it gets a low score (<4) sub-dimensions polarity consonant and a high score (> 4) to sub-dimensions with dissonant polarity.
- Adaptation by integration characterizes the subjects who maintain their temporal identity of origin while being receptive to the requirements of the sporting temporal framework. We consider that a subject belongs to this mode of adaptation when the scores of sub-dimension with consonant polarity and those with consonant polarity he obtained are high.
- As for the style of adaptation by separation, it characterizes the subjects whose answers indicate that they maintain elements of their temporal culture, without adopting the specific time of the framework in which they find themselves. We consider that a subject belongs to this mode of adaptation when he obtains a high score...
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(>4) of sub-dimensions with dissonant polarity and a weak score (<4) of sub-dimensions with consonant polarity.

Lastly, the adaptation by marginalization concerns to the subjects whose answers indicate that they manage neither to keep the elements of their temporal culture nor to adopt those relating to the temporal framework of the sport. We consider that a subject belongs to this mode of adaptation when his obtained scores of sub-dimensions with dissonant polarity and those with consonant polarity are weak (<4).

5-3 Statistical analysis of data: it is carried out using the software Statistica 6.1. The effect of independent variables on the modes of adaptation is checked by the use of the chi2 of independence. All the statistics are regarded as significant when the threshold of probability is lower than 0.05 (p < 0.05).

III. RESULTS: MODES OF ADAPTATION

For all judokas involved in the investigation, it proves that the adopted modes of adaptation are mainly of standard assimilation and integration, with slightly higher results for the mode of adaptation by assimilation (47.1%) against 44.4% for the integration mode. The style of adaptation by separation is also present at 8% of them and only 0.5% adopts a mode by marginalization.

![Modes of adaptation](image)

1- Gender effect: Young girls are characterized by a mode of adaptation by assimilation to a total value of 63.4% and integration to 36.6%, while the male subjects adapt rather by integration at a rate of 49.1% and assimilation to 37.1%; they also adapt by separation to 12.9% and by marginalization with 0.9%. This result is confirmed by significant Chi2 (X<sup>2</sup> = 15.74; p = 0.001).
2- The effect of practice category: The categories of the cadet and the seniors adapt mainly by assimilation with respectively a rate of 56.7% for the first and 52.9% for the second; they adapt then by integration with respective percentages of 35.8% and 41.2%. As for the juniors, the results show that the deployed modes of adaptation are integration with 52.3% and assimilation to a total value of 37.2%. Small percentages are observed on the level of the modes of adaptation by separation (juniors: 6%, juniors: 10.5%, seniors: 5.9%) and by marginalization exclusively among cadets 1.5%; these results are confirmed by no significant Chi2 (X2 = 6.9; p = 0.33).

3- The effect of the expertise level: Two essential modes of adaptation distinguish the judokas from the national elite: assimilation with 55.1% and integration with 38.5%. The results are reversed when one considers the sportsmen concerned with the regional formations: those adapt by integration to 48.6%, then by assimilation with 41.3%; this result is confirmed by no significant Chi2 (X2 = 3.09; p = 0.377).
IV. DISCUSSION

The modes of adaptation by assimilation and integration are the modes which we find more in the Tunisian judokas; the answer by the mode of adaptation by assimilation may be explained by the specificities of the high level sports activity. It is recognized indeed, that it is desirable that an agreement be established between the temporal behavior and the requirement of the activity in which one engages in terms of temporal structure. But if adaptation integration occupies a place as important as the first, is that so far indicates a mismatch in sports? One might answer through the use of data relating to the Arab-Muslim culture. Indeed, if one takes into account the “gender” variable, one realizes that the Tunisian female athletes mainly deploy strategies of adaptation by assimilation, evidence of the adoption of a conformist behavior, in harmony with the context of sport high level and the pressure it exerts on the personalities of the sportswomen. This result shows that conformism for the female is total and may relate to various spheres of the sociality. And sport, for them, represents the other place of the exercise of the conventional thought. One will be able to thus conclude that the practice of the judo apparently seems to upset traditional and cultural reality since the young girls are faithful to a behavior well rooted in them; and they were only satisfied to generalize it with other social activities. Boys, on the contrary, seem to choose the path of integration, closer to the character as described in the Chebel calling schizomorphic. In his study of the imaginary Arab-Muslim (1993), he stressed that “the Arab allegiance to several worlds at once, including those of the secular and the sacred, the material and the immaterial, the thing and its representation. He [...] reacts to fundamental dualities». (p. 371). the author concludes that the dual personality of being Arab and Muslim, driven by two opposing forces, transverse and horizontal, which makes difficult the overall synthesis drawing it towards the schizomorphie. The two modes may thus, according to the perspective developed by Chebel, coexist. These analyses are corroborated by the remarks of Gasparini (1994) concerning time; he also chooses this way and conceives “the possibility of a synergy and an integration of different and apparently antithetic times (quantitative/qualitative, - linear/cyclic, - mechanical technology / existential natural rhythms ...).”

Compared to the "age" variable, which also means a category of practice institutionally recognized, the results show that the adaptation by assimilation is the favorite mode of the cadet and the seniors; this explains the early adequacy of perception at sport time, then a renouncement then a recovery in the direction of a synchronization of the personal and cultural data of time with sporting time. The curve is not ascending: the cadet behaves by adopting sport time at the time of this initiatory stage where a centration takes place on the immediate environment of the sport practice to the detriment of the cultural context; during the next period, a readjustment by integration and a relative off-centering compared to the immediate data to connect again on its identity are affirmed. This reflexivity marks a return on oneself consecutive to the felt shock which causes the dissonance between the cultural contents relating to time and the specific temporality of the sport. The access to the higher category of practice which is accompanied by a return to a mode of adaptation by assimilation, signs the confirmation of the course of the judoka, where the meeting takes place between the time of the culture and the time of the sport. The level of expertise confirms this interpretation, by raising more marked trend of the judokas constituting the national elite to develop strategies of adaptation by assimilation. But, the statistical, no significant data come to relativize this trend and to stress that we are to face a complex reality difficult to classify strictly by an explanation or another.

V. CONCLUSION

This article proposes a comparison of the perception methods of time in Tunisian judokas. It permitted to highlight the methods by which the athletes male and female, cadet and seniors, of high level or of regional level, approach the concept of temporality at the time of the exercise of a sports activity; it is followed that they build specific modes of adaptation resulting from the meeting between cultural time and the cross-cultural time of the sport. The adaptive strategies of sports are not univocal, but stamped with the seal of diversity, which confirms the idea that cultural expressions appear not as a barrier to excellence, but as a necessary ingredient to a successful alloy between the local and the global.
REFERENCES


ANNEXES

Dimensions and items of the time styles scale

1/ LINEARITY AND ECONOMICY OF TIME

* sub-dimension Economic time
  - "I plan my activities so that they fall into a particular pattern during the day"1
  - "I like to have a definite schedule and stick to it" 3
  - "I like to plan my daily activities so I know just when to do each thing" 2
  - "I enjoy following a schedule" 2

* sub-dimension : Non-organized time
  - "I hate following a schedule" 2
  - "It is more fun to take one thing at a time than to plan my day in advance" 2
  - "I hate to make any sort of definite plans weeks or months in advance" 3

2/ TEMPORAL ORIENTATIONS

* sub-dimension : Orientation toward the past
  - "I feel nostalgia for the past" 5
  - "When I am by myself, my thoughts often drift back to the past" 3
  - "I think quite often about my life as it used to be" 2
  - "Sometimes I find myself dwelling in the past" 4

* sub-dimension : Orientation toward the future
  - "I spend time thinking about what my future might be like" 4
  - "I think a lot about what my life will be some day" 2

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- "Many of us tend to daydream about the future. It also happens to me." 4
- "I often think about the things I am going to do in the future." 2

3/ OBEDIENCE TO TIME
* sub-dimension: Time submissiveness
- "No matter how hard I try, I am nearly always a little late." 2
- "I am almost never late for work or appointments." 3
- "If the only way I can get to an appointment is by rushing, I'd rather be late." 3
- "I would rather come early and wait than be late for an appointment." 3
* sub-dimension: Time anxiety (Feelings of uselessness of time)
- "Looking at a typical day in my life, I think that most things I do have some purpose." 4
- "I sometimes feel that the way I fill my time has little use or value." 4
- "I am bored by my day-to-day activities." 4
- "I often feel that my life is aimless, with no definite purpose." 4

4/ TEMPORAL PERSISTENCE
* sub-dimension: Tenacity
- "Once I have started an activity, I persist at it until I've completed it." 4
- "When I begin a project I don't like to stop it until it is finished." 2
- "When I am interrupted doing a task, I almost always go back to it as soon as I can." 2
* sub-dimension: Preference for quick return
- "I would prefer doing several very small projects than one very large one." 2
- "I would prefer doing one very large project than several small ones." 2
- "I would rather try to get two or three things done quickly than spend my time on one big project." 2

Sources:

- "Many of us tend to daydream about the future. It also happens to me." 4
- "I often think about the things I am going to do in the future." 2
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