BODY ACTING AND COMMUNICATING IN PHYSICAL EDUCATION: MOTOR SEMIOTICS IN VOLLEYBALL

ALI ELLOUMI[1]- NEILA GHANNOUCHI[2]
[1]University of Sfax, SYFACT Laboratory
Tunisia
[2]University of Paris Descartes
France

ABSTRACT

In attempting to address the so-called non-verbal communication as a language, researchers are engaged in a deadlock. Gesture and motor interactions of the sports games do not obey the classic linguistic mechanisms, but read the fulfillment of the principles of motor current action. We can reveal two motor-semiotic systems consisted of signs respectively very different body playful: "gestures" close to the act of the everyday life, and "praxemes" which the strong originality is to be a party to the current action. "Praxeme" generate a body meta-communication of anticipations, feint and misinformation, who founded the subtleties wealth of sports games. Thurs as examples, several officials are presents body codes (volleyball, underwater sport, etc) very logins the double articulation of language systems. The study of body communication sports games or "motor-semiotics" requires a consideration of the internal logic of the body action which plunges in a context of fulfillment. At the heart of all competitive sport, and especially in one on one situations (tennis, etc) and team games (volleyball, etc), players from opposing teams tactically interact. Their interaction enhances decision making and movement strategy, as well as dummy moves and therefore meta-communicational practice. So, the player's body, actively communicating, is going to be studied hereafter within the field of "motor semiotics" in volleyball, invented by Parlebas (1986 p.241).

Key words: Motor-semiotics, body language, PE, volleyball, body acting, meta-communicational practice, internal logic

INTRODUCTION

The human communication has always been the object of numerous researches in different areas including the humanities (social psychology, sociology, information science, education, etc). The individuals found to be the main actors in the field of communication, responsible for the changes generated by their interests and their ability to take initiative. By joining a process of social order the communication calls a set of physical and psychological processes linking one or more individuals with one or more others. And it turns out in our daily lives «the impossibility of not communicating». (Saussure, 1971, p. 110).

Indeed, communicate reflects the fact of sharing, and highlights human relationships. Each person takes part in this communication and may be the cause or the result. This social process is based on a particular system and it integrates patterns of behaviour (gesture, facial expression, gaze, interpersonal space, etc). In addition, human communication includes verbal and nonverbal communication. It also addresses the human being as an integrated whole in all its dimensions in terms of complexity levels and multiple contexts. These systems are designed to a circular communication research. In addition, the body language also has a vocabulary. The tokens issued in order to communicate, are related to the social context in which they occur. This nonverbal communication is processed according to the rules of language and not in terms of the action. In this sense, sport games, in which occurs an observable communication frame, are currently considered as the 'motor contract' that characterizes and defines the role or roles of the players. In this context, the different motor actions that characterize the game seem to come from pre-intentions between players. The speed of their actions does not build by word, the tactics that should be exercised in the game, the use of signals and other gestures seem to be appropriate in such situations.

This study highlights the different types of motor interactions that underlie the direct and indirect motor communications in volleyball. This "sociomotor" activity (Pierre Parlebas, 1990, p. 27) has been the support of this research, based on constant motor interactions between partners and opponents and reflect reports of antagonism and cooperation. The behaviour of these actors on the ground denotes expressive kind (social emotional) attitudes and informative (referential) intentions between them, dominated by a desire for concealment. It is by a qualitative analysis of video recordings and semi-structured interviews to determine whether the "gestures" are universal and "praxemes" are polysemous.

This body language study review explains how motor semiotics is used in volleyball by answering the following questions:
1. How do you understand that "motor semiotic" is the scientific study of Bodily language in sport?
2. What's the difference between "semiotics" and 'motor semiotics'?
3. What's the difference between "gesture" and "praxeme" in sport games?
4. What are the larger implications of the motor semiotic view of sport games?

This analysis is resorted to a sociological approach of "motor semiotics" in physical education at school. By viewing motor communication through the eyes of semiotics and by doing so gain insight into the foundation of aesthetics we are able to better understand the relationship between the signified, signifier, and interpreter.

1-Elementary motor semiotics considerations (human movement as one behavior dimension of man)

Semiotics is the study of signs (semis) which are comprised of signifiers (sound/word/gesture) and signified (concept/meaning). Thus when we see a house (the signifier) it usually stands for, means, makes us think of comfort, safety, etc.

The two traditions: semiology and semiotics

In this century, Linguistics, the scientific study of language, has seen a quite extraordinary expansion. The study of language has held a tremendous fascination for some of the greatest thinkers of the century, notably Ludwig Wittgenstein (1913) and Noam Chomsky (1955), whose influence has been felt far beyond linguistics.

Much of the impetus for this interest in linguistics originated with the Swiss linguist Ferdinand de Saussure (1910, p.77) whose work (*Course in General Linguistics*, his lectures published in 1915 after his death by two of his students). French theorists developed "structuralism", out of which (in part against which) grew "post-structuralism", both of which have placed enormous influence on language and both of which have had a formative influence on cultural studies. This emphasis on language is often referred to as "the linguistic turn" in philosophy.

Saussure's vision of semiology

As this section deals with semiology (also known as *semiotics*, especially in the USA) rather than linguistics, we shall not dwell on linguistics here, but we need to look at Saussure's ideas as it was he who laid the foundation stone of semiology. It was he in fact who

coined the term (which he developed from the Greek word for "sign"). He used the word to describe a new science which he saw as «*a science which studies the life of signs at the heart of social life*». (Saussure,1971 p.33). This new science, he said, would teach us «*what signs consist of, what laws govern them*». As he saw it, linguistics would be but a part of the overarching science of semiology, which would not limit itself to verbal signs only.

Communication and language

Saussure tried to get around this problem by saying that 'the linguistic sign' does not unite a thing and a name, but a concept and a sound image (see graphic) (Saussure, 1971, p. 98). If we consider printed language, then we could say that a sign consists of the printed form of a word and a concept; if we consider a black and white photograph, then the sign consists of a particular set of shapes/ shades and a concept. Structuralism (i.e. the philosophy which derived later from Saussurean linguistics), then, "brackets the referent", in the current jargon. In other words, the thing referred to (the referent) is taken out of the sign   thing (referent) relationship and is replaced by "concept". Clearly, the "linguistic turn" is strengthened by this, since any notion of a reality external to language and concepts is de-emphasized.

Saussure actually saw the division of the sign into sound image and concept as a bit ambiguous. So he refined the idea by saying it might make things clearer if we referred to the concept as the signified and the sound image as the signifier (significant). This idea is shown in the graphic, which attempts to show how the signifier and signified coalesce into what we call a sign. It's worth taking a little time to consider the graphic so that you get it into your head. It's worth asking yourself as well whether you think it makes good sense and whether it's very useful.

You might think that the distinction between sound image (signifier) and concept (signified) doesn't get us very far forward in trying to figure out what we mean by "meaning". You're probably right. After all, it's no easier to say what the concept of "the" or "of" is than to say what thing those words correspond to. And, of course, I don't know if the concepts "city", "woman", "man" in your head is the same as those in mine.

Using the layout provided by Saussure, philosopher Charles Pierce (1902, pp. 4-19) explored a semiotics as "a formal doctrine of signs", closely related to Logic. His work in the field of semiotics led contemporary semioticians to narrow their semiotic focus on how meanings are made with signs, not just with the communicative function (Chandler, 2005, p. 4). Social semiotics, a more modern approach to studying signs, goes beyond the Structuralist approach to explore the use of signs in specific social situations. Roland Barthes (1967, p.28) popularized this approach in the 1960's. Although Semiotics is not often considered an academic discipline, its importance should not be underestimated. Daniel Chandler (2005, p.5) asserts, «The study of signs is the study of the construction and maintenance of reality». The American semiotician, Charles Sanders Peirce explains it in this figure:

Object is the real world or speaker's mind

Interpretant is meaning from decoding representamen

Representamen is physical, sensual
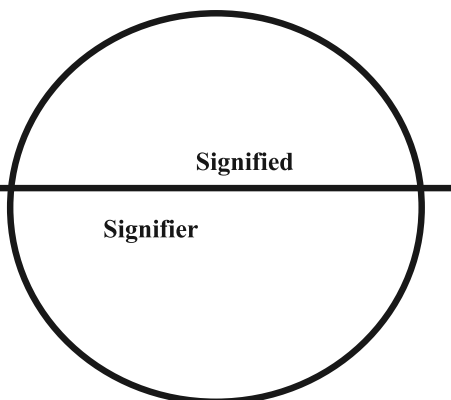

Signified

Signifier

Figure 1
Triadic Model (Peirce, 1905, p.512)

Saussure shifted the emphasis from the notion that there is some kind of "real world" out there to which we all refer in words which mean the same to all of us. Fairly obviously, we in our language community have much of this real world in common, otherwise we couldn't communicate, but, for various reasons, the "real world" which we articulate through our signs will be different for every one of us. It is for this reason that Saussure saw semiology as a branch of social psychology.

Semiotics - Semiotics and culture

Saussure freely admits that when he is stressing the arbitrariness of the sign, he is stressing something which is actually fairly obvious. As he sees it, though, the problem is that people haven't paid enough attention to the implications of the fact that sign-systems are arbitrary.

Since it is the case that the codes we use are the result of conventions arrived at by the users of those codes, then it is reasonable to suppose that the values of the users will in some way be incorporated into those codes. They will, for example, have developed signs for those things they agree to be important; they will probably have developed a whole array of signs to draw the distinctions between those things which are of particular significance in their culture.

In other words, you might reasonably expect that the ideologies prevalent in those cultures will have been incorporated into the codes used: ..."reality" is always encoded; or rather the only way we can perceive and make sense of reality is by the codes of our culture. There may be an objective, empiricist reality out there, but there is no universal, objective way of perceiving and making sense of it. What passes for reality in any culture is the product of the culture's codes, so "reality" is always already encoded; it is never "raw". Semiologists generally prefer the term "reader" to "receiver" (even of a painting, photograph or film) and often use the term "text" to "message". This implies that receiving a message (i.e. "reading a text") is an *active* process of decoding and that that process is *socially* and *culturally conditioned*.

Semiotics - Paradigm & syntagm

One of Saussure's fundamental insights, then, was that sign-systems are arbitrary systems, a set of agreed conventions. Since there is no simple, natural sign=thing relationship between sign systems and reality, it is we who are the active makers of meanings. The sign-systems (or codes) which we use provide us already with sets of meanings. We activate the meanings within the repertoire which the code offers us. Saussure points out that the value of signs is culture-specific. He emphasizes that a sign gains its *value* from its relation to other similar *values*. Without such a relationship signification would not exist. The figure below clearly explains the different levels of signs:

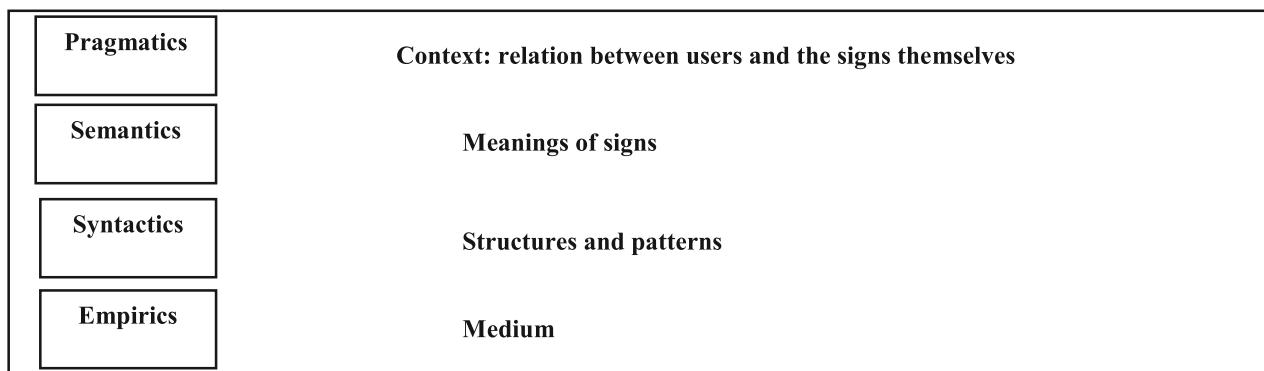| Pragmatics	Context: relation between users and the signs themselves
Semantics	Meanings of signs
Syntactics	Structures and patterns
Empirics	Medium

Figure 2
The different levels of signs (Peirce, 1905, p.517)

Although semiotics is not often considered an academic discipline, its importance should not be underestimated. Daniel Chandler (2005) asserts, "The study of signs is the study of the construction and maintenance of reality.

How do Semiotics Function as Representation in sport? Is the active body communicating?

The motor acting science theory: when the body is done sign: The motor semiotic
*«The motor communication is highly significant» (*Parlebas 1999 p.221). In this theory Parlebas also confirms that in the body language, there are meanings other than language. Prior to language, different from language, there is a motor meaning. From it, athletes develop a kind of code. In sport games, grows with more or less success gesture and postural communication. The body makes sign. The volleyball will call a real "physical code". The meaning is expressed using gestures. The code will be called "praxeme" when the behaviour as a whole, is significant: such a code is the players opposing teams on the ground. Sometimes often the interpretations are not direct behavior; they make interpretations of interpretations.

The gesture is a language
The body interactions invade everyday life. They have intrigued many researchers have attempted to expose the conditions and procedures operation of this communication called 'nonverbal'. Have been well described and explored the speech gestures highlighting the presence of an eloquence of the body other authors studied gestures prohibited Trappist speech, gestures deaf-mutes or that of native American-Indian ethnicities. Many authors have sought to establish a theory of gesture, it is then considered as a mode of communication, as "language", often without much care. In this context, the gesture was not considered as with autonomy, it was arrested as an accompaniment of speech or as a substitute for it, both in its function and in its structure. The most successful attempt in this way is probably. The most successful attempt in this way is probably was that of Ray Birdwhistell that by publishing his Introduction to the Kinetic in 1952, proposed an analysis of the gestures on the model of phonology. Movement gestures and facial expressions were dissected in units deemed minimum, the "kinemes" which may consist to give rise to "kine-morphemes" which, in turn, fall into "kinemorphic complex constructions". In short, fifty kinemes have been identified, mainly in the hands and face, pretending to attest the presence of the royal mechanism language: the "double articulation". This "kinetic" founded by Birdwhistell was a great success during his presentation and was often included in analyzes dealing with personal interactions. Can we defend this point of view? Is it really consistent with the deployment of the body communication in the case of sport games? Can we uncover any significant units of motor and communication the mechanisms of their combination on the field of sport games?

Sport games and motor semiotics
In a collective sport game (socio-motor games), the motor action of each participant solicits continual coordination with the behaviour of other players. The football player, volleyball player or the player can be effective only if the motor conduct fits and combines with appropriateness to other participants. The player is always on the lookout for warning signs of behaviour that will accomplish; he must 'anticipate' the actions of others, also knowing that others will anticipate his own action. It is not enough to act or react, it must be pre-act, that is to say precede the act being to facilitate the case of a partner, or to counteract the case of an opponent. How is it possible to go to the event?

The individual acting decides according to the situation evolution probabilities such as he perceives it. It must decipher the body signs that arise and vanish in a flash, in the twinkling of gesture. It must capture and decode motor communication messages in terms of future action. All motor communication is indeed carrying a strategic significance: as gesture of head or hand, as the feint race of the opponent, posture of the shooter, they decipher as much projects and foreshadow the action that will follow. The player motor acting is a highly motor meaningful. The observation of sporting events reveals that they occur on a frame body signs, too, «The science that studies the life of signs within society», that is to say the "semiotics" as it was defined by Ferdinand de Saussure, and it becomes a frame of reference indispensable. However, it is unusual that the semiotics substance is not sound but motor, so we speak of a "motor-semiotic". We hear from the motor semiotics the nature and scope of the motor communication envisaged under the angle of the involvement of sign systems directly associated with motor interaction of participants.

This motor semiotics is very complex and it unfolds according to several registers. Schematically, we can distinguish three types truly differentiated:
1. Motor semiotics as a socio-affective type: it corresponds to physical interaction that indicates a reaction predominantly emotional: aggressive reaction or friendship, threatening gestures, postures despite or shared joy, (players who congratulate ...).
2. Motor semiotics as a repository type: it takes shape in the practices of spectacle that refer to social representations of historical events or cultural, or simulate them as mime, expression body or dance in its many varieties themselves.
3. Motor semiotics as instrumental category: in direct contact with the fulfilment of the motor task in progress. These gestures, postures and body acting set in the immediate service of entertaining success.

Gestures signs or acting gestures?
In this study, we are interested only in the third motor semiotics type strictly operating under the framework of the rules of the game in question. "Gestemes" refer to the system characteristic rules of each sport, "internal logic": is not expected to play basketball with

feet, or to play football with hand. It should be noted that this code is one-sided as far as the answer of the players is never realized in the same code, but by acts of game-related rules of the sport concerned. Even, the code depends on the gestemic praxis context from which it arises and to whom, it sends back systematically. In the field of instrumental type of motor communication, some authors have drawn a fundamental distinction between what they call the "signs gestures" (e.g. a hand gesture to invoke a ball pass) and "acting gesture" which would not be considered as signs (e.g. starting a volleyball player who goes to the net). We do not approve the dismissal of the action out of semiotics: acting gestures are indeed also signs. On the playing field, as in other places, in the words of Gregory Bateson (1988, p. 73), «one cannot communicate». Any conduct by a player that he wants or not, is likely to be interpreted as a sign. This pervasiveness of communication and information gathering is clear, whether at volleyball or tennis. If the previous two categories, signs gestures, or acts gestures contain both good signs, however, are signs of a very different nature than we carefully distinguished: "gestures" and "praxemes"?

The "gesteme": consists of gestures, facial expressions or conventional postures where the observable aspects (the 'meaning' or 'signal') is associated with a relational or tactical content (the 'signified' or 'message'). For example, player raises his arm, claps his hands or designates a 'space finger' to call a pass or request a changing location. These gestures belonging to a custom code actions that function as signs with a 'face-signal' and 'face-signified'. The gesture player is not a constitution of task: it transmits a body injunction replacing the word. This semiotics act, not essential that replaces a speech act is additional to the motor act instrumental itself. Many 'gestemes' are not specific to sport games are more or less derived and adapted 'gestemes' of everyday life. However, some gestures codes are not allowed the free spontaneity of each: the case of the sign code of diver's submarine, also the case of gestural codes of the sport referee who provide an imperative good conduct of sporting events. We suggest a quick illustration of these examples in a moment.

The "praxeme": It is about any physical conduct of a player, susceptible to be interpreted as a sign by the other participants. The 'significant' is the observable behaviour and the "signified" is the corresponding as perceived by other tactical project. So for example, a keeper of soccer who goes out of its goals advancing towards the side line release, adopts behaviour (signal) which is an appeal (message) directly sent to the rear, which means for example: «pass to me the ball». The "praxeme" here is the combination of the "significant", "output side guard", and "signified appeal of pass". Often, in the same signal can be associated with several quite different messages from each other. Thus, when winger football player leaves ball to the penalty area, it can be perceived as being able to, or to take purpose directly or continue to dribble up the keeper, or to centre in the wake or still to put back. The "parxeme" is polysemous: this multiplicity of sense is the source of the ambiguity of the strategic act. The meaning of the message is dependent on the categories of motor action associated with socio-motor roles which the considered player is entitled to update at this moment. The motor behaviour is not the verbal conduct. The relevance is not there in the order of the language, but of the order of the motor action. The cutting and the identification of "paraxeme" require the combined perception of several elements or "indications" that reinforce each other: orientation of body segments, areas occupied by other players, speed, acceleration, etc. The individual acting collects constellations indices he decides relevance, risk of error, depending on the context and the rules of the game in question. Each player will then encode and decode behaviour according to his own sense of the game. The "parxeme" is not, as the "gesteme", an added significant unit; it is the game itself. It is the reason why is not arbitrary, but seems deeply "motivated".

In sport games when do is say

It is every player who identifies "praxemes", who builds, deconstructs and reconstructs them over the action being fulfilled. We are very distant from the usual pattern in terms of stimulus-response. We can knock down the John Austin's proposal. When the author asserts: "When saying is doing", we can argue that the opposite is also true: «When doing is saying». Basketball player who distances himself from his opponent by spinning towards the basket "said" to the carrier of the ball that he requests an immediate pass; but he also wants to persuade maybe as well as the "said" it, while in reality he tries to attract towards his opponents to release one of his patterns in better position than him. If the "praxeme" is information, it is also disinformation, plays on the multiple meanings to deceive the opponent. The "motivation" of "gesteme" can be faked. To make is to say, but what can say? The feint is the exemplary case of this masking of the information that we find as well in tennis, handball or in volleyball. This communication called "non-verbal", this motor communication is actually body meta-communication which is to be read in the second degree and often even in the third degree. The motor communication is meta-motricity which "speaks" to itself and is auto-repository. It brings the salt of the game which feeds partially the pleasure part of the spectator. The spectator of football or volleyball enters fictitiously into the network motor communications by projecting continual anticipations, based or not, meant to stimulate the dynamics of the current action. Participate in a sporting event; it is to secrete a scenario of mental images continually taken on "praxemes". The motor action is not the speech, and the fact praxis is not a linguistic fact. We can not settle them with a simple "application" of the linguistic model. The remarkable organization of the language, in particular the double articulation seems foreign to the motor semiotics behaviours of sports games. Therefore it needs a specific analysis and particularly cautious. "Gestemes" and "praxemes" should not be confused. The While motor-semiotics culminates in "praxemes" much more complex and more subtle, however, "gestemes" codes offer more controllable corpuses, allowing to test the possible connecting analogies between the "conversations by gestures "and the verbal communications. To answer imperative needs of body communication were designed numerous "gestemes" codes, often crude. Already in the military environment and in the world of work, was imperative the necessity of communication by using gestures codes unambiguous, especially in noisy, agitated and dangerous situations (factories, constructions sites, ships, airports, etc.). In more elaborate way in the sports field, were created original gestures codes sometimes containing several tens of differentiated units, to be understood at a distance or to deal with the near impossibility of the vocal exchange. The code of motor communication in Volleyball offers a characteristic example as well as the gestures codes used by referees and judges in many sports (judo, fencing, basketball, American football, etc.). It is not possible here to describe and to analyze these various systems, however, as an illustration, we present some of the characteristics of the most notorious in Volleyball.

The motor communication codes in volleyball (motor semiotics)

Volleyball possesses its own communications tools bases on (polysemous) highly significant motor conducts, and it infers specific socio-motor semantics. In volleyball, the vocal exchange is usually forbidden: become fundamentally visual, the communication occurs through gestures and postures. The players have an inventory of gestures forged empirically on the heap, according to needs. It corresponds to it a corpus of a wide variety of units (submitted possibly to answer new requirements) (Fig. 1, following page). To prevent ourselves to vague metaphors considerations about the "sign language", it is advisable to deepen somewhat technical analysis of the identified "gestemes". We can distinguish four main categories of units according to the function of the transmitted message:

- A request of information or action (e.g.
- An order to be executed (e.g.
- An indication: information or designation (e.g.
- An appeal for help (e.g.

Is it possible to decompose these "gestemes" into units in first and second articulation? We have to face facts: this "gestemes" is not decomposable into relevant subunits; they operate integrally. Volleyball code has neither the first nor the second joint linguistic type. The code does not involve any economy: "gestemes" must all be learnt one by one, separately, without neither crossing nor strengthening between them.

The gesture is not however ordinary. We can reveal some major types of distinctive features that take as referents the player's bodies and the surrounding space:
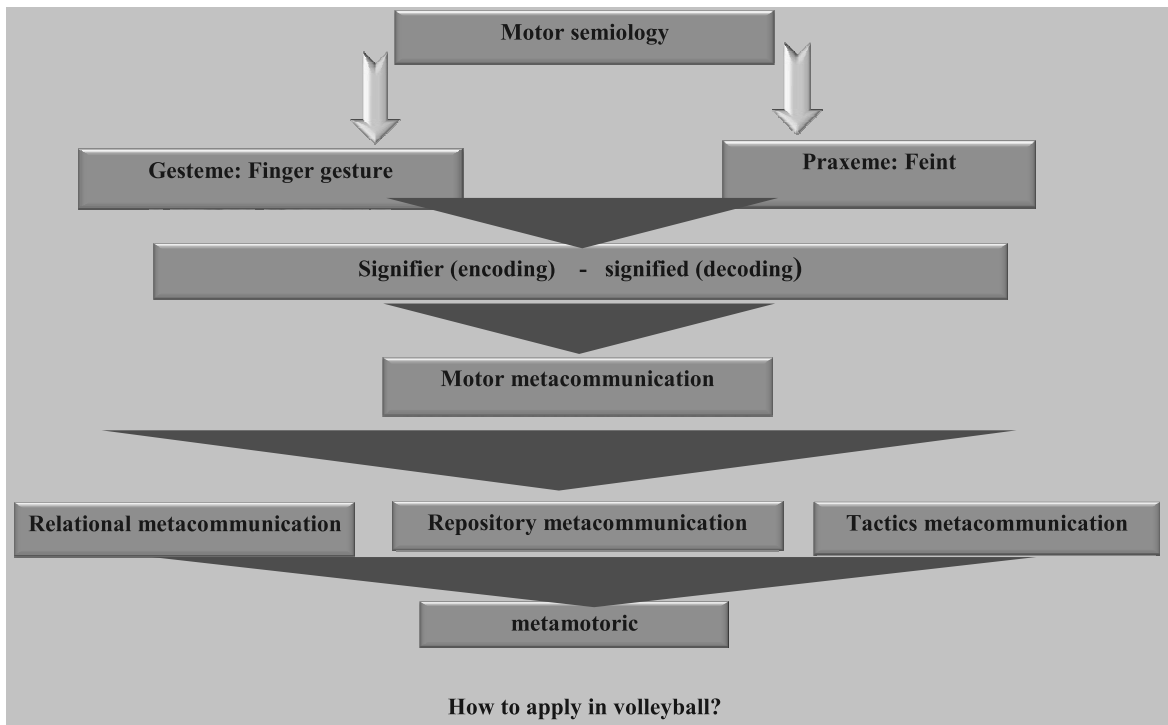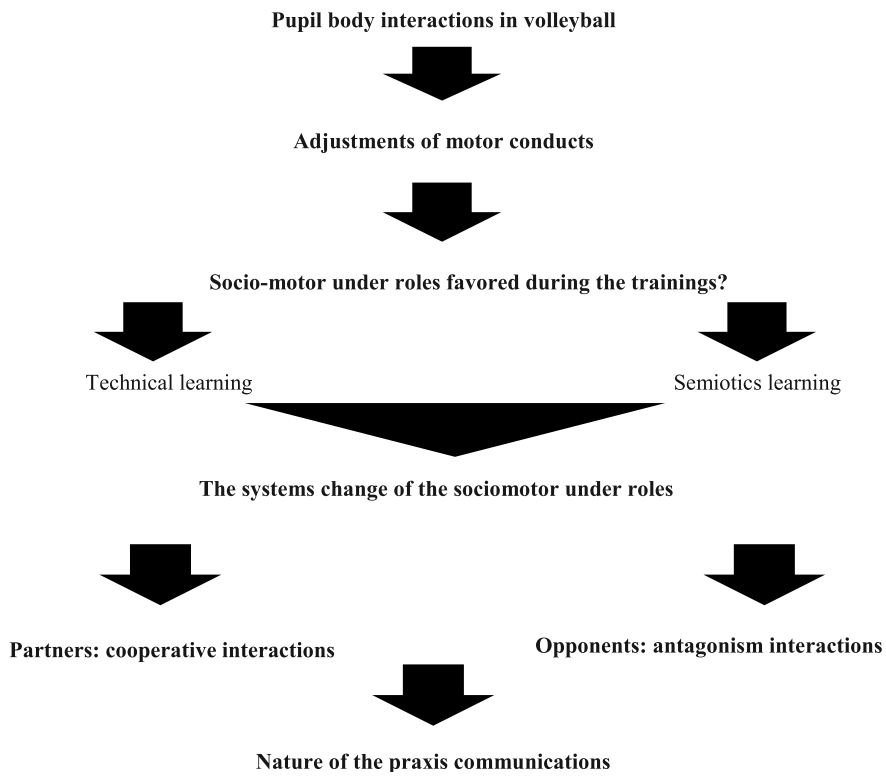
Figure 3
Motor semiotic model

Pupil body interactions in volleyball

Adjustments of motor conducts

Socio-motor under roles favored during the trainings?

Technical learning   Semiotics learning

The systems change of the sociomotor under roles

Partners: cooperative interactions   **Opponents: antagonism interactions**

Nature of the praxis communications

Figure 4
Semiotic analysis in sport

Gestures meanings in educational volleyball

The index and the major are pointed in the top or the bottom

Palm of the hand upward with oscillation of the wrist to the right and to the left

Tense arm at the top

Tense arm horizontally by pointing the finger at a location

Arms and before arm form an angle 90 ° with oscillation movement

The index, the major and the ring finer are pointed in the top or the bottom

The meaning of these signs differs from an educator to another one; consequently, the meaning differs from a player to another one. Which meanings to give to these gestures?

Gestures presented previously are going to be translated into actions encoded for the partners and to decode for the opponents.

Figure 5
Offensive tactical strategy emitted by the smuggler player

Figure 6
Offensive tactical strategy emitted by the smuggler player

The position and the orientation of the hand fingers of the signer towards his partners (receiver): the faces must be face to face, given (completed possibly by temporal characteristics associated with the features "movement").But we were not able to expose the kinemes and kinemorphemes whose kinaesthetic thought bringing proof. Can we recognize in this code any of the classic linguistic properties?
    - The gesteme is discreet
    - The gesteme is not linear, involving several segments body at the same time; it is performed in a three-dimensional space in which the repository is the body of the signer
    - The gesteme tends to become arbitrary, although it was 'motivated' frequently at first
    - Gesteme possesses syntax, but this one is very elementary: the figure above illustrates a sequence of dialogue, crude, between partners
    - The gestemes form system by pronounced differentiation and by complementarity of their meanings, but it is about elementary system, flat, without economy. The effect of context is often decisive: the gestemic statement takes its sense only compared with its context of statement.
    - The status of the signer (player) then assigns its meaning to the statement. The characteristic of most gestemes is to send back to a motor action which has just been made or for an action which   must be done (often with the urgency and a strong implication of safety). The sign expressed by the player in figure 1& 2, which is in reality an offensive tactical strategy, indicates to his partner in the first line of attack to pretend to block against opponent and to create a free space to his partner of second line to hit the ball freely. The reach of numerous gestemes depends on the situation of the players in the space (partners, opponents, the ball, the context, etc.) and time (duration of the action already achieved, first or second ball, etc.). We notice that these hand signals are closely dependent on practical conditions, in particular on incurred risks (more than a third of the units are calls for help) and difficulty reading of messages (more than two thirds of gestemes resort to movements). Organized according to an established code, the volleyball gestemes joins a global system of motor actions related to the conditions of the game, in other word, this gestemic code must be always reinserted in its context of production, transmission and reception.
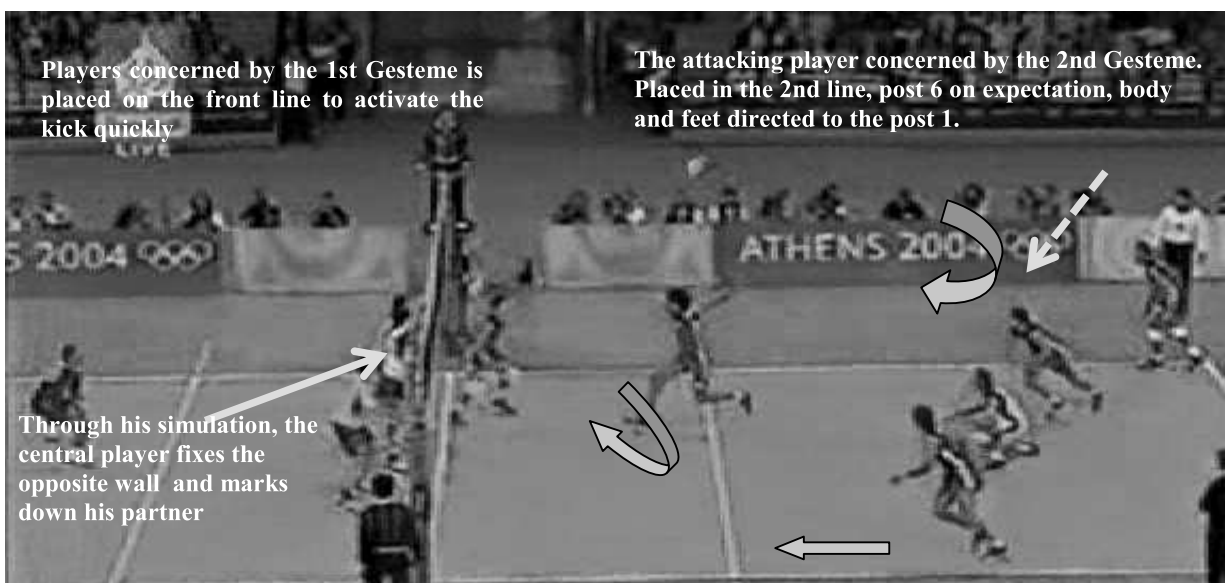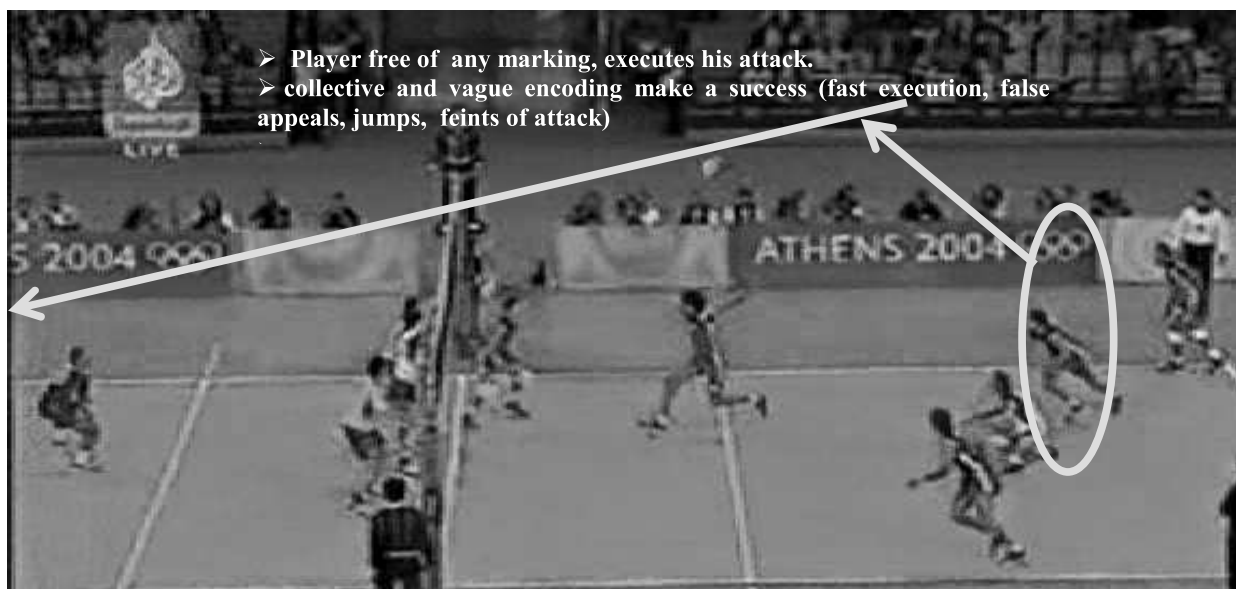

Figure 6-7
Praxemes meanings in volleyball

> ➢ **Player free of any marking, executes his attack.**
> ➢ **collective and vague encoding make a success (fast execution, false appeals, jumps, feints of attack)**

The socio-praxeme: A collective interactions.

We think that the evolution of the high-level teams will be there. Today, we acquired important knowledge relative to the problems in energy expenditure and muscular preparation; the decisive direction will ensure that each player (this is not a problem that requires coach) becomes able to guess the partner behaviour and opponent in a collective plan and thus the capacity for initiative and decision that will bring success factors. The high-level of the collective practices will be in the direction of this motor semiotics, this ability of the players to intervene interactively and not just individual. In this sense, Parlebas (1981, p.87) refers to the socio-praxis

Conclusion: Motor semiotics and PE

Motor learning is the preferred field of physical education teacher and athletic trainer. Learning methods have consistently held the first place in the practice of physical education. Essentially, two methods, analytical and global, crossed the physical education during the 19th and 20th centuries. We join here the PE teacher concerns. The Motor activities conjure up the principles of actions (permutation, pre-action, etc.), which are not reducible to bio-mechanical or gestural units such as we wanted to impose them at prior. The motor semiotics learning in PE is not an activity which involves only the physical machine, but a motor action seeking all the personality, abilities both emotional and cognitive. It manifests a motor intelligence which takes into account the different elements of the situation according to their perceived significance.

The analytical methods of semiotics are indeed applicable to all nonverbal as well as verbal phenomena. Sport, which seems to be particularly resistant to the linguistic model, poses an especially interesting problem.

Moreover, the history of sport theory is full of references to the idea of a "language" or "grammar" of sport games. Parlebas (2005, p.17) is interested in sorting out these problems while developing a rigorous method for defining how sport is meaningful: "motor semiotics or semiotics". «Sport is a "body language"; sport is infinitely different from verbal language».

A volleyball match is too obviously a message for one not to assume that it is coded. It includes partially coded elements. But is there pre-established match syntax? No, it is learned, established historically as an aesthetic norm. "Language" disappears when the body talks. Body language in sport is:

•   An open, highly connotative system;
•   Motivated relation between signifier and signified.

Body language means a completely realized artistic expression. It is a language that contains a langue in the sense of talking body: gestemes and praxemes.

REFERENCES

BARTES, Roland, 1967. Elements of Semiology. (Jonathan Cape, Ltd., Trans.) New York: Hill and Wang. (Original work published 1964)

BATESON, Gregory 1988, Communication et société, Traduit sous le titre (fr) Seuil, Paris

CHANDLER, David, 2005. Semiotics for beginners. Retrieved November 6, 2007, from http://www.aber.ac.uk/media/Documents/S4B/sem01.html

CHOMSKY, Noam, 1955, Logical Structure of Linguistic Theory. (A typescript Chomsky wrote in preparation for his PhD thesis, including hand-written notes made in preparation for the 1975 book, is available as a 436 MiB, 919 page

PIERCE, Charles, 1902, Logic as semiotic: the theory of signs. In Justus Buchler (Ed.), The philosophy of Pierce (pp 4-19). New York: Routledge Press.

PIERCE, Charles, 1905, Issues of Pragmaticism, *The Monist*, v. XV, n. 4, pp. 481 [archive]-99. Reprinted CP 5.438-63. Also important: CP 5.497-525.

PARLEBAS Pierre, 1986, Eléments de sociologie du sport, PUF

PARLEBAS Pierre, 1990, Pour une sémiologie du jeu sportif, Linguistique, sémiologie et conduites motrices, in Activités physiques et éducation motrice - 3è Edition - Ed. Revue. Education Physique et Sport - II, avenue du Tremblay 75012 Paris)

PARLEBAS Pierre, 1999, Jeux, sports et sociétés - Lexique de praxéologie motrice, INSEP Publications

PARLEBAS Pierre, 2005, Mathématiques, jeux sportifs, sociologie, Numéro thématique de la revue « Mathématiques et Sciences Humaines », n°170, Revue de l'E.H.E.S.S – CNRS

SAUSSURE Ferdinand de, 1910. Third course of lectures on general linguistics. Retrieved November 6, 2007, from http://www.marxists.org/reference/subject/philosophy/works/fr/saussure.htm

WITTGENSTEIN, Ludwig 1913 : Notes sur la logique (Notes on Logic, in Notebooks 1914-1916, p. 93-107)