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BODY MOVEMENT COMMUNICATION

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Abstract. *It has been noticed that participants of important national and international competitions use specific gestures and movements in order to express their emotions, as well as to fulfill their psycho-social needs and, even, political attitudes. Manifestations of their attitudes and relations within the competition environment have a specific motoric elements, which require careful analyzes and interpretation. The present study is based on observation of motor behavior of participants of the European soccer championship held 1996 (England). The behavior of player immediately following scoring goal has been analyzed. The results obtained suggest a particular role of arm movements, conveying the message, while demonstration both their feeling and attitude.*

INTRODUCTION

Human body represents a product of biological and psycho-social determinants (R.Rije, 1966). In the cultural meaning, among other, it can be analyzed either from aspects of growth and development, or on the basis of *reaction mode*, as well as on *the specificity of the information contents* (emphasized by M.K.).

Human body, as a natural product and, in a certain way, as a technical device, enables intentional or unintentional communication. Forms of communicational means are in their essence both the signs and signals. Signs point at something or cause a quite ordained activity, while signals expres a certain internal state, and, as themselves, they represent an unintentional expression of a state and man's features, respectively.

Signs have an in advance determined conventional character, while signals point at each person's subjective state and individual specificity.

"According to the fact that physiological base is inborn and determined on genetic program, and that the emotional influences upon tenseness unfold within relatively constant emotional attitudes of personality, strain tenseness is mainly specific and always a part of psychosomatic feature complex of each personality or of each development

process" (Bojanin, S., 1979).

One of the important characteristics of all emotions is their connection with body movements. The connection manifests through stressed motion, the skeletal muscle activation, etc. Physiological mechanisms include, unexceptionably, movement reactions and secretory reactions as well. Human emotions lived through are always connected with mimic expression, pantomime and muscle tenseness. The function of the mimic muscles is profoundly connected with phylogenesis, while the muscle tenseness changes according to external factors and quality of the emotional experience of particularity and surrounding, within certain moment.

From the point of view of the present study, it is necessary to stress that humans express their particular personalities through "...the experience of their individualized space existence within both the temporal and social field" (M.Mos, 1982). One of indirect ways of described expressions is through mimic, gesture and reaction modes as well.

The gesture tract refers to a span from trunk toward the end of outstretched extremities. Within that space "...the principles of reality and contents imbue, the subjectivity imbues the objectivity, the intimate world of personality imbues the surrounding", and furthermore, in this connection "surmountation of the gesture tract precedes the penetration of aspiration to the world out of body reality. With that the socialization process begins" (Bojanin, S., 1979).

Contentment inflames the affection (stenic affection), e.g. both the heart rate and muscle work increases. In a state of joy, one mislays the head, lifts his eyebrows, smiles, while his hands or entire arms express the emotional state (Trajanovic, S., 1986)

Sport activities represent a certain area for realization of singularity, while in certain kind of activities contest itself requires the participants' efficiency. The successful aspiration and the aspiration for maximally possible efficiency presume a complete preparedness (e.g., technical, tactical, physical, psychical etc). Football is an athletic activity in which motoric and psycho-social characteristics, together with specific, professional characteristics of player's attitude, are prominently expressed. Just because of concentration of representative players within geographically-political and cultural area (that is relatively homogeneous) and because of the importance of certain game as well, the European football championship served for the observation of players behavior in genuine game conditions after the goal has been scored, that is, immediately after the significant material and emotional event during a game occurred. The direct aim of the study is to determine manifested elements of un verbal communication based upon players' raised emotional state.

METHODS

In order to fulfill the aim of the present study, a method of observing players' behavior has been applied. That behavior was observed during TV transmission, as well as on the basis of documentary reviews released through domestic and foreign TV network (SKY, DSF, EUROSPORT),

The European football championship was held on June, 1996. Sixteen national teams took part (England, Holland, Scotland, Switzerland, Germany, Czech Republic, Italy, Russia, France, Spain, Bulgaria, Romania, Portugal, Croatia, Denmark, Turkey).

Altogether, 55 games were played, while 64 goals scored within both regulars and the overtime. Shirer, English player, scored most goals (5), four players scored three goals each (Klinsman, Stoichkov, B. Loudrup and Suker), four players scored two goals each, thirty eight players scored one goal each, and there has been one autogoal. The final result of four games has been determined on penalties, and therefore, additional thirty seven goals have been scored.

RESULTS AND DISCUSSION

Generally, on the basis of the obtained results three different types of reactions could be draw out: "on spot" reactions, reactions while walking, and reactions while running.

Out of all registrated after-goal reactions, 5% were the "on spot" reactions, with the emotions expressed through raising of arms (upwards, upwards aside). A different intensity of the emotion expressing could be observed, in the first place through increased tenseness of arm and shoulder extensors.

Five percent of the players' reactions manifested as a slow walk and thereupon with raise of one or both arms upwards. The outstretched arm was with one finger extended (forefinger), or with arm clenched.

Most of reactions (90% of them), however, after a goal has been scored, manifested through running (energetic) and thereafter with raising both arms (upwards-aside, upwards-infront, upwards infront and aside, "the helicopter"), or with raising one arm (usually right). In addition, the reactions manifested through holding arms close to the body but with significantly increased tenseness of arm muscles (arms clenched), with running and thereafter with "front salto", or with running and thereafter with sliding upon knees (arms semiflexed upwards-aside). There were also the reactions such as alternate raising of arms from bent-over position with arms infront to position with arms upwards, running and thereafter christening oneself upon knees, running with arms aside-down, running and thereafter jumping with arm extension from flexed to position upwards ("Pele jump").

When it was up to deciding a match on penalties, on the basis of the analyzed data (obtained by the observation of the player's behavior after the goal has been scored), it could be noticed, like it has been the case with a regular-time goal, that the behavior could be classified in three groups: "on spot" behavior, behavior while walking, behavior while running slowly.

The reaction group registrated "on spot", which manifested the player's internal state through waving after the penalty-goal has been scored, thereafter jumping upwards with both arms upwards too, than with the right arm move similar to shot-put move (arm clenched), arm rotation, and with a jump and shot-put move ("Pele jump") as well.

The players, 30% of them, after the penalty-goal had been scored walked slowly, with expressing the emotions through a hip-high clenched arms, arms close to the body, or through slightly raised arms.

Some players (30% of them) ran slowly after the penalty-goal had been scored. They expressed their internal mood with raised arms, with an upward shot-put move of one arm, with "Pele jump" or with one arm raised.

On spot reactions	Reactions while walking	Reaction while running
		approximately 90%
approximately 40%	approximately 30%	approximately 30%
approximately 5%	approximately 5%	

Figure 1. Observed behavior after a goal was scored within the regular time (heavy shadow), and from penalty (light shadow)

"On spot" behavior: the extension of the whole body, extending arm (arms) while walking, walking and jumping ("Pele jump"), on spot running, running and the extension of upper body, hard tenseness accentuated (clenched arms). It seems as it is in this way emphasized: ONE WHO COULD, ONE WHO DID, ONE WHO OVERPLAYED.

The manifestation of joy and happiness is most usually expressed through raised arms (while running), with forefinger extension only, with one arm raised, with applause, kneeling with arms raised, with embracing teammates etc.

When it is up to expressing the emotions, the running represents the most usual kind of direct behavior after scoring a goal. Regarding to the fact that the running is 90% represented in all of the cases, the primary need for accentuated motion can be emphasized.

The most usual variations are: slow running and raising of arm and finger; slow running and jump.

The energetic running is most oftenly fulfilled with: 1) arm movements (extension) 2) the increment of the muscle tenseness (clenched arms) and 3) jump and arm movements.

On players that manifest the emotion of joy through muscle tenseness and clenched arm (arms) or with alternated extension-clenching arm cycle movements (with simultaneous extremely increased tenseness of arm and mimic muscle, that is, in one word speaking, with muscles of the entire body), remarkably high psychic tension and in this connection the executor relish could be noticed.

In the aesthetic and ethical sense this kind of behavior is unacceptable, that is, it fits neither in Nature of the football game nor in Nature of the playground (when the playground is considered as an open scene).

The regular-time goal mobilizes the organism much more than the penalty-goal, so the internal state manifests through reactions that are more intense and more various.

It seems as the existence of a high scoring possibility when a penalty is to be shot diminishes incertitude (doubts) and internal tension, and in this connection it contributes lower reaction intensity, when compared to reaction of regular-time goal. It seems as the

players are indifferent to penalty-goal when compared to regular-time goal scored from less than eleven meters. In a way it is evident that the players' reaction mode that has been expressed immediately after scoring a goal becomes recognizable, structurally almost identical, but in details a little bit different, i.e. the reaction is a message no more and it also contains a sign essence.

Body signalized message, as well as a sign contents enables the internal state to become a recognizable communication contents in a situation of expressing joy.

On the basis of the players' reaction a clear message of successfully realized aim is expressed, as well as the message that he is the one that realized it (deserved, judged)

The informatic contents of communication fulfilled with the emotional charge (movement dynamics, pantomime, mimic, muscle tenseness, etc.), represents a clear message for teammates and fans (to encourage, to show group appurtenance), but to opponents as well (to discourage them, to provoke them).

Besides communication based on psychology and tactics the reaction mode after scoring a goal contains elements of aesthetic character, represented in the first place with body segments of relatively steady position or locomotion. A special aesthetic role (symmetry, asymmetry, dynamics, expressiveness) when expressing a mood, that is, when communicating on the open scene is upon arms.

The differences between the players' behavior intensity while scoring regular-time or penalty-goal, could be partially explained with dramatization factor (the event intensity, culmination, uncertainty, unexpectedness, triumph), which is incompletely presented in the second situation.

The behavior after goal scored is the individual act (specific internal state signal), but it is interpreted as a certain meaning as well. It is pouring into the universal communication language of the indirect and direct participants and of on-stadium and TV broadcast spectators.

REFERENCES

1. Bojanin, B. (1979): *Neuropsihologija razvojnog doba i opšti reedukativni metod*. Privredna štampa. Beograd.
2. Bokan, B.(1994): *Komunikacija i/ili pokret*. Zbornik radova Filozofskog fakulteta u Nišu. Serija fizička kultura. Niš (93:100)
3. Černikova, O.A.(1980): *Soperničestvo, risk, samoobladanje v sporte*. Fizkultura i sport. Moskva.
4. Hanin, J.L. (1980): *Psihologija obščeniya v sporte*. Fizkultura i sport. Moskva
5. Kukulj, M.(1994): *Antropomotorički habitus kao sadržaj komunikacije*. Zbornik radova Filozofskog fakulteta u Nišu. Serija fizička kultura. Niš (85:92)
6. Mos, M.(1982): *Sociologija i antropologija (1)*. Prosveta. Beograd.
7. Vjatkin, B.A. (1981): *Upravljenje psihičeskim stressom v sportivnih sorevnovanijah*. Fizkultura i sport. Moskva
8. Vizitej, N.N.(1979): *Socjalnaja priroda savremennogo sporta*. Štiinca. Kišinev.
9. Trajanović, S. (1986): *Psihofizičko izražavanje srpskog naroda poglavito bez reči*. Prosveta. Beograd

KOMUNIKACIJA POKRETIMA TELA

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Praćenjem televizijskih prenosa značajnih nacionalnih i međunarodnih takmičenja u periodu 1991-1996. godine zapaženo da se učesnici u takmičenju, često na specifičan način, koriste geste i kretnje u cilju izražavanja osećanja, zatim u tehničko-taktičkom smislu, zatim zbog zadovoljenja različitih psiho-socijalnih potreba pa i ispoljavanja političkih stavova.

Manifestovanje raspoloženja i odnosa u okviru utakmice ima specifičan motorički sadržaj koji zahteva pažljivo analiziranje i stručnu interpretaciju.

U radu su saopšteni rezultati posmatranja motoričkog ponašanja igrača nakon postignutog gola na takmičenju u okviru Evrpskog fudbalskog prvenstva održanog juna 1996. godine u Engleskoj. Analizirano je ponašanje aktera postignutih golova neposredno nakon tog čina. Rezultati analize ukazuju na dominantnu zastupljenost ruku u saopštavanju poruke, u ispoljavanju osećanja i u iskazivanju stava.