Observing the Paraverbal Communication of Coaches in Competitive Match Situations

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ABSTRACT
The present study examines the relationship between the verbal communication skills and paraverbal communication (both kinesic and proxemic) of indoor soccer coaches in competitive match situations, senior women's competitive level. T-patterns detection analysis provides a sequential analysis of data, illustrating the communicative style and flow of each coach.

Author Keywords
Paraverbal communication, competitive match, T-patterns, observational methodology, indoor soccer, coaches' behaviour.

INTRODUCTION
Coaches' behaviour in competitive matches is an interesting subject for observational methodology in sports. The current approach has undergone significant developments in recent decades and is now well integrated within the scientific context. The flexibility and rigour of this methodology makes it fully consistent with the characteristics of the study and it has become a standard approach to observational research [1] especially in the field of motor behaviour [7] and sport [6,8]. Of particular relevance is its multi-dimensional nature, which enables it to be adapted to the successive events of paraverbal behaviour, as well as to each of its components.

In sum, observational methodology can be applied to many different facets of human communication [3, 4, 10, 11], and the wide range of possibilities it offers enables us to optimise the demarcation of units or the development of *ad hoc* instruments such as SOCOP_Coach [6], by adapting the SOCOP (System for Observing Paraverbal Communication) [5].

AIMS
The aim is to study how coaches convey the whole range of verbal and paraverbal communication during the course of a competitive match. The main purpose of the paper is to illustrate the structure of the SOCOP_Coach observational instrument, which can be applied to any type of coach in competitive situations.

METHODS
The study was consistent with the basic tenets of observational methodology in that the coaches' behaviour was analysed without influencing it (spontaneity of the behaviour), it was studied in a competitive situation (naturalistic context), and the design was idiographic, point and multidimensional (I/ P / M) [2]: idiographic because it was centred on the analysis of different subjects, point because three matches were considered without any one being pre-established, and multidimensional because the *ad hoc* system codes consisted of seven criteria and 23 codes.

The data were derived from the study of two coaches and three competitions, giving a total of 240 minutes of empirical material.

Instrument
The instrument used is SOCOP_Coach. By starting from an already validated observational system (SOCOP) (System for Observing Paraverbal Communication) [5] (Table 1) the present study was able to focus on the empirical component, enabling us to validate the communicative specificity of indoor soccer coaches in competitive situations. Coding was carried out using ThemeCoder [12], while data were analysed using Theme v. 5 [9].

CRITERIA	CODES	CRITERIA	CODES
Typology: The information concerns the sort of action to be performed by the athlete.	**Instruction (I)**: The information is supplied with the aim of encouraging future actions.		**Observation (VB)**: The coach watches without working or illustrating the result of the competition.
	Feedback (F): The reciprocal action is referred as a valuable judgement in accordance with the performance of the athlete.	**Paraverbal Communication of Morphology**: The information is conveyed via kinesic gestures that are morphologically defined for the athlete.	**Emblem (EMB)**: The information is supplied via kinesic gestures which are iconically defined and agreed upon, where verbal language is not necessary.
Verbal Communication of Function: The information given by the coach plays a mediating role with respect to the athlete's performance.	**Positive evaluation (EP)**: The coach makes a favourable judgement of the athlete's performance.		**Deictic (DEI)**: The information is supplied via kinesic gestures that indicate the location of people and/or objects.
	Negative evaluation (NE): The coach makes an unfavourable judgement of the athlete's performance.		**Kinetographic (KIN)**: Gesture that draws actions or movements in space.
	Description (D): The coach describes the way in which the athlete performs or performed their actions.		**Beats (BEA)**: The information is supplied via kinesic gestures that are iconically defined, in accordance with the communicative style of the coach.
	Prescription (P): The coach communicates with and directs an athlete as to how he/she must carry out future actions.		
Verbal Communication of Morphology: The information given by the coach is of a given form designed for the athlete.	**Interrogative (IRG)**: The coach questions the athlete as to his/her performance with the aim of raising his/her awareness of the mistakes made or the correct way to perform the action.	**Paraverbal Communication of Posture**: The information is supplied from a given postural position.	**Biped (BI)**: The coach remains standing but without moving around.
	Imperative (IMP): The coach tells the athlete firmly what to do or what should have been done in order to draw his/her attention to this aspect.		**Sitting (SEA)**: The coach is seated.
			Locomotion (LCM): The coach moves to the technical area.
	Exclamatory (EXC): The coach expresses a strong emotion in response to the athlete's performance.		**Alteration of level (ALT)**: The coach alters his posture with respect to the height of his body.
Paraverbal Communication of Function: The information given by the coach involves a kinesic gesture with a communicative intention.	**Regulator (RE)**: The information is given via kinesic gestures that control and link together the moments of interaction between people. It requires an immediate response from the athlete.	**Communication of Adaptation**: The information is supplied via kinesic gestures but without the aim of control or illustration. These gestures physical contact with other people and/or objects.	**Self-adaptor (SE)**: When the teacher maintains contact with other parts of his/her body but without any communicative purpose.
	Illustrator (IL): The information is supplied via kinesic gestures with the aim of reinforcing the verbal language that is used by the coach, and does not require an immediate response from the athlete.		**Hetero-adaptor (HE)**: When the teacher maintains bodily contact with other people but without any communicative purpose.
			Multi-adaptor (MUL): When several of these adaptor gestures are combined.

Table 1. SOCOP-Coach Observation Instrument.

DATA ANALYSIS

The observation of a natural context requires the use of the above-mentioned observational instrument. In-depth analysis is then possible with the detection and analysis of temporal patterns (T-patterns) in the transcribed actions.

How to read the pattern tree graph: The tree graph shows the events occurring within the pattern, listed in the order in which they occur within the pattern. The first event in the pattern appears at the top and the last at the bottom. The pattern diagram (the lines connecting the dots) shows the connection between events.

Both pattern tree graphs / dendograms show three levels of concurrence of paraverbal communicative behaviours, Figure 1 shows an example of a T-patterns from the paraverbal communicative behaviour of a coach during alongside three competitive matches.
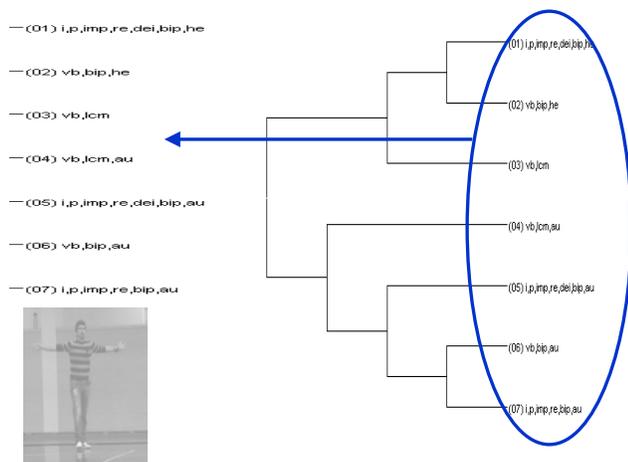

Figure 1. Example of coach communicative T-pattern obtained from three matches.

RESULTS

(1) Communicative situations involving *regulation* are those in which the coach requires an immediate response from players (for example, orders, questions, etc.). In this kind of situation, regulatory gestures (RE) are morphologically coded predominantly by means of non specific football Emblems (EMB). Deictic forms (DEI) of gestures have a special meaning since, anthropologically speaking, they are perhaps the first communicative gesture whose function was to indicate or point at something. Therefore, above and beyond the individual style of each coach in using one deictic gesture or another, the important aspect is which one is used and how. The T-patterns conducted here show that such gestures are usually associated with regulatory behaviours, although they may also appear when the coach illustrates as part of an explanation.

(2) Communicative situations involving *illustration* are those in which the coach does not require an immediate response from players. As such, most explanations made by

a coach regarding situations, or the feedback provided about a situation already performed, are examples of illustrative behaviour. In this kind of situation, illustrative gestures (IL) are coded through Beats (BEA), which are gestures without any specific iconic definition. Also Pictographs (PIC) and Kinetographs (KIN) are of interest in relation to the effectiveness and discursive clarity of coaches involving ilustration. Coaches use them in a way that is more adequately tailored to their own communicative style.

(3) Many adapters were observed (for example, object adaptor, multi-adaptor, hetero-adaptor and, especially, self-adaptor), although these gestures have no communicative purpose expert coaches use such gestures in a way that avoids any interference with the quality of their communication, since the gestures are made when they are not communicating directly with players.

CONCLUSION

Observation of the different matches revealed some logical sequences in the coaches' behaviour over time, since they adopt the same behaviour when facing certain situations already encountered in a previous game. We now aim to recruit a larger sample and analyse the data using the Theme software [9], which yields behavioural patterns in a recurring (log) and sequential (lag) way. These are known as T-patterns and will provide valuable information about the communication profile of coaches.

With respect to the criteria of the observation instrument SOCOP-Coach the relevant T-patterns obtained and described in the results section invite a more detailed discussion in the communicative styles of specific and expert coaches.

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