

A Functional Model of Table Tennis for the Analysis, the Diagnosis and the Remediating during the Training

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Some important preliminary remarks

The research we are carrying out is situated in the context of an academic paper for a thesis under the direction of professor A.Durey in Paris. This is the research of a model resulting from the experience of training and coaching. We are looking for the systematization of the act which consists in passing from an actual player's state, observed when playing, to the act of intervention in order to modify its efficiency.

Our purpose is to remain in the didactical side of the operation which leads to the accurate decision about the contents of the training intervention. Thus, the concrete aspect of the intervention which aims at the player's transformation can be excluded, for it is pedagogical. Nevertheless the two aspects (didactics and pedagogy) are closely linked.

Our priority is to have a complete description of the context, of all the factors of performance. So we have to find all the separate elements which, by their action, are going to intervene in the player's performance during the competition. Both of them can be the cause of an insufficient performance, both of them the object of an intervention.

At a high level, the coach has a very good knowledge of the whole activity. Very often he has been a very good player; he has integrated all the elements. Not only can he show a quick and precise capacity of observation, but he is also accustomed to the training and thus, with criteria and references that are not always explainable. Our study should lead to a modelization of the acts which would precede the intervention.

The model is to allow a systematical and organized development, marked out by necessary analyses. Thus there will be a distance from the practical experience of a person (de-contextualization), as well as from the context (de-contextualization).

So we may come to a transmissibility of an act that we will be able to reproduce. And only then will it be possible to teach it.

Elements of play and performance

Our priority is to dispose of a complete description of the context of performance. We have to find all the elements which may have an action on the player's performance for the competition. And this entirety has to be organized.

There is very often a diagram which is proposed, with only four elements, but it is too elementary. We cannot accept this presentation because it is of no use for a precise

diagnosis.

In the center, we have the player who is playing. We don't give further details because it may be a point, a set, a match, a whole competition, a year of competition or even more.

The main aspects about which everybody thinks are present: technical and tactical know-how (techniques and tactics), and the player's physical and psychological condition. But there are links between them all, and we have to go further, to be more precise. We cannot allow object to a diagram which would be too reducing, for it wouldn't open real prospect.

Thus, if I take the physical aspect, it is the real player's condition when he arrives at the table; it's almost material after a certain lapse of time. Now, his condition is the consequence of many factors: his possibilities, preparation, his healthy way of life, or bad travel conditions or accommodation; it can be modified by his psychological condition which will have an action on his quality of presence, on the speed of his arms or legs, on his tactical clearness, his capacity of adaptation to the opponent according to the score, his easiness to decode the signals so as to find the relevant information about the play, the quickness of his reaction as well as his capacity to accept easily the game incidents, mistakes of umpires or else.

so we have to go through this diagram if we want to come to a solution of a physical problem, if the problem is really a physical one. The diagram itself leads the trainer to see if there is another possibility.

On this diagram, about which we have for a long time spoken with French team players, we must find all the elements of the performance; they must be isolated one from another, even if there is some interaction; in these cases, these relations have to be seen through.

All the elements are not at the same level, neither at the moment of action when they are acting, nor for the character of their action, direct or indirect, as far as their responsibility is involved.

A coach or a trainer can be brought to make intervention on other factors than on the play itself. Can't we see today the professional players association taking an interest in sectors which were thought to be reserved ever to an elite who was acting far from them and without them? Maybe they have good reasons to do so.

This whole diagram

For scientific methodology reasons, this diagram is not called a model, but rather "elements". It is the first step of our study. As I have experienced it within the French staff, and thus at different levels, I can tell you it is functional.

The way to the decision

The second step is that of the intellectual development of the trainer. Starting point is the game; the final point is the contents of the intervention in order to increase the efficiency of the player.

We have a succession of some various operations which are of the utmost importance and as necessary one as another.

1. From the play to the diagnosis: the play is seen, as it is played; it has to be analyzed, dissected, explained; in that way it must be objectivized. A specific process (reasoning) is necessary as well as some elements allowing us to form an opinion.
2. From the diagnosis to the prognosis: considering what has been found, can we do something? What course of action shall we take? What kind of evolution can we foresee? And thus, taking in account what the player can do, what we think he can do, bearing in mind his knowledge of the game (at high level) and of his evolution (cf. the history of the game and of the coaching).
3. From the prognosis to the prescription: It is the content of what shall be done that will determine the action. We must allow for the problem, for the individual, the foreseen solution; but the work is to be inserted into the organized history of the player and of the interests involved. It is only then (and with the player's agreement) that the precise prescription will come out, which will be then organized to be set in the training.

An example: a problem with the backhand

Take the case of two French players, playing at a high level, and who have had at a certain time the same problem: that of the efficiency of their backhand: Patrick Birocheau and Jean-Philippe Gatien.

The two players had a similar occupation of the space, taking it into account that the former was right-handed and the latter was left-handed.

The space used successfully in the backhand is very close to the table, whereas in the forehand both of them can go backwards very far without being inefficient.

The analysis of the strokes and of their efficiency shows that both of them have, when they play a backhand stroke: push, block, but that they haven't very heavy strokes or strokes which allow much spin, in the direction of their game which is a play of attack and of quick balls.

This report could have led to a similar inference. Yet it was different and thus in this very training group (the French team) which had several trainers and coaches and within which they have been playing together for a long time.

Birocheau, advised by Xi En ting, his Chinese coach, didn't try to improve a backhand topspin or a backhand attack. He rather tried to organize the game to be able to play much more with forehand; his service in particular, was made to prevent his opponent from profiting his relative passivity when playing backhand strokes. And indeed the backhand strokes themselves were used for this purpose.

For Gatien, things have been different. The image of his play, for him and for his relatives, was that of a quick play, using the same weapons on both sides. The reason of the weakness of the backhand was not to be found in a lack of skill or in a fear, or in a tactical insufficiency. In fact, it was his own inner organization which brought forth a delay to playing a backhand shot after a forehand. It's on this point that the effort was made and on the progressive introduction of the fast backhand strokes in the play, even during the competitions which were of the utmost importance.

Two similar problems, but only judging from the outside, and there were two different solutions. It shows that the model is not only technical or tactical, but that it brings to the fore all the contextual notions.

ELEMENTS OF TABLE TENNIS PLAY

