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**CRITICAL SCIENTIFIC
REVIEW
OF TEAM SPORTS**

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TCHOUKBALL

**TCHOUKBALL:
The Sport of Tomorrow!**

Foreword and Drawing by Michel Favre

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Note: in this book “he” is used for both genders only to simplify the reading.

V. LE TCHOUKBALL

1. INTRODUCTION TO THE TECHNICAL PART

Now that we have defined the events characterizing the different sports of categories 1 through 5, we can tackle the differential analysis of Tchoukball.¹

First observation: the *frame* placed at the back of the field cannot be superimposed on the goal; the goal is not to touch the frame: no point is scored at this moment. The real goal of the final motivation is beyond the frame; the frame is to some extent the intermediate device, but contrary to the net that separates the territories and that one must simply cross, the frame is a living object that amplifies the game and makes it change direction.

I. The “device”

In the considerations that we have established for the other sports, one point has not been dealt with. In the devices usually used, we must cite a category of devices, the purpose of which is to *amplify the mechanical effect* of bodily interventions. A racket, for example, makes it possible to intensify the shock of the ball and to return it with a very increased efficiency: it is therefore in reality an amplifier of mechanical actions, and that is the case for all rackets.

In Tchoukball, we also have a device the purpose of which is not only to separate two sides, but to return a ball with an augmented effect. The ball that strikes the net rebounds very far, and consequently, makes it possible to obtain very variable trajectories, but of considerable size. This mechanical amplifier is placed in such a way as to return the ball to the field.

II. Attack

Let us speak first of all of the action of *attacking*: the team that wants to attack also has a convergent action toward the frame; that means that at that moment the visual field and the frame can be superimposed, as we have seen for other games. However, *the frame is not a goal*. The goal is beyond, on the field itself, which becomes, which is considered at that moment to be the opposing field,

and it is the dispersion on this field that is going to count; in other words, *the goal to reach* in order to win is no longer prior to the view. It is not previsual; it is not included in the visual field. It is *imagined*; it is conjured up by the brain, which must picture *where the ball will go after* rebounding, and which must ask itself whether the point where the ball will go is a strategically important point.

That means that the finalist motivation is projected beyond the frame and, passing by the frame, onto the field. It becomes *divergent*, but *retrovisual*. There is a double aiming: the direct aiming, which ensures the touching of the frame in the effective part, and beyond this direct aiming, an indirect aiming, which seeks to place the ball on the field. One must *aim for* the objective *frame*, and *think* objective *field*, and the indirect aiming becomes the effective aiming, while the direct aiming is but the aiming that conditions the other one.

It is those elements that characterize the difference between the previous games (which are football (soccer), team handball, basketball, volleyball, and tennis. (See Chapter IV n.d.l.R) and Tchoukball. The *preparatory phase* is thus *direct convergent*, but the terminal phase is *retroactive divergent* and, passing by a convergent, previsual, and objective conditioning.

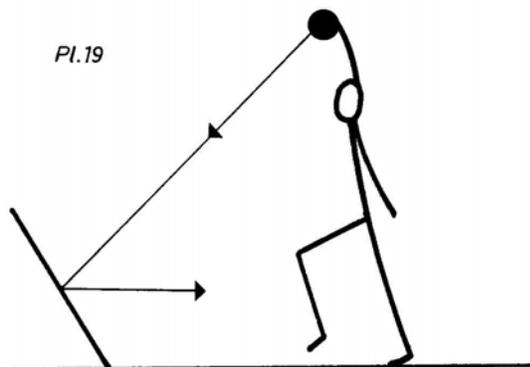
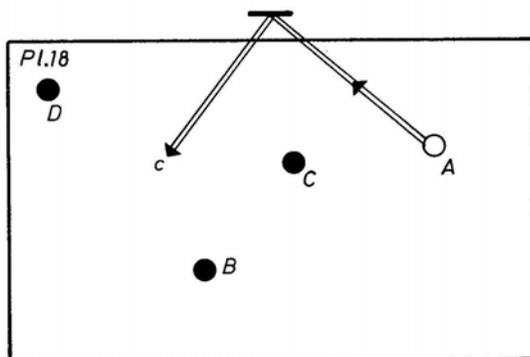
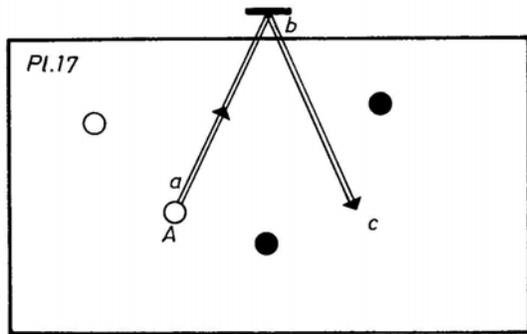
The finalist motivation is thus subordinate to numerous elements of assessment of a psychological nature: observation and judgment of situations, prejudgment of what will be the trajectory of the rebounding ball, etc.

The *changing of sides*, or let us say the turning point, is not an interception, but rather *a shot*, a direct aiming, left to its own technical quality. The frame marks the attacking change of initiative, then it makes [the ball] change sides, but there is no change of territory. The same territory is used alternatively by one team and then the other, and the turning point, the switching [of sides] is done by the frame itself.

The result of this is that *the visual field does not contain the whole problem*; it contains the direct line of aim, but is not contain the rebound.

¹ Sport #: 1=Soccer; 2=team Handball; 3=Basketball; 4=Volleyball; and 5=tennis

Retrovisual aiming of Tchoukball (Pl 17, p. 4).



The “A” player shoots while aiming at point c, which is not in his visual field, the weak point of the opposing team. It is in “A” has interest to shoot only if “C” is really unoccupied: in that case the direct aiming is *convergent* on the frame (AB), but the finalist intentionality is given by the trajectory BC (*divergent*). The goal c is not in the visual field of the shooter, but the latter must have a *mental representation* set by the observation of the field.

Psychological components of defense

In Tchoukball, in short, the defense is much more complex. In effect, it takes place on the same field as the offense, and it is *constantly mixed* with the offense. A movement, a new situation of defense ready to receive must correspond

immediately to every movement, to every change of position, to every move of the attacker. Defense is above all a *search for the position* that will be fixed by the rebound of the attacking ball. The defense obligates the players, each one of the players, and the best positioned, to prepare themselves to catch *the rebound*. Defense is therefore a placement on the field corresponding to the judgment of a probable rebound. Immediately after the rebound, or even at the rebound, the defense must transform itself into offense by catching the rebound; it is a catch that stops the opposing attack and makes the attack start again from the defended territory. However, the true defense begins before this rebound, before the projection of the attacking ball. It is a *constant surveillance of the shooting possibilities* of the attacking team for, judging its possibilities; the players position themselves in conformity with the possible efficient, effective catch. One sees that the defense here is totally different from the usual defenses. It is above all a psychological phenomenon. It is only possible and it only takes place through the effect of a judgment of situation, and since one cannot wait for all of the players to be at the same time at the place for the correct catch, each one has to know how to quickly judge which one of the teammates is best able to occupy the catching position. After all is said and done, *defense consists of preparing a good position for catching*, or even to encourage it for the teammates. However, a good defense must naturally also be a preparation for the offense. In other words, what must happen is that the players, judging the teammate who is going to be able to make the catch, immediately seek a position that is favorable for attacking. Again in other words, a good team incorporates the attacking concepts with those of defense, and there is the supreme skillfulness of a defense.

It must be remarked one more time that, if the defense is above all a phenomenon of psychology between persons and between situations, it is at the same time dictated by the fact that the occupation of ground is the same as for the attacking team. The teams mix with each other; it is always a question of moving about in relation to the teammates, but at the same time in relation to the attackers. This is why we attribute such importance to the *freedom of play*, to the interdiction of preventing the plays, and the interdiction of interception. In that, the psychology of the behavior between persons is the same as for the attacking team; on the same psychomotor processes, for the attack and the

defense. It is a behavior that proceeds from the judgment of situation and movement.

In *defense* the action is always a function of the rebound. The switching from “attack” to “defense” being made by the frame, the defensive team can only become an attacking team if it catches [the ball]. The catch is indeed part of the “switching time,” for the switch can only take place if there is a catch.

The psychology of the *defense is more previsual than the attack*: one’s attention is focused on the frame to see the ball emerge from it, which is indeed at this moment, in the visual field. However, one must have positioned oneself in advance on this trajectory, and that well before the ball is visible. The positioning of the player on defense is an act of intelligence, of judgment, of understanding of the movement of the game. There is, in a way, in the defense as in the attack, a *preparatory phase* (to position oneself in relation to the possible, indeed probable rebound), the terminal phase being the one that begins at the moment when the ball rebounds.

The preparatory phase is always previsual, for one must “fix one’s attention” on the circulation of the ball between the opposing hands to accomplish this mental operation that consists of choosing a favorable position.

In Plate 18, players “B” and “C,” on defense, should have judged the action of “A” early enough to carry themselves to “C.” However, to be able to act in this way, they had to have had “A” in their visual field at the opportune moment.

Switching from “attack” to “defense”

Of equal technical value (dexterity of the shot and precision of the pass), the preponderance is a question of adjustment of the situation, of a mental process of cerebral adaptation to these particular conditions. The fact that the visual field does not contain the whole problem adds a *psychic difficulty*, but an *additional interest*.

In these conditions, the situations of initiative (defense – attack) do not obligate [the players] any less to a constant preventive behavior. The tactic is permanent that is to say that the phase of preparation must take into account not only the position of the players during the preparation, but of the situation that they will occupy after the indirect aiming. There is therefore a more complex neuro-cerebral process permitting the players to anticipate and to prevent the situations that could give victory.

The fact that there is *never a direct interception* entails an important practical conclusion: there is no individual shock; there is no “ad hominem” intervention. If the preparatory phase is rather concentric, it is not at the mercy of an interception, but it must benefit from the *positioning of the players*, who seek a suitable shooting position, a position taking into account the two aimings, direct and indirect.

The simplistic attack can content itself with seeking the shot on the net, but if it wishes to take into account the data of the indirect aiming and of the true situation of the game, at the same time as favorable effective interventions, it must create an *advantageous shooting position* that is at the same time *unfavorable for the opposing catch* after the indirect aiming. It is there that is situated the essential part of the problem, and not in the visual field itself; the most difficult part lies in the psychological assessment of the territorial and functional conditions of the opposing team that the player must make. The game thus becomes also an intellectual problem, which then makes it possible to make use of changes in position and techniques to obtain favorable situations.

The change of initiative – a team becoming the attacker – is not therefore accompanied by a change of sides, and the *territorial concept* is not the one that one usually encounters – to each his side – but a zone on which everyone evolves, which belongs *to everybody*, but on which techno-tactical problems must be resolved. We know only that the initiative changes sides each time that the ball rebounds, which means that the objective of the defense is not to intercept and to hinder the opponent, but only to position oneself in such a way as to be able to catch the ball. The valid change is therefore not a problem of *interception* but of *catching*.

Calculation of points

Finally, the *points* are calculated in way that is also special. They can be the *effect of an error of dexterity*, either one misses the ball (see the rules of the game, n.d.1.R²), or one makes the ball rebound beyond the territorial limits. Each clumsiness is a lost point, hence a point won by the opponent. This method of calculating points is common with games 4 and 5 (see Chapter IV, n.d.1.R.). However, in

² “See the rules of the game” means that a change has occurred since the publication of the book in 1972.

normal conditions of dexterity, (no error being committed taking shape in a lost point), victory is acquired by the use of the weak points of the field after the rebound. It is the *indirect aiming* that must try to reach the weak points of the field (a sector that is vulnerable because of poor territorial occupation). Now, this occupation is contemporaneous with that of the attacker that is to say that these teams being mixed, territorial

occupation is judged instantaneously contemporaneously by the two adversaries.

Consequently, besides clumsiness, *points* are won only by the effect of *indirect aiming*, and by trying to direct this action toward an unoccupied weak point!

2. DETAILS OF THE COURSE OF THE GAME

Now we have to tackle the problem of the team on the field and the manner of playing.

a) It is forbidden to walk with the ball in the hands

Not to walk, that is the most important point of the game. Every individual, every player who holds the ball must immobilize himself (See the rules of the game, n.d.l.R.). As soon as one authorized movement with the ball, one would have to deal with a completely different form of game. If one authorizes walking, all the other principles of the game fall. The obligation not to walk is the direct consequence of this desire that we had to avoid actions [*sic*] [and] *not to create situations of man-to-man, body-to-body*.

Let us explain ourselves well regarding what is meant by “do not walk.” When the individual has the ball in hand, [with] both feet on the ground, the fact of raising a foot and of posing it at the side is only the beginning of walking, and that is authorized. However, at the moment when the foot is placed on the ground, the fact of raising *the other* foot introduces a concept of *walking*, and consequently demands a penalty. In other words, not to walk is to immobilize oneself [with] the ball in hand, and if really necessary, put one foot to the side, raise the other, but *do not place the latter back* on the ground.

Exception: a catch with full run-up

It is evident that one cannot always schematize so simply. It happens very often that a catch is possible only after a big change of position, with considerable bodily momentum and that *one cannot stop the movement* immediately on the spot. Moreover, balls are often caught in the air and the return to the ground is made in an agitated fashion. Often a catch is possible only during a change of position that obliges one to make several more steps before being able to stop and immobilize oneself on the ground. This *change of position in the run-up to a catch* is of course not forbidden; otherwise, one would forbid the game itself. However, it is evident that from the moment when he has stopped, or has been able to stop movement, from that moment on the referee is going to verify that he does not take a step. The change of position, the form of change of

position that is required by the catch, is not taken into consideration.

If therefore, to reach a ball and to catch it, the player is obligated to stop his run-up after a few steps, or even roll on the ground and change his position on the ground, he is not considered to be “walking.” In other words, the manner of immobilizing oneself for a difficult catch has no importance, unless it is visibly apparent that there is an intentional fault to technically use the change of position beyond what the movement of the body itself requires. That is the task of the referee. Moreover, those situations are extremely rare.

If it happens that in the impetus of the change of position, the individual takes a certain amount of time to stop it, it is easy for the referee to verify that there is no exaggeration on his part. The checking of the *walking* by the referee begins as of the moment when the body is immobilized (See the rules of the game, n.d.L.R.).

A Catch While Falling

When an individual has made a catch in such a way as to be extended on the ground, either by a dive or because he has slid or rolled because of the difficulty of the situation, he has the right to get up , and the calculation begins only at the moment when he is standing on the field. Let us point out, in passing, that the referee, at that moment, has to see to it above all that the ball has not touched the ground. One can roll; if the ball has not touched the ground, the situation is saved and the game continues. However, if while rolling the individual has not been able to prevent the ball from touching the ground, the game is stopped and the point is lost for the catcher. (See the rules of the game. n.d.l.R.)

Running off the field after a catch

(See the rules of the game, n.d.l.R.). It often happens that the individual, having stopped a ball, high or low, inside the field, then undergoes a “change of position because of impetus,” which drags him outside the limits [of the field]. It is incumbent upon the referee on the first place to verify that the *interception* had been made *still on the field*. If there is a doubt, he must cancel the point. However, suppose that in effect, the interception of the ball took place on the field, but the impetus of the run-up had led the individual

beyond the limits. At that moment, he may return to the limits of the field by walking, and throw the ball from the place of the limit where he left the field in his run-up. However, he cannot, in any case, shoot directly at the frame under those conditions.

However, if this run-up has carried him in the direction of the frame and if he has gone beyond the limit of the field *by entering the forbidden zone*, he may, as just stipulated, take position again on the limit, but from there he may serve a teammate only if the latter is positioned at least three meters from the forbidden zone. This is to avoid clashes before the goal by a close marking of the ones and the others. If it happens that the interception with sliding off the field *was found to be the last authorized pass*, the referee accepts at that moment a *new pass* to clear the field, *or a shot from the extreme lateral angle*, or else he simply cancels the point. (See the rules of the game. n.d.l.R.)

A last case must be cited: *at the start of play*, the referee sends the ball to a player of team that has the right to the ball (a player in a situation of back game); not more than another player, *does not have the right to take a step* as soon as he has the ball. In effect, the referee's pass begins the game, that is to say that it ends by a catch, with classic immobilization, at the back of the team that puts the ball into play. (See the rules of the game. n.d.l.R.)

There is also a limited case, it is the one where a player, launched in the direction of the goal, catches at full speed and, without stopping, transforms the catch into a shot at the frame. At that time, it is not easy to distinguish what is a change of position from a run-up and what is a shoot. To the extent that that one cannot prove that there had been a step, immobilization, and then a step, the game is considered to be valid, save if the ball had been retaken beyond the limit, in the forbidden zone.

The ball

Choice of ball: After many trials, we decided upon the *team handball*, of small size. It seems that a slightly smaller sized ball, that could be held by one hand (for most hands, even small hands) would be more useful. The handball is much more easily obtainable. Moreover, it is quite sufficient and it is suitable for nearly all players. (Today on the market different sizes of balls are available n.d.l.R.)

It must be *inflated rather hard*, because returning a dry ball is sharper, more dynamic than

returning a soft ball. A soft ball is useless; it rebounds poorly and complicates the game. With a hard ball, one has the impression, when one begins the game, that the ball is too inflated, too hard, and perhaps dangerous for the fingers. This is not so in reality, because it is more manageable while being very inflated than in the opposite case. One must become used to a hard ball that rebounds "dry."³

b) The shot: major move of Tchoukball

General principles:

Later on we shall deal with the problems of the *direction of the shot* (See the chapter on technical training for shooting).

Technique of shooting: the effects of the ball

The *manner* of shooting is capital: on a given trajectory, there are ways of modifying the ballistic conditions of the ball. That becomes an art of choosing the method of launching, according to what one wants to obtain from the ball.

Force

First of all, one must think about the *force of throwing*. The strike force plays a very important role. A very strong shot ends up very far on the field, and the soft shot remains close by. However, one must *know how to voluntarily dose one's shots*, one's initial force, in such a way as to reach at a distance the point chosen as opportune and useful. This first *dosage of the effort* according to the hoped-for point of rebound is very important to assimilate and must also become a conditioned reflex. This conditioned reflex comprises what we were saying just before, that one never shoots with force from a lateral position, because the limits are close (and consequently there is a great chance that the ball will rebound outside of the limits). On the other hand, when one is facing the frame, one can use force.

We must unfortunately note that numerous players do not know much more than to "hit hard." As soon as they find themselves opposite the frame, they send the ball with the maximum effort possible and it rebounds too far, generally outside the boundaries of the field. In effect, the average player knows very little how to give the ball a medium ballistic force, in such a way as to reach not the

³ At the beginning, with young children it may be adequate to start using a soft ball. n.d.l.R.

back, but the middle of the field. Now, it is extremely frequent, in the course of the game, that there is no opponent in the middle, while the backfield is completely at the back. For not having observed this rule, that is to say, because of *not knowing how to calculate the effort* while being content with a medium effort, many players acquire the habit of shooting very far and of shooting the ball into the hands of the opposing defense...or out of bounds.

Direction of the shot

On the other hand, one must know the effects *according to the direction of the shot*. One can may a shot diving against the net, with the hand held high: the ball is sent in a descending direction and, leaving in the opposite direction, takes a low trajectory that is often parallel to the ground. It is therefore there also a conditioned reflex: a throw, from on high, with the arm extended, gives a *low ball*, at ground level. (See plate 19, page 4.).

Effect of the ball

On the contrary, if one send a ball from below, it rebounds very *high*, and consequently, takes a high aerial trajectory. This is already one of the forms of lob (plate 20, page 10.)

However, if one wishes to further increase these variables, one can transmit to the ball an *effect*; the most classic and the most winning effect is the one that accompanies a low throw, such as we have seen for the lob. The hand is then palm up, the ball is placed at the bottom of the hand, towards the wrist, the arm is projected forward and the ball rolls on the hand, separates from the hand while having a rolling, rotating movement, the result of which is that at the moment when it touches the frame, it is *projected higher* than the mirror would like (plate 21, page 10.)

It happens often in the course of the game that there is an opponent very close to oneself, near the frame; then a lob makes the ball pass above his head, and if no other player has foreseen this, the point is scored.

We do not want to dwell on the different manners of shooting so as to *camouflage one's shot (feints or fakes)*. An interesting way to shoot is to make a feint to the side: move away the arm held

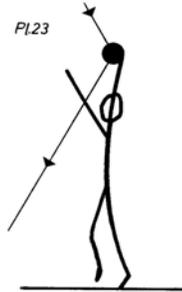
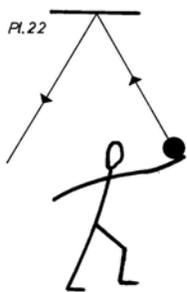
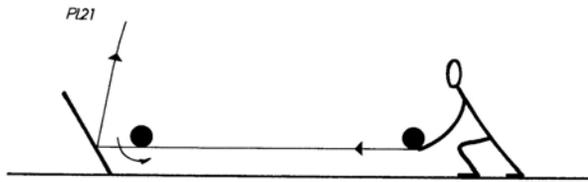
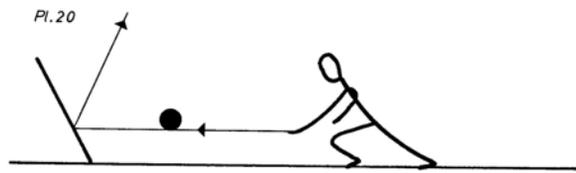
out to the side and, from the end of the arm shoot in the opposite direction. The extended arm will shoot from the left side (plate 22, page 10.) This ball technique, rapidly executed, makes it possible to surprise the opponent and to give the ball an extremely effective lateral effect (*lateralized shot*).

The *hand play* is sometimes very pleasant. It is useful above all when one wants to follow up a high catch requiring only one hand, with an immediate response of launching, which makes it possible speed up the response (plate 23, page 10). This catch launched from a hand is above all useful for shooting, more rarely for passing.

In the varieties of shooting, one should mention the *numerous possibilities for feints*, but these are not described, they are executed according to the imagination of the players. They are extremely useful, always pleasant to see, and generally surprising. Most often they are improvised.

Among the variations of shooting techniques, we must point out succinctly the shots *right after the catch*. There, it involves seizing the ball when catching it in such a way that, by a return movement, it can again be immediately projected. It is sometimes a shot at the frame, sometimes a transformation into a pass. It is often extremely useful and advantageous to know how to respond immediately, but this technique should not be applied unless one is *very sure of one's reflexes* and, consequently, *of the direction of the shot*. The catch shot is always seductive and many players find it very amusing. Unfortunately, to have a mastery of rapid moves, one must have great training and one often sees good results completely compromised by the haste that certain individuals have to demonstrate their gift for failed sleight-of-hand.

In shooting, let us note one more detail: when an individual believes himself to be well positioned to shoot, and he still has a possible pass, it is in his interest *not to hurry too much* in order to give himself the time to observe if he is already marked, while, by a few moments of patience he gives time to a teammate to position himself better and, having begun a shooting feint, he makes a pass that, surprising the opponent, becomes effective. This is said to insist on the fact that that it is not always necessary to hurry.



To finish this small chapter on shooting, let us repeat, while insisting, a curious but general remark: The *strong tendency* that players have to *shoot* against the net as soon as they have the ball in their hands, I would say almost with their eyes closed, or at least without concerning themselves at all with the place where the ball will rebound: they are near the frame, they shoot. The frame, which is the only object visible in their visual field, is for them fascinating, obsessive. They are in a hurry to put an end to the obsession by shooting, by bombarding the frame; this is the first innate natural reflex of the player. Now, between this simple, elementary reflex and the desired effects of the game, there is all of the cerebral element of reflection, of calculation, of assimilation of the situations, of intelligence of the effect to be obtained, of judgment that results in a throw not being a throw against a frame, but a throw toward a point on the field, inverted, of course: *to the instinct of fascination by the visible object, reflection is opposed.*

Finally, a last case should be cited: a player possessing the ball find himself rather near the frame. In his enthusiasm, he sends a strong ball that he catches himself against a certain part of his body. There, there is a shooting error; he should not have sent a ball that risked touching himself. *The point is lost.*

On the other hand, if he sends a ball that reaches, that touches *the body of a teammate*, this teammate not having moved, not having made a forbidden, the point must simply be *done over*. (See the rules of the game, n.d.l.R.). One supposes, in effect, that it can happen sometimes that a teammate find himself poorly positioned, but there is no intentional fault, nor is there clumsiness, and one cannot penalize this situation by a lost point.

When we say a cancelled point, we mean by that that the ball is given to the referee who puts it back into play according to the usual formalities (See rules of the game. n.d.l.R.)

c) No obstruction

Among the essential principles of Tchoukball, there is also this very important concept: *no obstruction*, that is to say, ever hinders the opponent or the teammates.

The concept of obstruction follows from a series of considerations: as soon as one or more passes are permitted, one only seeks to authorize the search for a better shooting position, for one does not score a point without *passing by the frame, without using the frame* to attack the opposing team, and *one must look for an effective shot*, that is to say, making it impossible for the opponent to catch the ball: good shooting position or effective shot, such is the first objective that must be pursued by any team possessing the ball.

It goes without saying that every shooting position of a team comprises the search by the opposing team for a catching position. Since the rebound takes place inversely, the catching position in relation to the shooting position is also the inverse. This is the essential notion that one must constantly have in mind in order to seek suitable positions. When the ball changes hands in a team, the opponent must move his mirror as a consequence in order to be in a good catching position. *The response to a pass can only be an opposite movement toward the mirror.* We have become accustomed, in effect, to speak of a mirror to better express constantly what is the suitable; position on the field in relation to the rebound; this notion of a mirror always having to express clearly the need to find oneself not on the same side as the shooter, but *on the opposite side*, in an exactly symmetrical position.

The search for the suitable position is a game of observation, of deduction, and of decision. The

brain of one person (the attacker) responds to the brain of the other person (the defender), or the thinking of one responds to the thinking of the other, or better still the intention of the one creates the intention of the other. It is the eternal problem of the “head and the legs.” The head orders and the legs obey. The motivation of each move is the result of an elaboration of the thinking, itself the consequence of the observation of situations. The anticipation of the “defense” thinking is mobile according to the variations of the “attack” thinking.

That is a very beautiful sports problem: on a slightly large field, it demands “many legs,” which means from the biological point of view much breath. It is the individual athletic value placed at the service of tactical thought.

I have often been asked *why we forbid interceptions*, for example, to prevent a pass, to intervene in the trajectory to keep a pass from reaching its goal. This right to interception would translate itself into two major drawbacks:

1. The fight, the “ad hominem” attack, the body against body, the individual against the individual, the opponent against the opponent... that which we do not want at any price. We shall explain this in other important chapters.

2. The stagnation of the game around the body-to-body and the limitation on movements that would be caused by the vagaries of this body-to-body are not desirable; if one accepted it regulations would become impossible as of that moment and the clarity of the game would lose as much.

One must realize what the interception in a ball game is. Between the intention of a pass and its realization, that is to say, the attainment of the objective can be placed a number of interventions that are more or less coordinated and that would upset the tactics of the game.

How can one *limit* this right of interception, since it could be executed up to a few millimeters of he who wants to pass, or he who wants to catch? For us, the need to ensure the move and to permit a clean technical execution presupposes that *the effectiveness should depend only on the quality of the performers*, and that nothing should be able to interfere with this execution.

Within the team, the game manifests itself only in the loyalty of the performer, his skill and his adaptation to the goal. Every player has the right to succeed if he has applied the appropriate skill, and it

is not up to the opponent to interpose himself between the goal and the intention.

Therefore, *no direct struggle for possession of the ball*: one takes possession of said ball only by a correct pass and a correct catch. It is already a difficult enough game to ensure these passes and these catches.

This is therefore a first serious principle: *muscle at the service of thinking*. It is in the name of this principle that we proscribe all obstruction.

We translate this onto other words: “*free trajectory*.” Thus the rule becomes for every player: let [the other person] play, do not distort the move, and do not hinder the spatial expression of the player in possession of the ball.

This principle applies to *any path of the ball*, whether it be a shot, a pass, or a rebound. Under all these circumstances, the trajectory must be ensured and perfectly free. From the moment when the trajectory is evident, every player for whom the ball is not intended must make sure to ensure the freedom of the trajectory.

We even go very far in this domain; we think that every move of an opponent that can distort the reactions of catching is condemnable. For example, it often happens that a player makes a mistake: a ball is in the air, a ball that is not addressed to him (to which he has no right). By mistake, he makes a slight catching movement. In so doing, he causes a bad catch by the “legal” catcher and this mistake can result in a missed catch. The error is counted against the team to which the mistaken player belongs.

A hindrance can be not *spatial* (ill-considered move), but a word: we have observed players who, to make the opponent miss, cried out or asked a question, in brief, who intervened in such a way as to hinder the action of catching. This is a manner of preventing the “free trajectory” (which presupposes: leave to the players every possibility for catching).

There are naturally *limited cases* that lend themselves poorly to refereeing. Here, when that happens, *the point is cancelled* and the ball is thrown back into play (See the rules of the game, n.d.I.R.).

Among these cases to be identified, here are two that must be pointed out:

- a) (plate 24, page16.) The player (a) is near the forbidden line; hence nobody can position himself

more forward. *A teammate occupies exactly the mirror image of the position*, the only one that enables a favorable catch. In the event that the shot is made, the opponent who should catch, stuck in the back of said player, does not know where to position himself. His views is obstructed in the direction of the frame, and it is easy for the player who is launching the ball to slightly modify the angle of attack, and the ball rebounds next to his teammate. In other words, the so-called mirror image of the position must be respected for the catch, and *if an opposing player occupies this favorable position, he is wrong*, and the point can be called against him. In other words, when a player has the ball in his hand, at all times, *the mirror image of the position must be free* for the opponent who wants to make the catch.

b) (plate 25, page 16.) A player (a), still positioned near the forbidden boundary (it is the proximity of this zone and of the frame that creates the possibility of such a situation), shoots and *moves in front of the frame*, in the same direction as the ball. *He has blocked the view of the catcher* and he has made a screen with his body. Even if he does not catch the ball on his own body, which can happen and which happens frequently, the point is lost for him. *He has made an obstruction*. He should have moved his body in the direction opposite to the ball.

Having run up in an ill-timed change of position, a player rapidly crosses the field at the moment when the ball rebounds from the frame; if this crossing is executed after the shock of the ball against the frame, the point is lost. Naturally, that is valid only when the player who crosses is on the same side as the thrower; in other words, from the team opposing he who must make the catch (one does not make an obstruction on one's own side). If one hinders the catch, it is an error, an error of tactic and of the team.

d) Sports ethics

We have said that the rule "*no obstruction*" is at the very basis of the game of Tchoukball. It does not only have a theoretical value; it creates the foundation for the ethics of the game, and it *constitutes the psychosocial framework of the game*.

The players of soccer and basketball are used to seeking the interception; it is even one of the important phases of the game, a fundamental technique, and they use this right as much as it is permitted. Man is opposed to man, man struggles

against man; it is a veritable body-to-body where the rules of the game try to specify where is the limit of what is permitted. The motivations are more or less *aggressive* and include an element of attacking a man, a measured, doses, limited (in principle) attack, but an attack all the same. The problem to resolve is this one: to steal the ball from the opponent.

The general motivations evolve in a climate where the action of the opponent must be aimed at and cancelled.

In Tchoukball, this aggressive direction of motivations is completely eliminated. There is never a search for an action directed against somebody, because there is never a purpose of motivation directly represented by a player. It is *only the game* which occupies the thought of the player in possession of the ball. As in chess, the player has the right to play, his means are not taken away from him, he maintains all his rights and his decision once he has reflected on the problem of the situation and has found the momentary, immediate solution he can pass to implementation and wait to see the result of his action. It is not *interrupted* by the opponent.

At the heart of his preoccupations, there is always the notion of the frame, the frame that is the means of playing his game, of trying his luck. Every motivation must pass in some way by the frame to reach the opponent, as one must cross a bridge to go from one bank to the other, and the goal is not the bridge, no more than the goal is the frame, but the player must be assured of *not being subjected to any external constraint* of any sort. He is left to his own problem and his decision, his final move, will express the end of the mental process of elaboration of the action. It is there that he will be judged.

The motivations are thus concentrated on a mental process of *seeking a situation* and nothing must be able to prevent [the player] from passing from motivation to action (See the diagram of motivations on page 14).

We find ourselves therefore in the presence of a pure process of *motivations belonging to each individual, and only to the individual*. The problems of behavior are always individual; accessible to elements of momentary and immediate information, but the solution that is brought, the motor translation of the motivation is free, never impeded by another player or by another will.

Aggressiveness is, in effect, a reciprocal confrontation of motivations that confront each other directly, one of which tries to impose itself on the other. In Tchoukball, the momentary motivations are thought out, confront each other, and judge themselves according to the “freely desired” consequences.

e) Social education of the player

These considerations explain why Tchoukball constitutes a social exercise of individual behaviors. Every decision involves the responsibility of the individual who decides, and *only his*. He is judged, consequently, according to the results of his thinking and the moves that have manifested it.

This notion of the *sole personal responsibility of the player* plays a very important role in the development of Tchoukball. In effect, the fact of not being hindered by anybody, of being left to one's own power, to one's own decision, and of acting so that one's move can be judged by all the players, teammates and opponents gives and *develops a precise sense of responsibilities*. When one has the ball, one must decide to play. Just as an airplane pilot who is in the air must land at one time or another and he cannot escape the need for landing, so the player who has the ball cannot escape from the need to play. He makes his play; he decides himself, and it there that *the feeling of responsibility with regard to the team*, with regard to the teammates, begins.

One cannot insist too much on the importance of this feeling, which is a sort of *social sensation*. We have talked about this with regard to collective psychology, but it is good to insist on the fact that this feeling of responsibility is possible only because nothing comes to hinder the player; he is left to himself and he has all the rights, hence all the responsibilities.

From the point of view of individual pedagogy, of the education of oneself, this feeling plays a very important role, and it is at the *basis of the psychosocial effect of Tchoukball*.

That is so true that when we make players used to a game of aggressiveness play Tchoukball, it is very difficult to make the rules of the game be respected. Every person always has the intention, the tendency to intervene, to address himself to the man, to prevent him, and he must be trained to refrain from direct interventions against someone, for it indeed a question of that. When all is said and

done, the *player completely respects the play* (the behavior) *of the others*, of every player present on the field. He *lets the other person* construct his game, and he grants him the absolute right to choose his personal conduct. This respect for *the other* is also one of the important psychological bases of Tchoukball and comprises educative consequences from the point of view of social psychology that are for us the *fundamental elements of Tchoukball*.

The *psychological clarity* thus obtained manifests itself in a game of *social psychology* that gives to this group psychology a very particular and characteristic aspect.

With regard to the comparison with games where aggressiveness is authorized, and is a part of the general plan of action, one may add this: in these games, the aggressive motivations develop very complex secondary processes, the purpose of which is the possession of the ball by all the means allowed and the psychophysiology has a very questionable result.

f) Combativeness and aggressiveness

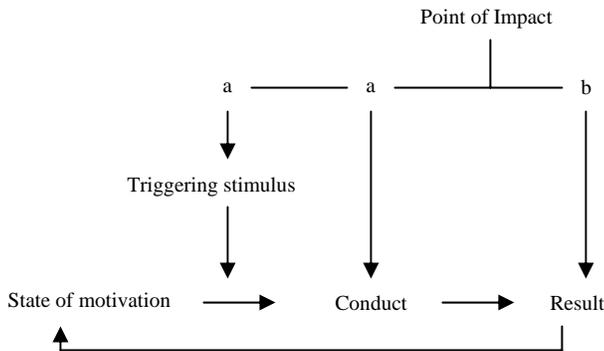
It is time to return to the *comparative notion between combativeness and aggressiveness*. *Combativeness* is a fundamental, active personal attitude, giving the individual the ambition and the desire to actively achieve all that he can to reach the goal. He fights, that is to say that he conducts himself in all situations like *somebody who wants to obtain the result*. This combativeness also consists of *non-resignation to defeat*: it is the desire to exert oneself, to move, to act so as to realize all the possibilities of the actions that the game comprises.

Aggressiveness comprises a *negative element: to neutralize the opponent*, to take away his means, to take away from the opponent the right to achieve his personal move. We think that in group psychology, this notion is very important. It is defensible naturally, one can no doubt find a justification for it, but we think also think that, in most cases, the *notion of combativeness without aggressiveness* present unquestionable advantages, a cleanliness of the game and of social conduct that create their educational foundation.

In Tchoukball, the motivations confront each other not at the level of direct individual attacks, but at the level of results. If one wants to refer to the diagram of motivations, drawn up by the physiologists (See the Karli diagram in the chapter

on motivations), we find a *very interesting and evocative diagram*.

We adopt the one about which we have already spoken, and which summarizes the recent discoveries:



The position of the points of impact is characteristic of sports with or without individual aggression:

In a (aggression), the point of impact reaches the individual at the summit of the motor manifestation, and even during this motor expression.

In b (Tchoukball), the point of impact manifests itself only after the result and does not hinder in any way the individual motivations. In this case, it is evident that the play of motivations is completely different. In one case, the motivations fight each other; in the other case, they observe each other. In the one, they mix with each other, disturb each other, and give themselves over to the game of who has the strongest muscles. In the other, they are integrated in the form of motivations for action.

Now, the point of impact a) is that of neutralizing aggressiveness, *the point of impact b) is that of Tchoukball* (not intervening before the behavior, letting the act unfold until its motor expression).

The “technical freedom” of the player

All this is possible only because is not hindered by any intervention external to him. The psychophysical process that governs these diverse phases unfolds under the sole control of the individual himself. It is behavior “in the pure state,” with subsequent sanctions that constitute the consequences of the move connected with the ball.

At every change of hands, the ball triggers the same psychosocial event resulting in the external

sanction of the elaborated move. When one has read the works of Karli (See the comments in the special chapter) on motivations and their neurological localizations, one thinks that one can say that in the game of Tchoukball one has the privilege of psychosocial experimentation, of a “laboratory.”

Social experience

The resources of this phase of the game, repeated infinitely in the course of the progress of the operations, are multiple. One must add, to the value of the observations that one can make the pedagogical and psychotherapeutic interest of the psychosocial elements of collective action. The “group sanctions” that crown the totality of the individual behaviors constitute a social training where the personality finds itself constantly framed in communal action. We have experienced very often that this experience releases a social dynamism that makes certain individuals discover other horizons. The ‘introverted’ individuals are subjected to the pressure of the surrounding world and *find a completely different definition of their personality*. I see no other explanation for the psychosocial observations made up until now. Now, they exist, and the facts are there. Veritable transformations take place, which can be understood only thanks to “a personal experience.”

The addition of successive phases of elaboration of this type make the course of the game an enriching, collective experience, which does not exclude gaiety, for nothing is funnier, at times, than “missed moves” for which an extemporaneous rudimentary psychoanalysis – which everyone can do by instinct – provides explanations that “discover” the true personality. The “moral propriety” of the individual adapts itself quickly to the demonstrative aspect that the phenomenon easily assumes. However, by this system of communicative social sincerity are born interpersonal links that manifest themselves finally by what I shall call “*group friendship*.”

If there is a social moral in the sports act, it is indeed in this way that one can define it...and provoke it!

Exertion of vigilant energy

However, the richness of the phases described under the term “elaboration” can only be explained because the individual in actions subjects himself to the extreme tensional effects of his system of

vigilance. It is a considerable nervous exertion: all the more so because to each individual phase of elaboration there corresponds on the part of all the participants a tension of observation that related to the fact that each person is “concerned” by the final end of the spatial decision: the path of the ball is immediately going to provoke general reactions. The opponents who are waiting for the shot are as interested in reacting by anticipation as the partners themselves. On a limited field, where the two teams are intertwined, *one can only win by the speed of one’s “conditioned reflexes.”*

We have already said that we have observed that the result of this huge exertion of nervous energy finally manifests itself, after one or two hours of action, in a sharp decrease in the capacity for attention: this modification of nervous performance is above all manifested by the dwindling of the inter individual reactions. *The decrease in attention precedes by a long time the decline in physical form.*

That explains why the players, clearly the victims of this attack of nervous integrity, *continue to play with passion.*

This contrast is striking between the expressions of less nervous concentration and the evident, even intense, pleasure of participating in the game. When the organism still possesses enough physical resources, despite the attention unfitness, the interest of the game is such that the vigilance may lose its energy without the individual himself suspecting that. He is taken by the action and participates in the operations with subjective feelings of satisfaction that surpass the vigilance.

It is a frequent subject of astonishment to see how much certain young people show little resistance of their capacity for vigilance, but the astonishment transforms itself into admiration when one notes that the ludic instinct finds the same satisfaction in pursuing the effort while continuing to demand of vigilance an optimal participation that it does not refuse... but that it provides at a reduced dose!

g) Psychosocial analysis

The analysis that we have just made of the diverse incidences of the phase of individual elaboration of the active move obliges us to reconsider the study of the *psychosocial components* of this game.

The *elimination of aggressiveness* does not only have as a consequence the avoidance of any

external intervention coming in between the motivation and the behavior; it also *confers upon the individual action a guaranty of internal evolution* that enhances the value of the processes of fundamental integrations. Now, it is these that constitute the social personality. Man finds himself confronted with immediate social context (teammate as well as opponent) by his moves, and the moves are objectified by the trajectory of the ball. This spatial outcome links more or less well the result of the act with its motivation. The social man is constantly put to the test, but only by the appropriateness of his intimate reflexes to the environment. These are *social conditioned reflexes* by which the personality finds itself connected with the group. The psychology of small groups, so dear to social psychologists, finds here methods of execution and of exteriorization that are absolutely remarkable. Man judges himself and has himself judged by his acts that nothing neutralizes, which would distort the appreciation of his responsibilities.

One cannot prevent oneself from thinking of the *notion* so brilliantly developed by Lorenz of the “*responsible moral*” that he proposes as the basis of the future society. Without wanting, of course, to elevate the experience of the little group to the level of a universal social treatment, one cannot however avoid evoking the social effects of the “miniaturized” experimentation that man makes in the course of a Tchoukball match. *What he learns*, what he “feels” (and our knowledge of interpersonal psychology have underlined the importance of this) *is the feeling of the other*, when his behavior, developed with the support of all of the resources of which he disposes from the psychosomatic point of view, without any aggressive opposition, puts him facing his comrades in the game.

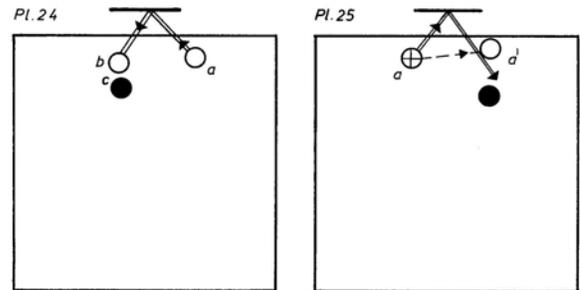
This experience, I wish it for man of every age, for it is curious to encounter men who have developed in human society without ever having experienced the sense of the bonds of social solidarity. It is these who, in the middle of the game, are always ready to refute the principles of “non-aggression” (because they have the habit of imposing their will and their desires on their social environment) and reject the framing of their personality in a social whole constantly linked to their attitudes. I have spoken at times of characterology and I can only confirm that the characterological experience of tchoukball constitutes also a psychoanalysis and a psychotherapy promised to other developments, *on*

the condition that these social experiments are conducted by men who are conscience of their responsibilities and their means of action.

The development of my thinking regarding “free motivational thinking” was possible and has presented itself spontaneously in the course of writing, because in a close, rapid game, involving the players in an uninterrupted series of actions calling for an immediate outcome, the individual feels in solidarity with a whole that presents *all the characteristics of the little group condensed in time and in space.* The experienced lived under these conditions cannot not influence the social acts of all of life.

SIGNIFICATION DES SIGNES UTILISES POUR LES PLANCHES

- JOUEUR
- JOUEUR ADVERSE
- ⊕ JOUEUR EN POSSESSION DU BALLON
- DEPLACEMENT DU BALLON
- - - - -> DEPLACEMENT DU JOUEUR
- ▬ CADRE
- ▬▬▬ LIMITE DE TERRAIN
- ▬▬▬▬ TIR AU BUT



3. THE BIPOLAR GAME

It is called thus because there are two “poles,” each extremity of the game field being occupied by a frame.

The game makes it possible to introduce 5 players and more per team. Each team is responsible for one frame: it is against this frame that the opposing team comes to shoot while trying to score a point (See rules of the game n.d.l.R.).

Like for the usual game, the ball changes sides by rebounding, but here, the team that catches must come to strike the opposing frame at the other extremity of the field (See rules of the game n.d.l.R.).

To do so, the ball must pass obligatorily through the hands of a player called “intermediate”: the latter must be in a transverse median corridor, the edges of which are 2 meters from the transverse line of the middle.

The ball cannot therefore be sent from one extremity of the field to the other above the heads of the players: it must cross the middle corridor by using the pass of the “intermediate” player.

In this game, 5 passes are permitted, but in reality rarely used (See the rules of the game n.d.l.R.).

In principle, there is a line of attack and a line of defense, connected by the intermediate player.

To make the opponent run, one must make the ball run: quick passes, short or medium, but never long, in progression toward the goal, are the most effective and at the same time the most constructive from a tactical point of view.

The other rules of the game are the same as for the usual unipolar game.

4. EDUCATIONAL EFFECTS

Introduction to the physiology applied in Tchoukball

Considerations of a scientific nature with regard to joints and muscles

We have spoken of the importance of the respiratory and cardiovascular participations on the one hand, cerebro-nervous on the other hand, in physical activities. We cannot neglect the articular and muscular factors of which we have set forth the principles in our work (*EDUCATION PHYSIQUE SPORTS BIOLOGIE, de l'éducation physique aux Sports par la Biologie*, Dr. Hermann Brandt, Médecine et Hygiène, Geneva, 1967).

Educative effects and utilitarian effects

One of the most important observations, according to us, and somewhat unexpected besides on current sports practice, is that the *repetition of the same sports move does not suffice* to develop articular and muscular optimums of the segments of the limbs concerned. In effect, there are conditions to be fulfilled so that an exercise is educative from the articular and muscular points of view.

Range of movement

Among these fundamental criteria, there is the *particular range*. That joint executes movements in

the full amplitude of their capacities or in a limited range, is very important and has considerable consequences. From the educative point of view, from the point of view of the biological maintenance of joints and muscles, movements comprising large ranges are much *more effective*. We have insisted on the fact that it is a question of the educative character and not of the performance character. One must separate, in effect, the *performance* of a movement and the *educative character* of certain exercises covering these movements.

Let us take the foot race: for the joints of the hips and the knees, the ranges used are rather medium. However, if one wants to develop to the maximum the musculo-articular capabilities of the lower limbs, it is by the *appropriate exercises comprising the maximum of extension and flexing that one will obtain that*. We have demonstrated why, we shall not return to this. We accept these truths as fundamental and consequently, we have to pose ourselves the problem with regard to a *new sport: does it meet the criteria* that are the conclusion of scientific expositions and that deal with the particular range and the muscle movements in elongation, in elastic function and with speed?

Muscular functional qualities

If the notion of articular range can suffice for the joint itself, it no longer suffices for the muscles: the muscular functions are varied, can be of different types and one must adapt one's movements to the function that one envisages as being the one to be educated.

For us the quality of strength is not the first: the noblest quality of the muscle is elasticity and speed, speed being linked to the strength of relaxation, but itself dependent in large part on the elastic qualities of the muscle fibers.

Speed, relaxation, elasticity: such are the functional muscle methods the most capable of exercising an influence on the development of the individual.

Under what conditions can one make the muscles function according to these desires methods? By evaluating the biological conditions of execution such as our work shows them, one can easily imagine the methods of movement that can help to develop these muscular qualities.

It is quite evident that the methods of contraction maintain and *condition the cardiovascular repercussions.*

Cardiovascular effects

Speed, relaxation, are accompanied by a considerable *biological exertion*, and consequently, necessitate exchanges that help to regulate the cardiovascular factor and, as a consequence, what we have called resistance and shortage of breath.

A sport that creates functional occasions using articular ranges, the capacities of speed, relaxation, and of elasticity of the muscles, these sports have particularly strong *educational coefficients.*

Educational value of Tchoukball in this domain

We shall demonstrate by the image that *Tchoukball realizes similar conditions.*

The catches and the shots demand positions that cover exactly the fundamental educational data. We group in a special paragraph the photographic confrontations demonstrative in this regard and one will be able to understand the variety of muscular-skeletal functions demanded if one remembers that Tchoukball creates numerous opportunities for flexing and for profound extensions. These functional situations are, moreover, linked to rapid movements, to executions that are rapidly linked, in

such a way that *all the ideal conditions for musculo-articular development present themselves.*

If one tries to picture at what moment an individual is called upon to jump up in extension above the ground or, on the contrary, to lower himself to the maximum on the ground, with complete flexing of the feet, knees, and hips, one will understand that these opportunities *multiply themselves with the relative size of the field.* In effect, it is because in particular, the catches of the ball must be made at often considerable distances, under variable conditions, that the organism must adapt itself to these circumstances by accepting catches at ground level, for example, fully flexed, or aerial; catches with jumping tension. In brief, the necessity of ensuring catches on a vast field, on which the ball evolves at considerable distances, requires a variety of movements that comprise *all the range of functional possibilities,* and consequently, pedagogical utilities.

Educational Strength and Capacity for Execution

Evidently, he who is not capable of great extensions while jumping to intercept a high ball, or who cannot lower his hands to the level of the ground for a low interception with complete flexing of the lower limbs, can do without such executions. If one puts him in activity on a restricted field, his weak capabilities can suffice. However, if he develops on a rather large field, which necessitates large spatial movements, it is evident then that the individual who is capable of considerable extension-flexion occupies the space much better than he who is limited in this regard.

One can ask oneself therefore whether, in the game, one does not obtain a sort of spontaneous selection the result of which is that the individual who cannot does not execute flexions or extensions, and consequently, does not educate himself from that point of view. We recognize that, in sports performance thus envisaged, one cannot expect of everybody that he will try. We note in effect often that individuals with little talent let difficult balls pass without even trying to catch them. he has thus not executed the educational movement, and that confirms our fundamental opinion that nothing replaces Physical Education.

However, if we want to *give a chance for musculo-articular development* to individuals who are not talented, it is by making them perform sports where the demand in this sense is strong, rather than

by contenting ourselves with small games where it suffices to be immobile and to wait for the ball to arrive in your hands!

The *educational strength of a sport* is measured by the capacity that it develops to “suggest” the *educational effort*, the accomplishment of a move that, being the most effective, becomes at the same time the most educational. When the desire exists to obtain a precise result, one finds the means to execute it, even if it is at the limit of his possibilities. However, the experience of physical re-education has taught us that the desired effects become achievable only when the individual agrees to attempt the difficult movement and tries to surpass this apparent limit of possibilities!

These amounts to saying that sports is educational as soon as *it demands a “limit performance”* and where the individual is actively subjected to this motor suggestion.

Moreover, the game has a considerable suggestive power: the emulation of a performance in which one has an interest to do the best possible to accumulate points, induces the individual to try often to perfect himself certainly.

On normal Tchoukball, we mean on a normal field representing athletic efforts, the individual can execute veritable *performances*, with regard to the essential musculo-articular qualities: range, speed, relaxation and, at the same time, dexterity. All of these qualities become indispensable to intercept balls, and we must here as in other chapters, point

out the interest that one has in being able to adapt the dimensions of a field, hence the qualities of technical execution, to the real functional abilities of the individuals. It is in that way that, little by little, one succeeds in obtaining improved performances, and difficult moves with a higher educational coefficient.

The practice of a team sport certainly cannot dispense us from the necessities of education that one finds in analytic gymnastics. However, in contenting ourselves with a team sport, the best will always be the one that creates opportunities for execution that approach the most the perfect educational types and we think that in this regard Tchoukball is interesting.

Our great principle has become, with experience, and always while striving to combine “the useful with the pleasant,” to try to *pass by the game to attain the education*; to oblige the organism to and the brain in particular, to make efforts comprising large educational coefficients from the physiological as well as from the psychological point of view, and even from the sociological point of view, in some way appears to us to be a happy solution to the problem. *To be subjected to the educational effects while being amused*, to obtain that which one is not looking for – the perfection of their personality – while doing that which pleases, offers this inestimable pedagogical supplement; the pleasure of the action increases the effects and facilitates the execution! The ludic instinct to the aid of the personality!