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A theoretical basis for soccer strategy.

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THEORETICAL BASIS FOR
SOCCER STRATEGY

WHITE 1950

A THEORETICAL BASIS

For

SOCCER STRATEGY

By

DAVID O. WHITE

A thesis submitted in partial fulfillment
of the requirements for the
Master of Science Degree

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TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF FIGURES

CHAPTER I

THE INTRODUCTION

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THE INTRODUCTION

Background of the Study - Soccer, like all games, is
played within a framework of rules. Change the rules, and
you change the game.

Anything done with a soccer ball that doesn't comply
with the rules of soccer is either a violation or belongs
to some other game. When in 1823 William Webb Ellis took
the ball in his hands and made his historic run, he was no
longer playing soccer. He was, as the tablet erected near
the site states, originating the distinctive feature of the
rugby game. Dr. Naismith's experiments in 1891 with a soc-
cer ball and a peach basket led to the invention of basket-
ball.

Since the rules of association football were published
in 1863, changes have been made in the game by changing the
rules. The offside rule was revised in 1866 and again in
1925. The two-handed throw-in was introduced in 1882; the
penalty kick, in 1891. The goalkeeper was restricted from
using his hands except in his own penalty area in 1912. This
year the National Collegiate Athletic Association decided to
change the throw-in to a kick-in.

The effect of a rule change is not always easy to predict.
In 1925 the changing of the offside rule started an interesting
chain of events. For a short while the rule change increased
the scoring in the game as was hoped. In three years, however,

a new system of defense, the three-back game, was developed
which, as a study by Ivan Sharpe indicates, has been reduc-
ing the scoring of the leading teams in the British Isles
ever since.[1]

In spite of this wide recognition that rules make the
game, a review of the literature, listed in the bibliography,
indicates that a study of the effect of the rules on soccer
play has not been made. The reasons for this apparent omis-
sion are not hard to surmise: The laws of the game are re-
latively simple and have been in effect with very little
change since 1863; the development of ball control skills
is undoubtedly the most important aspect of building a team.
The answers to where and how to play eleven good men (if you
have them) have been answered emphatically by long experience
with a very stable set of conditions. The impressive records
of outstanding teams provoke the question, "How did they de-
velop such superiority on the field?", rather than, "Why do
they play soccer that way?"

The answers to the question "Why?" are not simple. A
theoretical understanding of the problem of deployment, for
instance, does not begin and end with a description of the
two and three-back games. The use of any system of deployment
must be based upon considerations of ball control, player en-
durance, implications of the offside rule, and in the final

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1. D.Y. Yonker, "Soccer Defense"-Two or Three-back?",
Soccer Official Guide, p. 13.

analysis all other aspects of soccer play. The answers to
such specific questions, therefore, depend upon the answer
to the general question, "How can eleven men be used within
the framework of soccer rules to best achieve the objects
of the game?" A guide to the answer to this basic question
can be found in the principles of soccer strategy.

Definition of Terms - Strategy has been defined as
"the science and art of employing the armed strength of a
belligerent to secure the objects of war."[2] The term strat-
egy, applied to the game of soccer can, therefore, be defined
as the science and art of employing the strength of the team
to secure the objects of the game of soccer.

The term "team strategy" has been used by E. R. Slade[3]
in reference to material which is more correctly described
by other authors as the two and three-back games. A theory
of soccer strategy must, as stated above, take into account
all of the significant factors which affect the proper use
of the strength of the team. The literature listed in the
bibliography of this study failed to disclose that a theory
of this nature has been developed.

Purpose of this Study - The purpose of this study is,
then, to weigh systematically all significant factors which
pertain to soccer strategy. The most logical way in which to
achieve this aim appears to be through the use of the rules as

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2. Webster's Collegiate Dictionary, p. 984.

3. E. R. Slade, Soccer, p. 29.

a foundation for and a guide to the organization of material. In this way the study proceeds from a discussion of aims and objectives through a discussion of problems arising out of the various rules and their applications, to a general statement of the principles of soccer strategy.

The Probable Value of the Study - The absence of principles of soccer strategy based on the laws of the game indicates that the two classic systems of deployment, the two and three-back games, have a basis in experience but not in principle. The potentialities of the three-back game existed for years before they were generally realized through experience,[4] although the relatively rigid adherence to the five-three-two-one system of deployment provided optimum experimental conditions.

Adherence to the five-three-two-one system of deployment did not facilitate the development of the three-back game because its poison had killed strategic thinking long before 1925. A reading of all the books and articles recorded in the bibliography of this study failed to produce one suggestion that there can be any alternative to the two or three-back game. The idea of having forward, halfback and fullback lines is as firmly established in soccer thinking as the idea of having eleven men on a team. The difference is important, however, for the concept of "three line" soccer is based on

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4. D. Y. Yonker, op. cit., p. 17.

limited experience, and the concept of eleven men is fixed
by soccer law.

Although the coach of today is offered the broad choice
between the two and three-back systems, he is still obliga-
ted to develop a group of eleven specialists in ball control
and function: a fast man on the wing to quickly penetrate
the defense; a clever man on the inside to set up the play;
a marksman at center forward to score; and possibly a veri-
table "police dog" at center half to stop the opposing center
forward; etc. In developing specialists in ball control
skills and function to meet the requirements of a two or
three-back system, he completes a vicious circle, because he
can't use his players as "free agents" if he wants to. It
is considered smart strategy to allow a center forward to
swing out to a wing position occasionally during an attack,
and an interchanging of positions by the two fullbacks is
considered standard procedure. But not until the possibilities
of using a "fullback" to score a few goals have been explored
can any one be sure that full strategic value of eleven men
has been realized.

This study, approaching the game of soccer as a science,
attempts to supplant an easy going philosophy of abundant
self-expression with a set of guiding principles which will
eliminate the aimless fiddling of inexperienced players and
the perfected diversions of ball control artists. It attempts
to reach beyond those areas of soccer play outlined in des-
criptive analysis, and into areas for which descriptive analy-

sis presumes experience but cannot provide the answers. It attempts by orienting all action toward achieving the widest possible margin of victory to pin the responsibility for widening that margin on every action of eleven players all the time the game is in progress. It attempts by developing the basic principles of team organization to provide a basis for intelligent experimentation with new types of attack. The practical value of this study depends on the soundness of its principles and, if they are sound, on the intelligence with which they are applied.

CHAPTER II
METHOD OF PROCEDURE

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METHOD OF PROCEDURE

A survey of soccer literature indicates that a theory
of soccer strategy has not been developed. In America, lo-
cal climatic conditions and our sporting habits present a
native and perennial problem of fielding teams after a few
short practice sessions for short seasons. A common under-
standing of principles of soccer strategy should provide a
firmer basis for unified team action.

Statement of the Problem - It was the purpose of this
study:

(1) To gather material pertaining to soccer
strategy from available soccer literature.

(2) To develop a theory of soccer strategy from
this material.

(3) To determine the validity and practical
value of the developed theory of soccer strategy by sub-
mitting it for examination to a jury comprising coaches of
leading college, preparatory school, and high school teams.

Sources of Data - Three widely accepted and thorough
books on soccer were selected for intensive examination.[5]
During their examination a card index was used to file all
statements which pertained directly or indirectly to pro-

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5. J. Dimmock, Association Football; David Jack, Soccer;
Bill Jeffrey, The Boys with the Educated Feet.

blems of soccer strategy. The page in which each statement
was found was listed to permit later reference to context.
A systematic consolidation of this material with appropri-
ate cross references provided the basic file to which fur-
ther additions were made in the same manner during the read-
ing of the rest of the literature found in the bibliography.

The rules used in this study are those of the National
Collegiate Athletic Association and were taken from the Of-
ficial Guide of 1949. Revision of the rules, effective this
year, were taken from the Newsletter (March 1950) of the
National Soccer Coaches' Association of America.

Development of the Theory of Soccer Strategy - In the
absence of any precedent the development of a theory of soc-
cer strategy presented several problems of organization, and
proceeded largely on the basis of clues which were followed
up by trial and error.

Present studies of the
game of soccer analyze a high-
ly developed game and provide
the answers to many of the
problems of developing soccer
strategy: The limits of ball
control have been fairly well
defined; the methods of achiev-
ing them have been far advanc-
ed; the functions of the players

Figure 1. The limits of ball
control have been fairly well
defined.

have been carefully described and compared. It has produced

a descriptive analysis of the game. The limitations of descriptive analysis become obvious when the separate functions of eleven different players are found to be so numerous that the problem of memorizing them, to say nothing of the problem of relating them in innumerable game situations, demands an IBM recorder. Descriptions of the functions of the "line", or "W" or "double M", or "triangle" formations clarify segments of play. But descriptive analysis neither produces a logical theoretical basis for understanding soccer strategy nor provides a guide to its organization.

The old army truism, "It all depends upon the situation and the terrain", offered a better clue to organization. The rules of soccer determine the terrain and many of the conditions of the situation. The major implications of the truism seemed to be that a soccer player in any situation should be guided by principles based on the relative positions on the field of twenty-two players, the developing situation, and the possibilities for future action - and that the development of a logical theory of strategy precludes the use of any preconceived ideas of position play, line functions, offense, or defense. As the study proceeded, the facts relating to the effect of changing the offside rule in 1925 seemed to substantiate these facts.

Parts of the original outline and many pages written to develop ideas proved to be little more than exercises in getting rid of preconceived ideas about soccer strategy. Work on the study proceeded in an uneven fashion as ideas

were developed for inclusion or rejection.

An attempt was made to stick to the main aspects of soccer strategy. Voluminous material on proper methods of developing ball control is available in several texts. Its incorporation in this study along with similar additions in regard to other aspects of the game would detract from the development of the main theme.

Validity of the Study - The study is theoretical in nature. The validity of its basis of organization, its development of material, and its application are open to question. In lieu of the opportunity to test its practical use as a coaching aid over a period of time, this study was submitted to the following jury of soccer coaches for examination:

Marvin Allen, University of North Carolina, Chapel Hill, North Carolina

William Jeffrey, Pennsylvania State College, State College, Pennsylvania

A. W. Marsh, Amherst College, Amherst, Massachusetts

Leon Stanne, Hopkins Academy, Hadley, Massachusetts

Earle Waters, West Chester State Teachers College, West Chester, Pennsylvania

D. Y. Yonker, Drexel Institute, Philadelphia, Pennsylvania.

CHAPTER III

DEVELOPMENT OF PRINCIPLES OF SOCCER STRATEGY

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DEVELOPMENT OF PRINCIPLES OF SOCCER STRATEGY

Factors Affecting Soccer Play - A theory of soccer
strategy must take into account all the significant factors
which affect the proper use of the strength of the team.
Before attempting to develop a theory of soccer strategy it
is necessary to consider both the number and the nature of
the factors affecting soccer play.

Laws of Soccer - The laws which govern soccer play are
few in number and can be separated into two groups - those
which have a direct bearing on soccer play and those which
apply to the conditions under which soccer play shall take
place. The latter group of laws determine the functions of
the officials and should be familiar to the soccer player.
Familiarity with these laws eliminates penalties based on
such technicalities as failure to report correctly to the
referee and insures smooth progress of play.

The group of laws which will be considered in detail
in the following pages are those which have a direct bear-
ing on soccer play and determine:

   (1) The object of the game

   (2) The size, shape, and zones of the field of
play

   (3) The size, shape, and position of the goals

   (4) The qualities of the soccer ball at the
start of play

(5) The number of players on a team

(6) The manner in which goals may be scored

(7) The manner in which the ball may be controlled.

These laws are absolute in theory and affect all soccer play. In practice some are subject to interpretation by the referee.

Other Factors - All other factors which determine soccer strategy are variables which modify the application of general principles which can be deduced from these laws. For this reason the laws form the basis of soccer strategy.

The variables which modify the application of the general principles of soccer strategy are:

(1) The ball control skill of the opposing players

(2) The ball control skill of one's teammates

(3) The tactics or strategy of the opposing team.

Experience has defined in a general manner the limits within which these variables can affect the play. Climatic conditions, the condition of the playing field, the condition of the ball, and the mental and physical condition of the players affect ball control but do not affect basic principles of soccer strategy.

> Law of Soccer: The team scoring the greater number of goals during a game shall be the winner: If no goals or an equal number of goals are scored, the game shall be termed a "draw".

Aim of Soccer Play - The aim of soccer play is to score a greater number of goals than the opposition. The margin of victory lies in the difference between the numbers of goals scored. The primary function of a soccer

team is to score, and the primary function of a player is
to contribute his maximum effort toward insuring the most
effective functioning of the team.

Any attitude or rationalization which places any other
aim or objective above that of scoring is detrimental to
effective team play. Exhibitions of highly perfected ball
control skills, of superb midfield team play, of magnifi-
cent goal line "saves", or sparkling aggressiveness can
contribute to making but do not make a winner. All action
on the field of play must be directed by will, by intelli-
gence, and by understanding to widening the margin of vic-
tory without loss of time or effort.

Objectives of Soccer Play - To achieve its scoring aim
a team must be able to accomplish these three objectives:
to gain possession of the ball; to create scoring situa-
tions; and to carry scoring situations to completion. Team
action must be guided in such manner that the accomplishment
of each objective facilitates the accomplishment of the next
and results in scoring. Mastery on the field is determined
only on the basis of the number of goals scored.

Offense and Defense - In light of the above aim and
objectives possession of the ball is offense, and lack of
possession is defense.

These terms apply to every member of a team because the
action of individual players is always guided by team ob-
jectives. The player waiting at midfield in a critical de-
fensive situation is an important element in preventing the

opposing team from pressing an all-out attack.

Because the objectives of play are sequential, offense and defense must be regarded as relative terms. It is necessary in both offense and defense to guide team action in such manner that possession of the ball can be regained if lost, and the attack can be pressed as soon as possession is gained.

Offensive or defensive action may be initiated at any point on the field. A player who regains possession of the ball in the forward penalty area contributes as much to team defense as the player who regains possession at midfield.

Law of Soccer: The ball shall be spherical; the outer casing shall be of leather and no material shall be used in its construction which might prove dangerous to the players. The circumference of the ball shall not be more than 28 inches nor less than 27 inches. The weight of the ball at the start of the game shall not be more than 16 ounces nor less than 14 ounces and shall be inflated to a pressure of not less than 12 pounds, and not more than 13 pounds.

Figure 2. Soccer law demands a
ball with a reliable bounce.

Characteristics of the Ball - The qualities of the

ball, described above, determine the degree to which the

ball can be controlled by a soccer team. The distinctive

characteristic of the soccer game (control of the ball

without the use of hands and arms) would be lost without

a ball with a reliable bounce and a regulation size and

weight. The bouncing and flight characteristics of a ball

help determine the limits to passing and shot-to-score possi-

bilities.

> Law of Soccer: The field of play shall be
> rectangular, its length being not more than
> 120 yards nor less than 110 yards and its
> breadth not more than 75 yards nor less than
> 65 yards. The length in all cases shall ex-
> ceed the breadth.

Deployment, General Concept - The above law of soccer
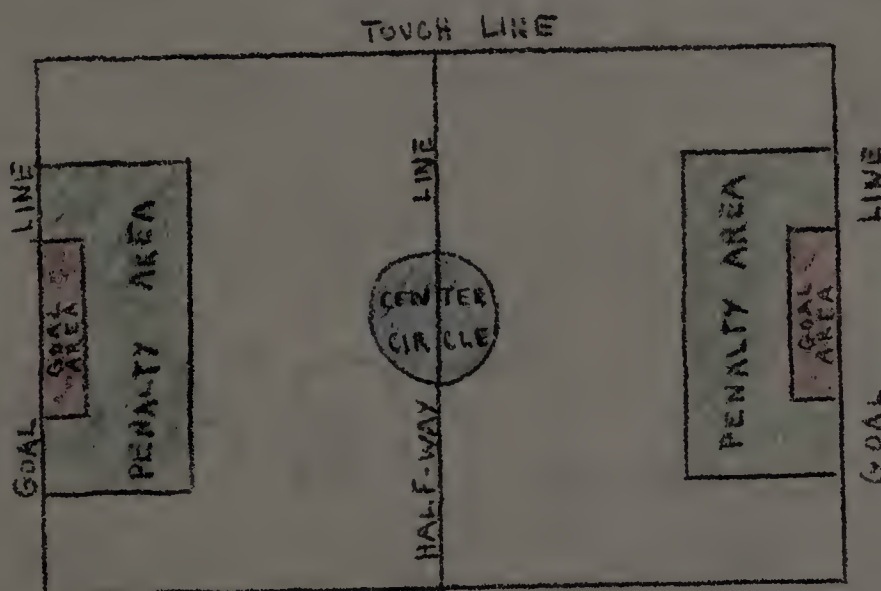
Figure 3. The Soccer Field.

limits the game to an area which can be traversed by the

ball in a few seconds and adds great weight to the strate-

gic concept, implicit in the previous chapter, that a player

is actively participating in the play while the ball is in play and should be continuously reacting both mentally and physically to changes in the game situation. Since the sum of individual reactions shapes team play, a general concept of deployment must exist if the size and shape of the field are to be used most effectively.

Deployment When in Possession - The team must be deployed in the field in such a manner that:

(I) The team can use the length and width of the field to their fullest advantage in moving the ball toward the goal.

(II) The scoring possibilities of the team will reach their maximum as the ball comes into scoring position. This may be effected by:

(A) Maneuvering the ball with such speed or deception that the defensive power of the opposition has been rendered temporarily ineffective.

(B) Concentrating the team's full offensive power against a strong defense.

Deployment When Not in Possession - The team must be deployed in the field in such manner that:

(I) The team will be able to regain possession of the ball as near as possible to the opponent's goal.

(II) The team will be able to turn any effective defensive action into effective offensive action.

Law of Soccer: The goals shall be placed on
the center of each goal line and shall consist
of two upright wooden posts, equidistant from
the corner-flags and 8 yards apart (inside
measurement), joined by a horizontal wooden
cross-bar, the lower edge of which shall be
8 feet from the ground.

Scoring Situation - The basic requirement of a scoring
situation is to have an unguarded man in scoring position
and in full possession of the ball. The size and position
of the goal determine the area within which the ball may be

Figure 4. The Goal

said to be in scoring position. The areas near the goals
are critical. This fact is recognized in the laws of soc-
cer, and there are severe penalties for foul defensive play
within the penalty areas which are shown in Figure 3. The
extension of the penalty area laterally along the goal line
to a distance of 18 yards from the goal posts is reasonable
since passes from this area provide excellent shot-to-score
possibilities.

The success of a shot-to-score depends upon the follow-

ing factors:

(I) The distance between the marksman and the goal.

(A) The possibility of scoring decreases as the distance increases because:

(1) The demand for accuracy increases: The goalkeeper has time to cover more of the goal mouth and the margin for error increases - as illustrated in Figure 5.
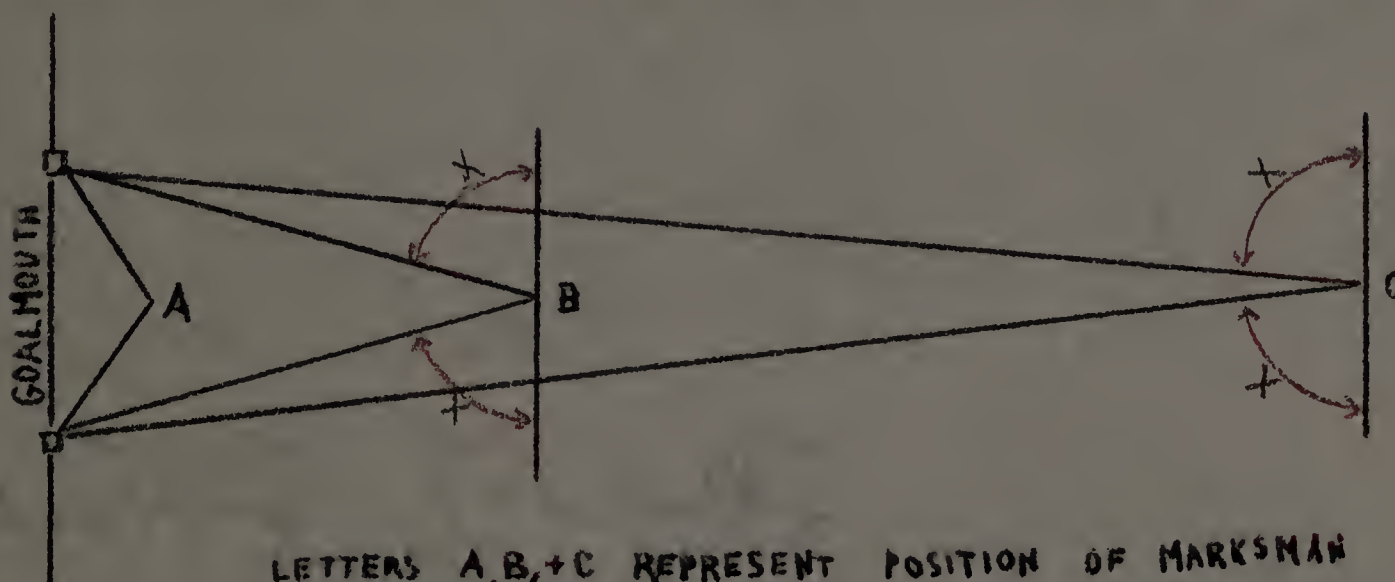
LETTERS A, B, + C REPRESENT POSITION OF MARKSMAN
MARGIN FOR ERROR IS REPRESENTED BY ANGLE X

Figure 5. Diagram of the Effect
of Distance on a Shot-to-Score

(2) The demand for power increases because the goalkeeper has more time to get behind the ball. Accuracy is usually sacrificed for power.

(B) 25 yards is considered to be a long shot at a well-tended goal..

(II) The angle of the flight of the ball with the goal mouth..

(A) The possibility of scoring decreases as
the angle which the goal subtends at the point from which
the shot is made decreases, as shown in Figure 6.
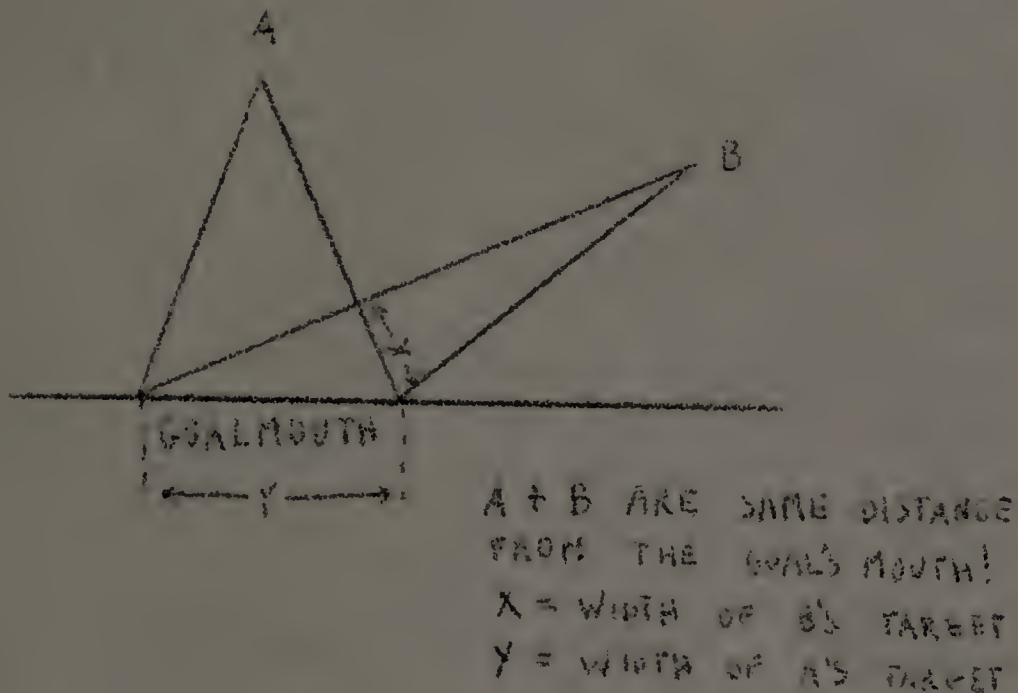
Figure 6. Diagram of the Effect
of the Angle on a Shot-to-Score.

(III) The goalkeeper and the situation.

(A) The possibility of scoring decreases as
the goalkeeper's opportunity to anticipate and prepare for
the shot increases as illustrated in Figure 7.

Figure 7. A Tough Situation and a Well-Prepared Goalie.

(1) Shots to the goalkeeper turn offensive actions at their most critical stage into critical defensive situations. Such shots are among the most costly of all soccer tactics.

(B) The possibility of scoring decreases as the opposing team's opportunity to anticipate and prepare for the shot increases.
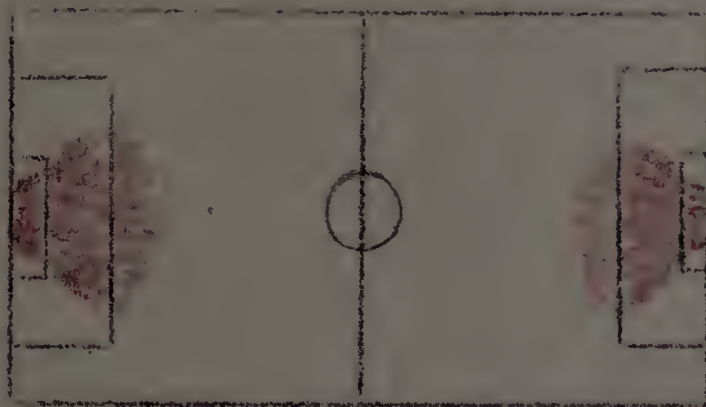
Figure 8.   Diagram of Field Showing Critical Areas.

Law of Soccer: A player is off-side if he is
nearer his opponents' goal line than the ball
at the moment the ball is played unless:
(A) He is in his own half of the field of play.
(B) There are two of his opponents nearer to
their own goal line than he is.
(C) The ball last touched an opponent or was
last played by him.
(D) He received the ball direct from a goal-
kick, a corner-kick, a throw-in, or when it is
dropped by the referee.

Punishment - For an infringement of this law,
an indirect free-kick shall be taken by a
player of the opposing team, from the place
where the infringement occurred.

A player in an off-side position shall not be penalized unless, in the opinion of the referee, he is interfering with the play or with an opponent, or is seeking to gain an advantage by being in an off-side position.

Off-side Law - This Law of Soccer limits the speed of offensive action by placing severe restrictions on the use of forward passes in the forward half of the field. It supports a mass attack in the forward half of the field by permitting all attacking players to move up to midfield in support of the attack (except the goalkeeper), but it annuls this advantage by concentrating the defending forces in the same area. Since small advantage can be gained by the defense's attempting "to play the opposition off-side", the off-side law is of greatest concern to the attackers and to the referee, and putting a player in possession of the ball when there is no one to stop him except the goalkeeper is a neat trick of the trade. ·

Interpretations of the off-side law are thoroughly covered in the annual soccer guide.[6]

> Law of Soccer: A player shall be penalized if he:
> (a) kicks, strikes, or jumps at an opponent.
> (b) trips, including throwing or attempting to throw an opponent by use of the legs, or by stooping in front or behind him.
> (c) intentionally handles the ball, i.e., carries, strikes or propels it with the hand or arm. (This does not apply to the goalkeeper within his own penalty area)
> (d) holds or pushes an opponent with his hand or hands, or with his arm or arms extended from his body, or uses the knee in any way against an opponent.

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6. Alfred A. Smith, editor, Soccer, Official Guide of 1949, pp. 90-94.

(e) charges in a violent or dangerous manner;
or charges an opponent from behind unless the
latter be deliberately obstructing.
(f) charges the goalkeeper, who is in possess-
ion of the ball, i.e., holding the ball.
(g) charges a player when he is in the air and
has both feet off the ground in an effort to
receive the ball.
(h) places his hands or arms on an opponent in
an effort to receive the ball.
(i) kicks or attempts to kick the ball when it
is held by the goalkeeper.
(j) when playing as goalkeeper takes more than
four steps in possession of the ball.
(k) joins his team after the game has commenced
or returns to the field of play while the game
is in progress, without reporting to the referee.
(l) plays in a manner considered by the referee
to be dangerous.
(m) is guilty of ungentlemanly conduct.

This is not intended to penalize all charging:
It is permissable as long as, in the opinion of
the referee, it is fair and is made when the ball
is within playing distance of the players con-
cerned and they are definitely attempting to play
it.

In the event of a player being ordered off the
field for tripping, jumping at, kicking or strik-
ing an opponent he cannot again come back into
the game.

Punishment -
(1) Direct free kick for any infringement out-
side the penalty area of: (a), (b), (c), (d),
(e), (g), (h)
(2) Penalty kick for any infringement inside of
the penalty area of: (a), (b), (c), (d), (e),
(g), (h), (i) by the defending team.
(3) Indirect free kick for any infringement of:
(i), (f), (l), (k), (j).

Penalties - The penalties incurred for infractions of

these laws are severe enough to warrant the following dictum

of strategic importance, "Play the ball and not the man!".

If the opposition weakens its attack by incurring penalties,

every effort should be made to capitalize on each error. The

laws of soccer protect the scoring interests of the team
that concentrates completely on the ball.

Individual Ball Control Skill - The laws of soccer also
dictate that the ball shall be controlled without the use
of the hands and arms (excepting the goalkeeper in his own
penalty area). The problems of ball control must, therefore,
be solved by the use of the head, the trunk, and the lower
extremities. A full understanding of the principles of team
play and a determination to use every ball control opportunity
to its greatest scoring advantage is the prize requisite of
all skills and tactics. Ball control skills are developed
for specific tactical purposes and the value of each must be
considered in terms of the requirements of the tactical sit-
uation in which it is used.

Tactical situations make four demands on individual
ball control skills: To gain personal control of the ball;
to maintain personal control of the ball; to pass the ball
to a teammate; and to score. All tactical situations demand
a high degree of control of the direction of the ball, and
most tactical situations demand a high degree of control of
the velocity of the ball. The construction of the human ana-
tomy and the behavior of the soccer ball are such that accur-
acy must usually be sacrificed for power. Tactical situations
demand that the highest degree of accuracy compatible with the
required degree of force be used.

Principles of Individual Ball Control - Unfortunately
the human anatomy is so constructed that its flattest sur-
faces are the softest and least mobile. The chest and the
abdomen are useful primarily in stopping the ball. The
hard relatively flat surface at the top of the forehead is
primarily useful for changing the direction of the ball al-
though movement of the head makes it possible to increase
the momentum of the ball somewhat. The locations of these
areas are such that their range of usefulness is limited.
Ball control must be achieved to a very great extent by
the use of the more irregular and highly adaptable sur-
faces of the lower extremities.

The following principles provide a basis for under-
standing how a practical balance between accuracy and power
may be achieved:
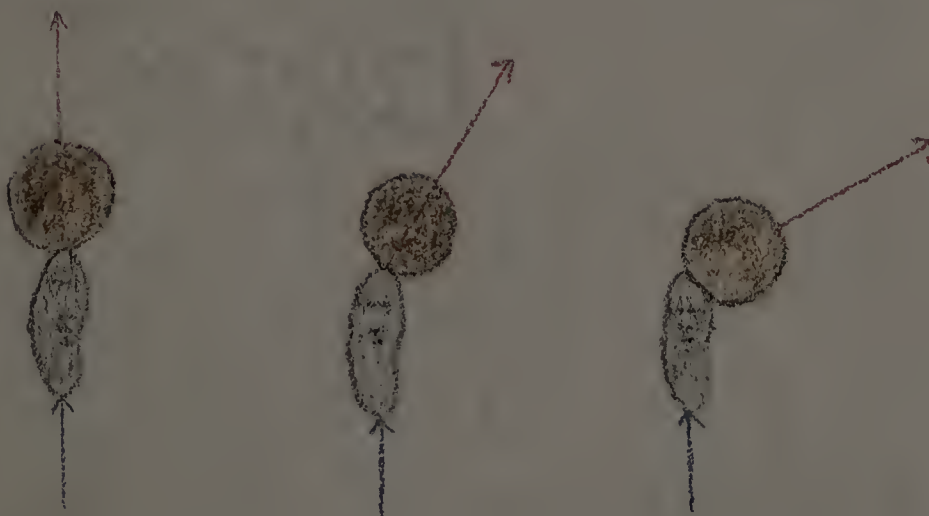
Figure 9. Diagram Illustrating the Effect of Changing
the Point of Contact on the Ball's Surface.

(1) When a soccer ball is met by a directed force,
the direction of its flight is roughly parallel to a line

drawn from the point of contact through the center of the
ball as illustrated by Figure 9.

Neither Figure 9 nor the above principle covers the
complications which arise when the ball as well as the toe
of the boot is in motion.
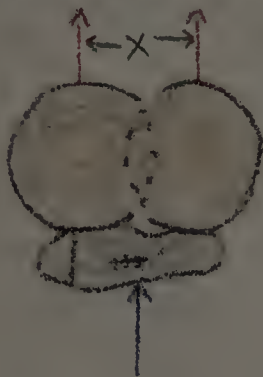
X = CHANGE OF RELATIVE
POSITION POSSIBLE WITH-
OUT LOSS OF ACCURACY

Figure 10. Diagram Illustrating
the Value of Enlarging the Surface
by which a Force is Applied to the
Ball.

But the fact that the momentum
of the ball, the momentum of the
foot, the direction of the ball's
motion before impact, affect the
direction of the ball after im-
pact places extreme emphasis on
the necessity for finding ex-
actly the right spot when a force
is applied at a point on the
ball's surface.

(2) The simplest solution to the problem of controlling
the direction of a moving or bouncing ball as indicated in
Figure 10, is to enlarge the surface of contact.

The top of the forehead
where the skull is strong is
a broad hard surface which can
be used to change the direction
of the ball. The eyes should
be kept on the ball, and both
the muscles in the neck and the
momentum of the body can be used
to add momentum to the rebound

of the ball.

The chest and the abdomen
have relatively soft flat sur-
faces which can be used to gain
personal possession of the ball,
i.e., stop it in such manner
that it drops into control at
the feet. The use of the pocket
formed by the stomach and the
thighs can be used to stop balls
which are travelling at speeds
so great that it is necessary,
both for comfort and to prevent
a rebound, to give quickly with
the ball at the moment of impact.

The trap formed by the sole
of the boot and the ground is
useful in stopping bouncing or
rolling balls coming from the
front.

The surface of the inside
of the foot and ankle is the
most useful in soccer play. By
allowing the leg to hang free at
the knee and allowing this sur-
face to give with the ball, the
player will find that he can
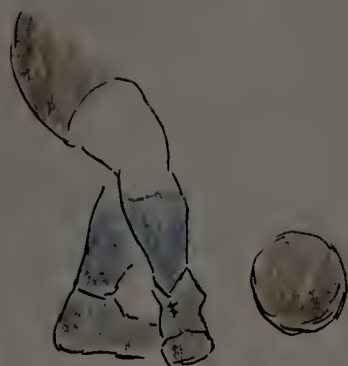
easily stop the ball "dead"
or deflect it with accuracy and
the desired force. The lateral
rotation of the foot permits
the use of the hip joint to
impart great force through the
inside of the foot. Good co-
ordination at the hip joint and in rotating the foot insures
the player with the means of accurate split-second changes of
direction and power. The use of the inside of the feet is the
most adaptable skill in soccer play. In dribbling, short pass-
ing, short shooting-to-score, and trapping, the effective use

of the inside of the feet
is indispensable.
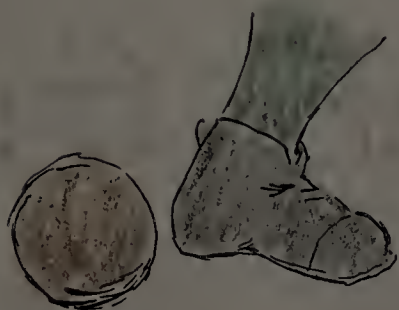
The outside surface
of the feet and ankle is
not quite so adaptable and
in some cases not so effec-
tive as the inside surface
of the feet. It is, however,
used in a similar manner,
and its lateral action can
be used to great tactical
advantage in suddenly chang-

ing the direction of a dribble or the ball, in making a quick
lateral pass, or in making a quick lateral shot-to-score.

Great power coupled with accuracy can only be achieved by the instep kick in which the forward movement of the body, the forward movement of the thigh, and the snap of the leg at the knee joint impart a speed to the broad surface of the instep, that can send the ball half the length of the field. The surface area of the instep is neither as broad nor as maneuverable as that of the inside of the foot and should be used only when the tactical situation demands more force or distance than the inside of the foot can provide. The instep is used for shooting-to-score or passing long distances.

The point of the toe provides the most powerful and inaccurate kicking surface in soccer. It should be used only (if ever) when the ball is stationary. Kicking at a moving ball with the toe of the boot often provides a player with his most spectacular means of ending his team's attack and presenting the ball to the opposition.
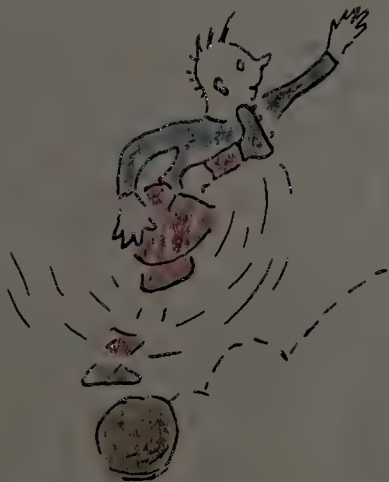
There are numerous variations of the above methods of
ball control; i.e., the pivot kick, overhead kick, and the
instep kick with the outside of the feet are all useful var-
iations of the "instep kick". Methods of learning and using
them are described in detail by many authorities. The player
should strive continually to improve his ability to control
the ball.

The ability to communicate either by voice or by sig-
nals with teammates plays an important part in ball control.
A player can often assist a teammate who in playing the ball
has little opportunity to survey the field for an opening.

The ability to "feint" falls under the heading of ball
control skills. A "feint" is a movement or gesture which,
when effective, causes the opposing player to move out of
position or to lose control of the ball.

> Law of Soccer: Except as otherwise provided
> by these laws, a goal is scored when the whole
> of the ball has passed over the goal line,
> between the goal posts and under the cross-
> bar, provided it has not been thrown, carried or
> propelled by hand or arm, or carried by a play-
> er of the attacking side.

Tactical Use of Ball Control Skills - The above Law of
Soccer indicates that any ball control skill mentioned in
the preceding pages may be used to score. Any ball control
skill can be used to score if the right situation arises.
But team action must be coordinated to create scoring sit-
uations which can be easily produced and easily carried to
successful completion.

Tactical situations make four demands on individual ball control skills: To score; to gain personal control of the ball; to maintain personal control of the ball; to pass the ball to a teammate. A common understanding in regard to the most effective use of ball control skills in tactical situations coordinates the action of the passer and the marksman, of the passer and the potential receiver; in short, it assists in coordinating the action of the entire team.

Scoring Situations - A scoring situation is created by coordinated team action for one purpose - to score. It may be the product of a quick break from the far end of the field, of tough maneuvering through a well-organized defense, of clever field tactics, or of a well-organized cordon around the offensive critical area. Any tactic which is liable to turn a hard won opportunity to score into a defensive situation has no place in soccer strategy.

Heading in a Scoring Situation - A teammate should not be forced to "head to score" unless he enjoys a clear superiority in the air near an untended area of the goal. Heading in a scoring situation is most useful in changing the direction of a "shot to score" which might fly wide of its mark or to direct a "loose ball" downward to the feet of a teammate. Unless the scoring situation demands a "head to score", a surer scoring tactic should be initiated which involves the use of the feet. Superiority in height is an advantage near either goal mouth.

(1) The scoring range of a "head" is limited and

depends to a great extent upon the velocity and accuracy of the pass.

(2) Balls coming down within this range are often within the reach of the goalkeeper.

(3) Balls coming toward the goal are most easily headed by opposing players who face them.

(4) Balls lofted into scoring range allow the opposition time to act.

Use of the Trunk in a Scoring Situation - In a scoring situation emphasis must be placed upon both speed and finesse. The operation of stopping the ball with the chest or abdomen in order to bring it under control takes time. Even more than heading, the use of the trunk in a scoring situation should be based on expediency and not on design.

Use of the Feet in a Scoring Situation - A player in control of the ball within the offensive critical area is a triple threat. He can advance the ball himself, shoot-to-score in an instant, or pass the ball to a teammate for a shot-to-score. Scoring situations based on the use of the feet offer a wide variety of possible solutions. For this reason keeping the ball on the ground when trying to carry a scoring situation to completion is sound soccer strategy.

(1) Always shoot for the least tended area of the goal.

(2) A goalkeeper can cover the area in front of himself better than the area behind.

(3) A goalkeeper can go after high balls quicker

than he can drop for low balls.

(4) If the goalkeeper is standing with his feet together or slightly off balance, shoot as widely as possible to the weaker side.

(5) Never waste a good scoring opportunity or waste a shot on a bad one - shoot to score, or move the ball to a better position, or pass to a teammate who is in a better position.

Gaining Personal Control of the Ball - In a few seconds asoccer ball can travel the length or width of the field. At all times during the game players should be positioning themselves according to the dictates of a strategic and tactical understanding of their team's play. Anticipation of the developing play will mean being in the right place at the right time with the right tactical answer.

Receiving a Pass to Gain Control - Making the best tactical use of a pass is the principal task of the receiver. Once the passing play has been set in motion, every effort should be made to carry it to a successful completion. The receiver should be prepared to go up in the air for an anticipated pass to the feet, prepared to meet a pass which lacks momentum, or prepared to dash after a pass which has been placed too far ahead. Receiving a pass may mean changing the ball's direction to pass it to a teammate or to bring it under personal control. The ball should not be allowed to bounce, and its progress toward and through the goal should be continuous. A dead trap is usually a tactical error.

A team must have possession of the ball in order to attack. If team strategy and tactics bring a player into position to intercept a pass or to gain possession of a loose ball, he should be prepared to act with the same determination and judgment required in receiving a pass. It is easier to beat an opponent to the ball than to take it from his control. A quick burst of speed is necessary to gain control of ground balls. The shorter man should feint his intention to head a high ball and concentrate on getting the rebound.

Dispossessing an Opponent to Gain Control - If team strategy and tactics bring a player into position to dispossess an opponent of the ball, the player can force the opponent to transfer possession of the ball to himself, to lose possession of the ball, or to attempt a pass. The value of this tactic lies in its effectiveness in initiating an attack.

(I) This maneuver should be timed and executed at the moment when the opponent is least in control of the ball, i.e., when his distance from the ball is greatest or when he is in a poor position to play it.

(A) A feint can be used to attempt to maneuver him into a poor position.

(B) A shoulder charge, executed when both players have one foot on the ground, can be used to weaken his control of the ball.

(II) The foot may be used to hook or trap the ball into personal possession or to pass it to a teammate.

(III) To attempt to stop the ball by sliding is often both a dangerous and futile gesture.

(IV) "Standing off" an offensive player, i.e., refusing to act until he has made the first move, often provides the defender with an opportunity to seize the initiative.

Maintaining Personal Possession of the Ball - Because possession of the ball is a functional requirement, a player in possession should maintain possession of the ball or transfer possession to a teammate. An intelligently deployed team always provides potential receivers, and the possibilities for effective attack always determine how and when transfers of possession should take place.

The Dribble - The dribble with the feet can be used to gain ground or to pull an opponent out of position. The dribble is most useful in making a slight change of position which will enable the player or a teammate to get off a more effective pass or shot-to-score. When a player has a long clear path to the goal alone, a series of relatively long passes to himself is the surest approach to a shot-to-score. The dribble is in most circumstances a slow uncertain method of gaining ground and should not be used as a substitute for a good pass.

(I) To dribble past an opponent, feint him out of position and pass the ball beyond him to a position where it can be easily recovered.

(II) Dribbling should be in stride for both speed and control.

(III) The dribble should never be attempted in the defensive critical area.

(IV) In general a dribble is slower than a run, accumulates opposition, and should be used for this purpose rather than to gain ground.

Transferring Control of the Ball - Like the shot-to-score the pass has a definite target area and a definite tactical purpose. It should be placed at the proper speed and time at the point where it will be most useful to the receiver. The target area should be determined by a common understanding of tactics and can be verified by instructions called by the passer, the receiver, or a teammate.

A pass should be placed so the receiver can gain control of it with his feet without breaking stride, slowing down, or unnecessarily changing his direction.

In changing the ball's direction with the head, trunk, or feet, the ball should be directed downward, as a pass to the teammate's feet, in a manner similar to that described above.

> Law of Soccer: The game shall be played
> by two teams, each consisting of not more
> than eleven players.

Difference Between Tactics and Strategy - The fact that eleven players on a team are always in play while the game is in progress is powerfully illustrated during those rare "solo" attacks in which one player dribbles the ball half of the length of the field to score. If his ten teammates were so deployed that they, themselves, presented no potential threats

during this maneuver, the solo artist would do better to dribble in the opposite direction if only to keep possession of the ball.

The distinction between the actual course of offensive or defensive action, which involves ball handling by a few players and the possibilities which exist for other courses of action and involve all the players on the team is one of tactics and strategy. Tactics applies to measures actually taken in moving the ball to achieve the objects of the game. Strategy includes all other potential courses of action, which permit freedom of tactical movement.

The effectiveness of both tactics and strategy is determined by the degree to which available ball control skills are utilized and the degree to which they answer the requirements of fluid play situations in terms of the aims and objectives of soccer play. Only on the basis of this concept can the essential unity of theaction of eleven players be defined.

Tactics - A tactic can be defined as a measure, involving the ball control skills of one or two players, taken to gain an advantage in the presence of active opposition. A tactic may be used to move the ball toward the goal; to gain an advantage of position; to gain an advantage in time; to conserve energy; or to gain possession of the ball. The tactical use of ball control skills has already been discussed.

Occasionally the infraction of a rule of soccer is worth more strategically than the penalty incurred. Kicking a ball off the field is a justifiable practice in certain situations. The tactic of a player, other than the goalkeeper, using his hands to stop a sure goal is also justifiable. Such tactics should be exercised with extreme care, for strategic reasons. Ungentlemanly conduct is something else, and cannot be condoned.

When a tactic involves two players, common judgment as to where, when, at what speed, and at what angle the ball must travel to effect the most efficient transfer of possession is necessary. This problem not only involves a careful weighing of the use of the several ball control skills to be used but merges into the more general problem of strategy.

Strategy - The essential elements of soccer play have been presented and analyzed in the previous pages, and a general concept of strategy has evolved which has defined the possibilities for action within the framework of the laws and within the limitations of permissable ball control skills. These possibilities have been discussed in terms of the aims and objectives of the game and have, thereby, emerged as principles to guide ball control maneuvers. The final step in the development of principles of soccer strategy is the consideration of potential courses of action which, as previously illustrated must exist to insure freedom of tactical movement.

Potential courses of action must be real. Their existence is determined like any tactic on the basis of available ball control skills. Continual use, because of necessity, of any tactical plan, tips off the opposition as soon as it is initiated. This is true both offensively and defensively and the team which operates on the basis of a few regular patterns of action exposes itself to intelligent and effective counter action.

The basic problems of team ball control are, then, very similar to those of individual ball control. The team whose major strength lies in four or five players can be compared with a player who can kick with only one foot. It is the ability to constantly shift offensive and defensive power into the every changing critical areas of fluid game situations which constitutes real team strength.

Principles of offensive strategy are based on the assumption that certain areas of the field provide better opportunities for effective team action than others. These areas exist because opposition is absent or the balance of power is favorable and because they are accessible through available ball control skills. Since these areas need to exist only long enough to allow passage of the ball, the application of principles of offensive strategy depends largely upon the team's ability to anticipate and to use such areas before the opposition can react. Conversely, the application of principles of defensive strategy depends on the team's ability to anticipate and to control such areas.

Principles of Team Play - The areas in which the balance of power is going to exist long enough to permit passage of the ball can be anticipated in the following manner:

(I) Wide dispersion of the opposing team permits the concentration of power in the immediate area around the ball. Two players or three players can move the ball easily through widely dispersed opposition by initiating short passing tactics as diagrammed in Figure 11, designed to pass one or two opposing players at a time.
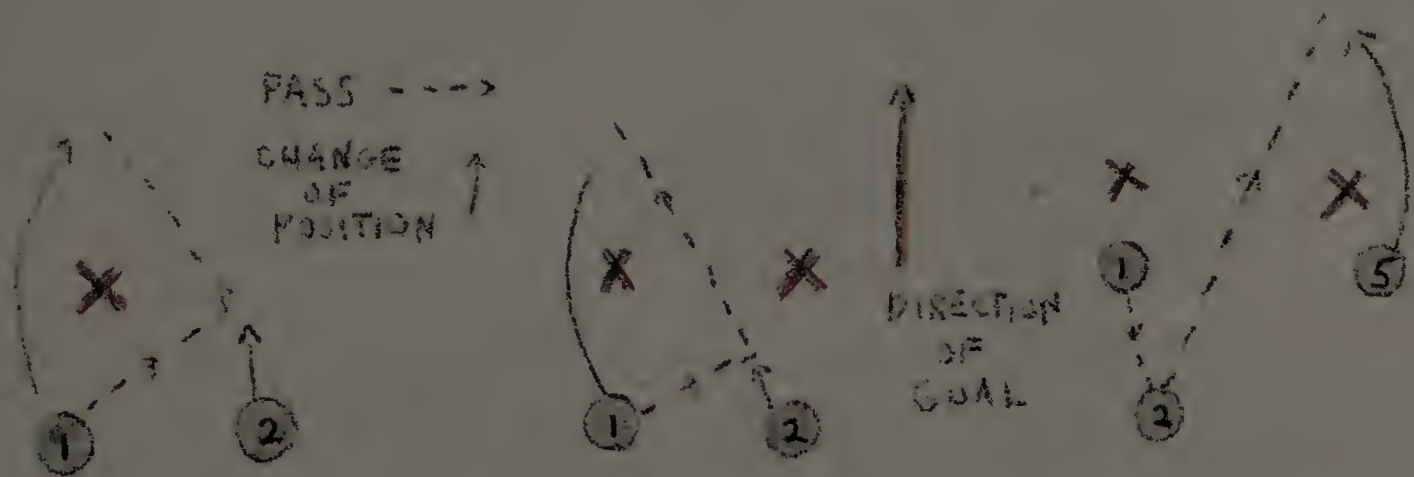
Figure 11. Diagram of Short Passing Tactics.

The dispersion of the other members of the attacking team should insure the existence of other avenues of attack if the opposition develops an effective counter measure.

(II) Concentration of the opposing team in the area of the ball means that other areas of the field have been left unguarded. Long passes designed to carry the ball over local concentrations of power provide the basis for using widely

separated areas of the field in pressing the attack.

(III) When the opposition has attempted to achieve defensive balance by adopting a relatively rigid system of deployment by assigning particular areas and particular functions to particular players on the basis of individual skills and traits, weaknesses will exist in those areas patrolled by players who lack skill, aggressiveness, speed, stamina, or ability to anticipate. The use of areas in which opposition is fundamentally weak is good strategy.

(IV) When the opposition adopts a man-to-man system of defense, the attack can be strengthened by providing play situations in which strongest offensive players are freed from the "policeman" tactics of the strongest defensive players. This is an excellent method of creating personal zones with ready-made balances of power.

(V) Rigid systems of deployment eventually result in the formation of habits of play which have proved effective. The team that can knock the opposition off its game by disrupting its habitual patterns of play or by interfering with its usual timing can often tip the balance of power for eighty-eight minutes.

(VI) Rigid systems of deployment usually function offensively along the lines of its strongest players. Weaknesses in defense can sometimes be spotted by noticing the usual flight of a ball from "one-footed" players and the tendency not to pass to certain players. It is good strategy to see that the weakest men on the opposition get plenty of defensive

opportunities to make up for such oversight.

(VII) Habitual play doesn't change quickly. A team that is observed through previous scouting or during the first few minutes of play to exhibit a serious weakness should be used for duck soup. For instance, a team playing too far up the field should be treated to immediate long passing tactics which will place a player in possession of the ball with goal to go. Such tactics should be repeated as long as the habit persists.

(VIII) A team whose marksmen must set the ball up or can be rattled should be over exposed to aggressive play for the entire game. A team's concentration of power and its balance of power can often be destroyed at crucial moments by such tactics. A good team is strongest under fire.

Applying Principles of Team Play - The aims and objectives of team play offer the guide to the application of the above principles.

When not in possession of the ball the team should deploy itself so that it will be able to regain possession of the ball as near as possible to the opponent's goal. The opposing player in possession of the ball should be "tackled" by the player nearest to him. A man-to-man system of defense provides the surest method of defense. Since possession of the ball is a functional requirement, the tackler is concerned mainly with gaining possession of the ball and his teammates are concerned with controlling the areas in which their "men" can operate. The defense should be deep enough to stop a

sudden thrust and should be tightened in fluid situations
by exchanging "men" until power in the defensive critical
area is so concentrated that potential marksmen will be
forced to take shots at inopportune times, angles, and dis-
tances.

In creating a scoring situation the team should deploy
itself so that the ball can be moved as rapidly as possi-
ble into the forward critical area to a player who is in
scoring position, "on side", and can have complete control
of the ball for a shot-to-score. Tactics which carry the
ball into the critical area before a defense can be formed
or carry the ball into the least defended portion of the criti-
cal area are most likely to be successful. Except in sit-
uations which demand one course of action, there should be
several tactical solutions involving several potential marks-
men.

Once the ball enters the forward critical area the tar-
get is fixed and on a vertical plane. The shot-to-score is
an end in itself and requires no more than passage through
the goal. The marksman should always bear in mind the fact
that the work of the entire team goes with any shot-to-score.

Present Systems of Play - The two and three-back games
are, at the present time, the systems of play and are dis-
cussed in detail in many soccer manuals. The success of the
three-back game precludes any statement that other systems
of play common to similar sports (ice hockey and basketball)
are adaptable to soccer game conditions. However, the possi-

bility of a team's improving its own game by adding var-
iations to its attack lies well within the realm of possi-
bility. Principles of soccer strategy provide a basis for
experimentation.

The advantages of the two and three-back games are as
follows:

(1) The pattern of deployment insures defense
in width in depth.

(2) The five man forward line permits strong con-
centration of power in the forward critical area.

(3) Playing three men up the field in defense pro-
vides opportunities for a quick offensive thrust.

(4) Wide deployment permits long lateral and long-
itudinal passes.

(5) General patterns of deployment permit short
passing possibilities for every player. The triangle play
offers the combinations as shown in Figure 12.

Figure 12. Diagram Showing Possible Passing Combinations.

(6) Players can be assigned to positions to which they are most suited.

The theoretical disadvantages of the two and three-back games are as follows:

(1) The full physical strength of the team is not utilized - the wing half backs and the inside forwards do most of the work.

(2) The abilities of individual players are not used to their fullest advantage, i.e., a half back in the center forward position for certain plays might add a new scoring punch.

(3) Fixed systems of deployment lead to "police" tactics not only to cover the "center forward" but every man on the team.

(4) Fixed positions and specialized players eliminate many possibilities for varying the attack.

(5) Fixed habits of play based on a fixed pattern of deployment cannot be changed easily in game conditions.

(6) Fixed systems of deployment are defensive by nature. Flexibility is the keynote of the attack.

The Human Element - The human element in soccer play exists on three planes: the emotional, intellectual, and physical. The problem of the coach is to provide the strongest possible motivation among his players to contribute to the most effective functioning of the team and to provide the best possible principles and methods by which they may guide their actions toward that end. Every game must be a challenge

to create the widest possible margin of victory, and every
opponent must represent a new and different challenge to the
team's mastery of the field. Every player must learn that
his responsibilities on the field extend to the limits of
his endurance, his ball control skills, his speed, his com-
prehension of soccer principles, and his ability to antici-
pate, and his resourcefulness.

CHAPTER IV

APPLICATION OF PRINCIPLES

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The application of soccer principles is an art, and
a sound theory of team play provides coaches and players
with the medium by which they can share the creative pro-
cess of shaping team strategy. The possibilities for flex-
ible play which exist, when the coach is not preoccupied
with fixed position play and his players are not limited
by fixed ideas and habits of play, are as varied as the
shortcomings of the opposition.

Summary of Principles - It may be said that the follow-
ing general principles should guide team play:

(I) The basic principle of ball control is the
control of the area around the ball and the control of
areas into which the ball can be moved.

(II) Long passing tactics should be employed when-
ever the dispersion of the opposing team exposes widely
separated areas to quick thrusts toward the goal.

(III) Short passing tactics should be employed
whenever the possibilities for a successful long passing
attack do not exist because of the dispersion of the oppos-
ing team or because of proximity to the goal.

(IV) When not in possession of the ball, the surest
defense is achieved by controlling the areas around the opposing
players; i.e., a man-to-man system.

Possibilities for Flexible Play - While playing
against a two or three-back system, it may be discovered
that the opposition tends to be pulled out of position by
the center forward as he swings with the ball out into the
right inside or wing position in a routine variation of the
conventional attack. In such circumstances the right inside
and wing are expected to assume the positions which are va-
cated by the center forward during each phase of this man-
euver so that the pattern of deployment remains constant.
The theory behind this maneuver is to weaken the position
of the opposition near the far side of the goalmouth. The
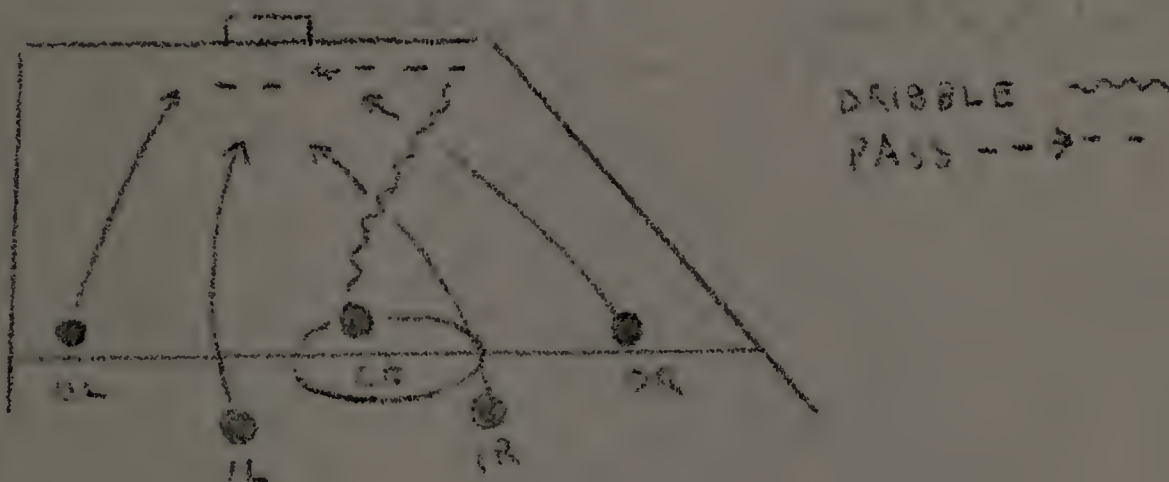play is simply diagrammed in Figure 13.

Figure 13.   Diagram of a Variation of Conventional Attack.

One of the major troubles with this maneuver is that in
weakening the opposition it also weakens the attack by
moving the center forward, who is theoretically the marks-
man on the team, out of scoring position. If, however, the

play were set up during a checkback situation so that the
right wing could initiate the play, and the center forward
could swing into his normal position, the offensive power
in the center could be maintained during the play as shown
in Figure 14.
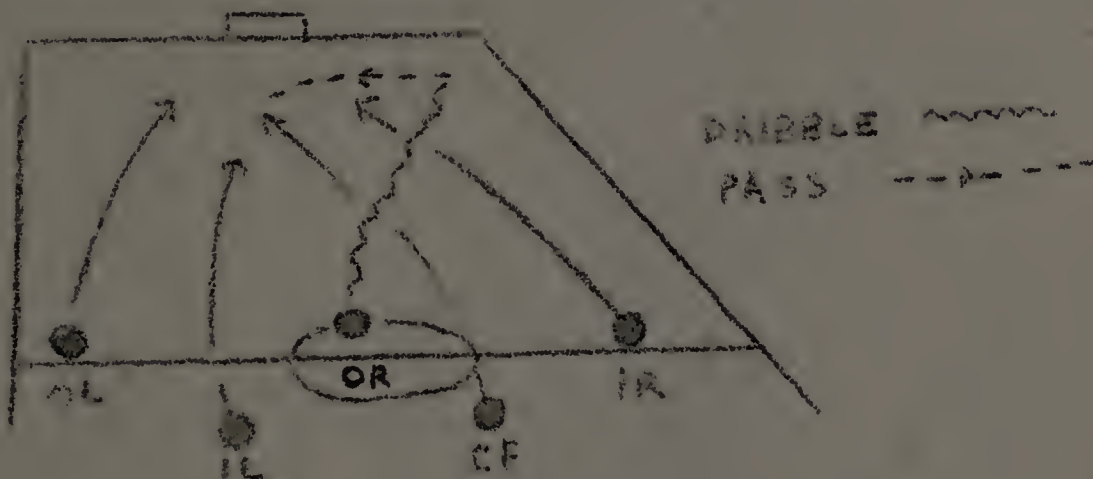

Figure 14.   Diagram Illustrating a Method of Improving
the Scoring Opportunity of the Center Forward.

Another variation can be added to this maneuver when
the right wing initiates the play and swings toward the left
side of the field. The center forward then finds himself in the

Figure 15.   Diagram Illustrating Another Method of
Improving the Scoring Opportunity of the Center Forward.

most exposed part of the critical area. This play is dia-
grammed in Figure 15.

The tip-off for this play comes when the wing starts to call
for the ball from the center forward position.

When the opposition repeatedly displays the power to
upset attacks in the forward critical area but displays a
limited mastery over other portions of the field, the phy-
sical characteristics and typically aggressive play of the
halfbacks, which dominate backfield and midfield play, might
provide the key to ball control in the forward critical area.
Possession of the ball is offense and lack of possession is
defense at either goal mouth. This can be accomplished by
having the wing halfs change position with the inside for-
wards.

It may be discovered that a team can be rattled by
varying the tempo of the attack. By alternating quick thrusts
with delaying tactics (pass backs and long passes) a team
gains experience in controlling the play and gains an in-
sight into the value of systems which provide deployment in
width and in depth.

The basketball weave is being used successfully[7] in the
game of soccer. The soccer weave provides three players with
a new tactical alternative to the triangle play. This tactic
has been described as being useful in creating scoring sit-

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7. Frank Wolynec, "The Weave in Soccer," Athletic Journal
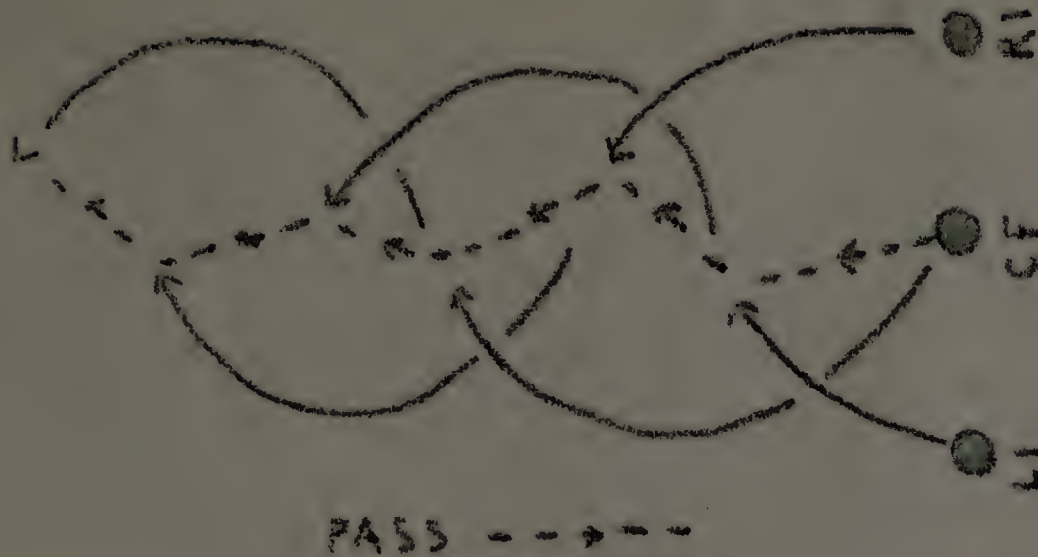(March 1950), pp. 42, 54-55.

Figure 16. Diagram of the Soccer Weave.

uations and is diagrammed in Figure 16.

When a team is discovered to be weak on one side, a concentration of clever ball handlers for a series of attacks down that side of the field can be accomplished by an exchange of positions after a "whistle". In weighting the play it should be remembered that "sleepers" on the opposite side of the field might prove useful in case of unexpected resistance to the planned tactic.

Changes of position can be used for non-tactical purposes. The coach with only a few players can preserve the physical strength of the team by shifting overworked insides out to the wing positions or overworked halfbacks into fullback positions. Such changes are also instructive.

The Limits of Flexibility - Exploration of the possibilities for flexible play increases player interest in the game and provides added motivation toward the improvement of ball control skills and team play. Therefore, as long as opposing teams exhibit weaknesses which can be exploited by

unconventional methods of attack, the wise team will exploit them. But as competition improves, the chances are that Americans will be forced to adhere more and more closely to the three-back game in which advanced experience may have discovered the limits of flexibility within the present rules.

unconventional methods of attack, the wise team will exploit them. But as competition improves, the chances are that Americans will be forced to adhere more and more closely to the three-back game in which advanced experience may

CHAPTER V
CRITIQUE OF THE STUDY

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CRITIQUE OF THE STUDY

The contribution which this study will make to soc-
cer knowledge is hard to predict. However the criticisms
of the jury and a few statements in criticism of the methods
employed may provide a guide to further study of the prob-
lem.

The Jury's Criticism - Although the study was sub-
mitted to a jury of nine soccer coaches, only six have
commented. Their constructive criticisms in regard to
soccer theory helped to strengthen the text. Undoubtedly
a careful study of this paper by a large sampling of ex-
perts would result in further alterations.

The verdict of the jury in regard to the value of the
study was favorable but not unanimous. Four coaches des-
cribed it variously as "an excellent analysis of the game",
"....writing....at once stimulating and scholarly", "an
excellent study", and "a well written scientific discourse".
Another coach described it as "interesting". A vigorous
dissenting opinion was given by one coach who called it
"half-done...pointless". Since the members of the jury were
contacted through informal correspondence and interviews, a
formal record of their assistance was not included.

An ethical question in regard to exploiting the laws of
the game in order to gain an advantage and a philosophical
question concerning the practical value of theoretical know-

ledge were raised by the jury, but seemed to lie beyond
the scope of this study.

Limitations of the Study - Although the method of
accumulating information about the factors which affect
soccer play seemed adequate during the study, contributions
from the jury indicated that much which is known about
soccer has not been written.

The similarities which exist between soccer strategy
and the strategy of warfare became obvious as the study pro-
gressed. A more thorough investigation of general strategic
concepts and an attempt to adapt them to the game of soccer
might result in valuable changes in the present theory.

The fact that this study is theoretical limits its
value to coaches who have little time to investigate its
applications. Therefore, it is to those coaches who can
use and improve upon this initial theory of soccer strategy
that this thesis is humbly offered.

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