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A study of an offensive signal system using words rather than numbers and including automatics

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A STUDY OF AN OFFENSIVE SIGNAL SYSTEM
USING WORDS RATHER THAN NUMBERS
AND INCLUDING AUTOMATICS

A Thesis
Presented to
the Faculty of the Department of Physical Education
College of the Pacific

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Don Carlo Campora

1958

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CHAPTER I

INTRODUCTION

The most important thing that happened to football during the late 1930's was the introduction, or "reintroduction," of the "T" formation. This formation, with many variations, proved to be a real turning point in the game. As teams all over the nation began to use the "T" formation with great success on offense, the defensive experts rose to meet the challenge. As a result, in many schools players have to learn as many defensive plays as offensive ones.

Perhaps this change in defensive thought is best illustrated by a comparison of the defensive theory expressed by Charles W. Bachman with the defensive attitude expressed by Bobby Dodd.

Bachman states:

The cup system of defense is the one used by most teams and is the most practical of all. The ends charge in fast and turn the play into the tackles; the tackles force the play into the guards and center.

The primary line - that is, everybody on the defensive line except the center - charges aggressively with the snap of the ball, trying to stop the play by piling it up behind the line of scrimmage.

In this same chapter Mr. Bachman diagrams and explains one defense for each formation then in popular

use.¹

In contrast to this, Mr. Dodd's attitude is that penetration cuts down pursuit at the rate of one step of penetration for two steps of pursuit. It is basically more logical to play the line of scrimmage and penetrate just enough to give a change of pace. Do not play for the "fourth and ten situation, play for the fourth with two or three yards to go for a first down. A team that tries to stop the offense for no gain each time is leaving themselves open for the long gain."²

He previously states that a coach would make a mistake going into a game with only one defense and advises that a coach use this defensive approach:

There are four basic defenses against the normal "T" formation. They are all sound and with stunts that will give you the necessary needed variations. The more defenses you can learn and still not make defensive mistakes, the tougher you can make it on the offense. Some teams play most of their games against normal "T" teams. If this is true, you will be able to have all four of these defenses in your attack.³

This latter theory has come to be the practice in

¹Charles W. Bachman, A Manual of Football for High Schools (Manhattan, Kansas: Department of Industrial Journalism and Printing, Kansas State Agricultural College, 1923), p. 113.

²Bobby Dodd, Bobby Dodd on Football (New York: Prentice-Hall, Inc., 1954), p. 211.

³Ibid., p. 212.

football as it is played now. The offense must prepare itself to meet not one defense in any given game, but several, with variations of each.

It is a generally accepted axiom that each of these defenses may be attacked successfully, but not in the same manner or in the same area. In the offensive repertoire there are the means to attack these defenses. The problem is to call the proper play for the defense on that particular down. The advantage of being able to change the play called in the huddle at the line of scrimmage is then readily apparent. There have been numerous systems presented to accomplish this, but they all have two objections in common:

1. They are different from the normal signal system and represent a duplication of learning for the players. Since numbering systems are so similar and familiar to all concerned, the normal system cannot be used with any regularity and still hide the area of attack from the defense.

2. This duplicate set of signals to be used as "automatics" necessitates practice time for the team to be able to recognize and execute them well. The word "automatics," as used here, may be defined as the offensive method employed to change plays at the line of scrimmage.

These automatics may be used, on an average, only

three to five times a game, and it is therefore hard to justify the expenditure of practice time on a phase of the game which is used so little. At the same time, it is recognized that these three to five times may occur at crucial points in the game and could represent the margin of victory.

THE PROBLEM

Statement of the Problem. It is the purpose of this study to (1) present a signal system for offensive football including automatics; (2) compare it with those systems already in use; and (3) present the reactions of nine coaches using it at the junior high school, senior high school, junior college, college, and professional levels.

Importance of the Topic. In this day and age of football there are few coaches, if any, who have not made an attempt to meet this problem of automatics. Quite often they have abandoned it and have looked to other approaches for their solutions. In doing this, they themselves feel they are overlooking the point at which an offensive attack may be adjusted to meet changing defenses.

Bud Wilkinson has this to say about automatics:

It is our theory that whenever the defense leaves a weakness, we should hit it immediately. Consequently, it is necessary for our quarterback to check signals at the line of scrimmage if he sees a

hole open anywhere for a run or for a pass because of a faulty alignment of the defense.⁴

Most coaches select a signal system with which they are familiar from past experience and proceed from there to integrate a separate system of automatics.

In this study an attempt is made to present a system in which the basic system of calling plays and the automatic system are identically the same; a system which will enable the offense to direct its attack at the weakest part of any defense with which it is confronted at any time prior to the actual snap of the ball. Besides being able to hit immediately at a weak point in the defense, it enables a quarterback to avoid wasting a play which may be aimed directly at the strength of a defense. At the 1956 Nevada Coaches Association Football Clinic in Reno, Nevada, Bud Wilkinson spent a good deal of time on this point.

The system represents a different approach to a problem common to most "T" formation teams and presents a possible solution to the "multiple defense" type of game. The material in this study contains, in addition to this system, many others in use now and may help the reader to select any one of those presented for incorporation into his attack.

⁴ Bud Wilkinson, Oklahoma Split T Football (New York: Prentice-Hall, Inc., 1952), p. 236.

RELATED STUDIES

In the search for studies of a nature directly or indirectly related to the problem, it was found that they were quite obscure or nonexistent. In checking the masters' theses at College of the Pacific, Fresno State College, and Stanford University, it was found that while there were several theses written on the general topic of football, none was directly related to a signal system or to automatics. A complete check of the Research Quarterly for 1942-1952 showed no related studies.

DEFINITIONS OF TERMS USED

Automatics. The offensive method used to change plays at the line of scrimmage.

Numbering Systems. The manner in which an offensive team designates what back is to advance the ball through which hole, and in what manner.

Defense. The manner in which the team trying to prevent a score deploy themselves.

Offense. The manner in which a team tries to advance the ball.

Starting Count. The set of signals spoken by the quarterback to put the ball in play.

"Or" Side. The side of the line through which a play

is to be run.

"Off" Side. The side of the line away from which a play is to be run.

Scouting Report. Information about an opponent brought back by an observer.

VARIATIONS

This word system was designed for and used by "T" formation teams. With modifications it could be used by split "T" and single wing teams as well. The difference in these offensive formations is illustrated in Figure 1.

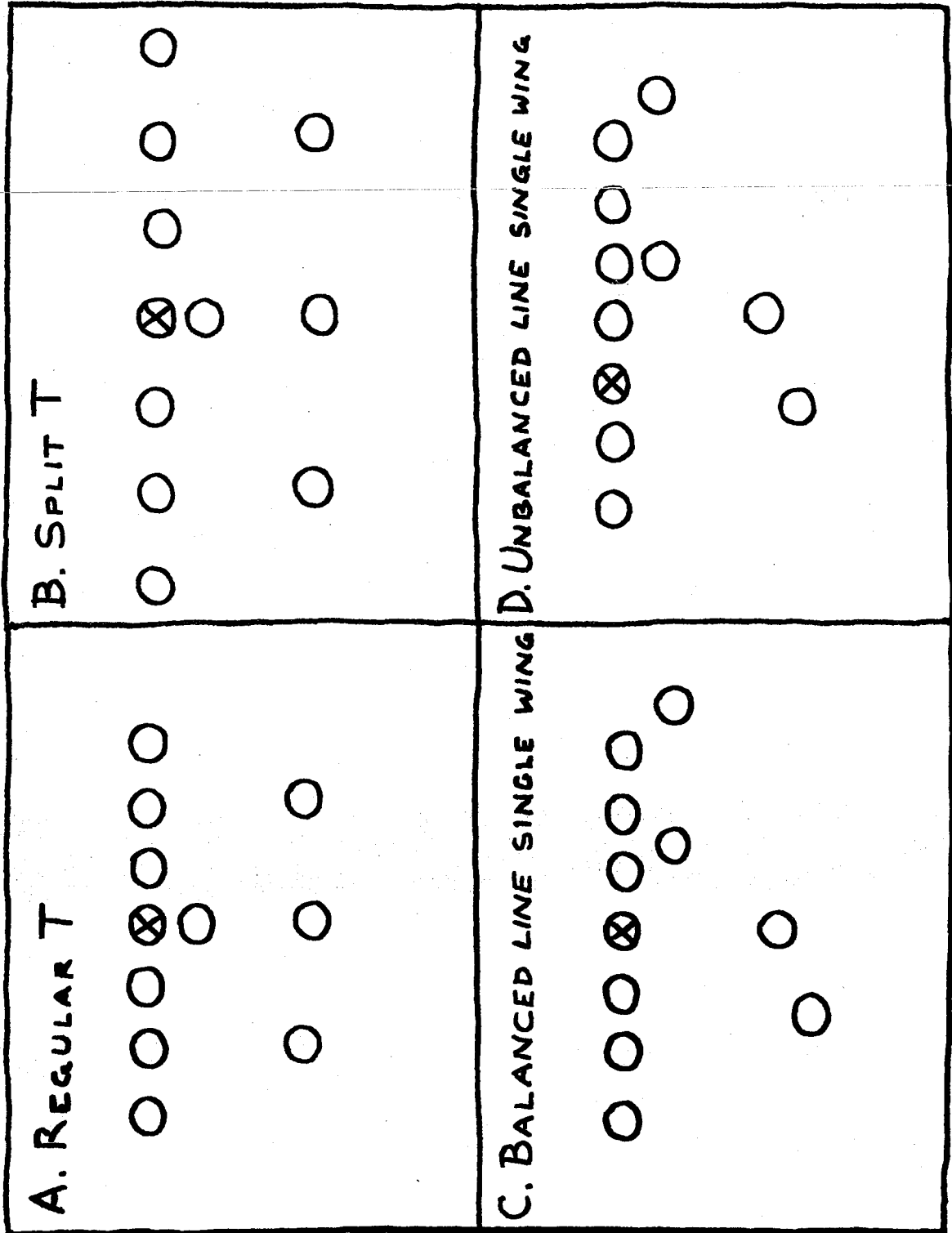
ORGANIZATION OF THE STUDY

The remainder of this thesis will be organized to include the following: (1) a review of literature, (2) an explanation of the word signal system, (3) the present systems now in use and a comparison of each, (4) the findings of the nine coaches and their staffs who used the word signal system from 1954 through 1956, and (5) the summary, conclusions, and recommendations of the study.

A careful study of the textbooks, literature in the field, notes from five football clinics, and personal interviews with recognized authorities in the field is included in an attempt to gather enough necessary data to support the formation of a word signal system.

FIGURE 1

Types of Offensive Formations



A thorough and illustrated explanation of the function and actual words used for plays by the teams using this signal system will be presented. Included will be the starting count used.

A presentation of as many other methods of changing plays at the line of scrimmage as the investigation was able to obtain will be made. These will be compared in substance with the word system of calling signals.

The compiled reactions and comments of the nine coaches who consented to use the system during the years of 1954, 1955, and 1956 are also included. These coaches and their teams were competing at all levels - from junior high school through the professional ranks.

The summary, conclusions, and recommendations for further study will follow and will represent the findings of the investigator.

Review of the Literature. There are a number of books by prominent coaches which deal with football in general, and these books are very helpful in gathering background material and technical knowledge of the game. However, these books, in most cases, devote only one chapter, or a portion of a chapter, to signal systems. Further, the experts very seldom mention how they attempt to call their automatics; or, if they do, how successfully their automatic system operates.

The magazines, Scholastic Coach and Athletic Journal, contain a number of good articles which are used in the investigation. A complete list of the articles used will be found in the bibliography for periodicals.

It may be noted here that the subject of this investigation has encountered one difficulty - the reluctance of most coaches to describe accurately the exact manner in which they change their plays at the line of scrimmage.

Of necessity, the main source of information in the investigation came from personal interviews with recognized authorities in the field, and from players under the direction of successful coaches who have used automatic systems.

CHAPTER II

THE WORD SYSTEM

Coaching would be all milk and honey if your opponents did exactly what was expected of them. Unfortunately, they seldom do - particularly on defense. The modern defense is a complex, shifting affair and you need a versatile attack to cope with it.

Since many defenses frequently shift at the last possible moment, you also need some sort of system which will enable you to change your play accordingly. This calls for a thoughtful consideration of automatic signals.

College and high school teams are becoming more and more aware of the value of automatic signals. After three years at Yale, I've come to the conclusion that good automatics are an essential part of offensive football - that an offense without them is equivalent to a team with inadequate reserves.⁵

This thought by Gib Holgate typifies the feeling of the football staff at Arizona State College at Tempe in the spring of 1952. Efforts were made at that time to put into practice one of the several types of automatic systems familiar to the members of the coaching staff. At the end of spring practice the result was a combination of the usual numbering system (with words designating the blocking and numbers designating the back carrying the ball and the area to be attacked) plus a group of words alone designating certain plays normally included in the offense as "automatic"

⁵ Gib Holgate, "Automatic Play Calls," Scholastic Coach XXII (September, 1952), p. 7.

calls. In selecting a system of this nature, the staff at Arizona State again paralleled Mr. Holgate's thought:

Some teams automatic almost every play. This is done either by completely changing the play called or by calling its reciprocal. Flexibility is the keynote of this method. However, the full exploitation of it requires much more practice time than most coaches can afford.⁶

The Arizona State coaching staff felt at this time that automatics as such were a vital and necessary part of the offense, but in order to perfect them, too much practice time had to be spent on team recognition of the automatic calls. As line coach on this staff, it became this investigator's duty to produce a satisfactory automatic system. The reason for giving this assignment to the line coach was that seven linemen were involved, whereas only four backs were concerned, and the system should be the simplest for the larger group.

In September, 1952, in a personal interview with Mr. Clark Shaughnessy, then associated with the Chicago Bears professional football team, this investigator learned that the signal system used at Stanford University in the fall of 1940 was planned to enable the quarterback to run any of the three backs through an offensive hole with any type of blocking. This system gave the quarterback the flexibility

⁶Ibid.

to improvise as the game developed.

Mr. Shaughnessy's backs were numbered one through four, with the right half as four, left half as two, and the fullback as three. The offensive holes were numbered even on the left, zero through six, and odd on the right, one through seven. The small digits represented the center holes and the large ones the wide areas. Words were used to designate backfield maneuvers and letters were used to denote types of blocking.

An example of this would be "44 counter AO." The "44" indicates the four back (right half) is to carry the ball through the four hole; "counter" indicates the maneuver to be executed by the remaining backs; "A" notifies the "on" guard that he is to make the block on the outside man at the hole; and "O" alerts the "off" guard that he is to lead the four back through the four hole.

The value of this system is doubted by many coaches. At the Nevada Coaches Association Coaching Clinic in Reno, Nevada, in June, 1955, "Red" Sanders said, "I do not allow a play to be run in a game if it has not been run a hundred times in practice." The myriad of plays possible under this signal system makes this most impractical.

Not only does this system present a learning task, but it makes selection of a play difficult for the quarterback. Bud Wilkinson expresses it this way:

Most offenses have many more plays and variations than we have in our attack. However, the simplicity of our offense is a big help to the quarterback. Even though a quarterback is an excellent leader and possesses above-average intelligence, a wide choice of plays will make it difficult for him to call the proper play in any given situation.⁷

Because of this desire for simplicity, the offensive trend in the past few years has been to fewer plays with better execution. The need for so complex a system is now doubtful.

In listening to the players talk among themselves during a football game or a practice session, the coaches observed that they did not use the full nomenclature of the play, but only a part of it. For example, someone would say, "Call the counter again," or "The trap will go." Everyone concerned knew immediately to what play the speaker referred.

With the above points in mind, a signal system was being sought for use in the Canadian Professional League for the 1954 season by Larry Siemering, head coach of the Calgary Stampeders, the investigator who was serving as line coach, and Edward LeBaron, quarterback of the Calgary team. In the course of the discussions it was decided to drop the use of numbers entirely and use only words, giving each play a one word name. Dr. George Ingebo, educational psychologist at the College of the Pacific, pointed out that it would be

⁷Wilkinson, op. cit., p. 233.

easier for a football player to attach his position's assignment to one word rather than to listen to several words and sort out the one that had significance for him.

Dr. Ingebo also indicated the possibility of naming each play with a word suggestive of that type of play. For instance, off tackle power plays could be called "Blast" to one side and "Ram" to the other. The thought association between these words and the powerful off tackle play would serve as a memory stimulant to the player. Another memory stimulant could be the association of words containing an "l" in their spelling with plays going to the left, and words with an "r" for plays going to the right. These points developed by Dr. Ingebo were invaluable in the development of the word signal system.

In March, 1954, the word system was developed to a point that was satisfactory to the Calgary Stampeders staff and Mr. LeBaron. Canadian professional football has only three downs in which to make ten yards rather than the customary four downs. This places an even higher value on the automatic, not only to meet the defense, but also to avoid wasting one down with a play which is not sound against a particular defense. Therefore, an automatic was considered on each down.

In substance, this is the word signal system. The choice of changing the play or running the one called in the

huddle is indicated by the quarterback each time the team comes to the line of scrimmage. The word signaling whether or not to change is incorporated into the starting count. The team comes over the ball and assumes an elbows-on-knees crouch position as a preliminary stance; at the quarterback's command, "Down," they assume a normal three point stance. Many times this is the point at which the defense will change if it is going to on this play. After the quarterback feels that the defense is set he looks the defense over for any weakness or poor alignment. If he finds any, he then calls the word designating the play he feels will penetrate the defense at this weakness or misalignment. If he finds no fault with the defense and is satisfied with the play called in the huddle, he then calls out a color, any color, to indicate to the other team members that there will be no change in the play call.

(A color was selected as the word to cancel out an automatic because a majority of the Canadian teams were using colors as their automatic changes. The thought was that this would perhaps confuse them somewhat. In post-game conversations with opposing players it was found that this was, indeed, the case at times.)

The quarterback's next command is "Let's go," which tells the team that everything is set and prepared to go. The quarterback then starts the count, "One up, two up,"

etc. The count in its entirety, then, would be as follows when an automatic is being called:

"Down, Blast, let's go, one up, two up," etc.

When no play change is to be given it would be as follows:

"Down, blue, let's go, one up, two up," etc.

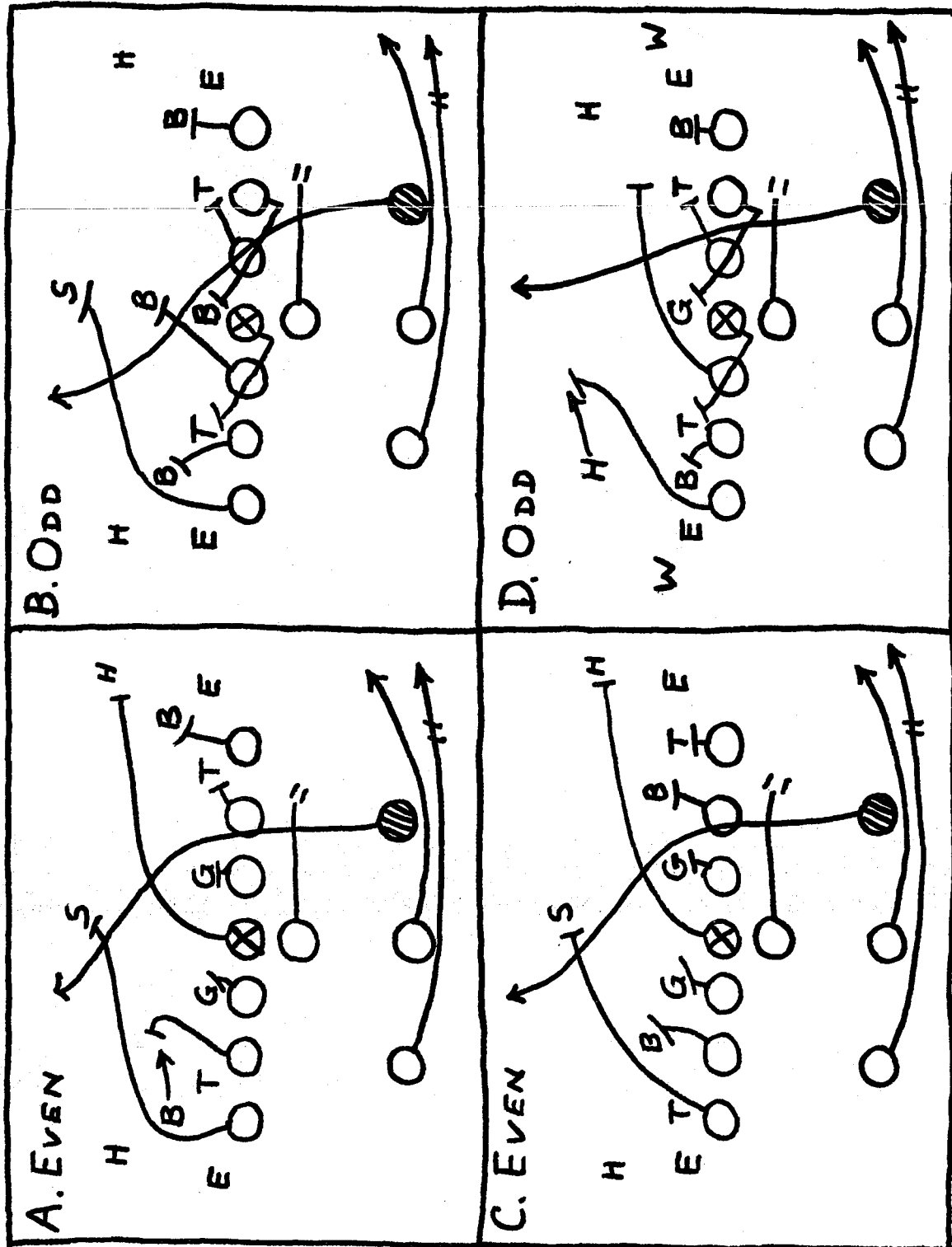
The basic offense used in 1954 consisted of thirty running plays and nine pass patterns, making a total of thirty-nine names to be learned by the squad. This does not indicate thirty-nine separate assignments for each player, however, as there are many duplications of assignments throughout the offense.

The next question is blocking assignments for the line-men. Blocking assignments are according to rule blocking. For instance, the play named "Straight," which is a direct handoff to the right half straight ahead, calls for the center, guard, and tackle on the "on" side to block man to man if the defense is "even" (that is, no one in front of the center and a man on the guard). If the defense is "odd" (that is, with a man on the center and no one in front of the guard), the guard and tackle cross block with the guard going first. The end is always to get the linebacker on his side, unless there is a man over him. This is shown in Figure 2 on page 18.

All play assignments are designated in the same manner, with the exception of those plays that are to be run

FIGURE 2

"Odd" and "Even" Blocking Assignments on a Straight Handoff



off tackle. In this area, because of the variety of positions possible to be taken by the defensive end, tackle, and linebacker in combination, it was felt that some signal should be given for clarification of the assignments for the "on" side. Because the tackle position is in the center of this area, the tackle was chosen to give this signal. Frank Leahy advances this same supposition and has his tackles call the "on" side blocking arrangement.⁸

Hampton Poole, in a personal interview with this investigator in September of 1952, (at which time he was head coach of the Los Angeles Rams professional football team) said that any one defensive man is limited to three defensive positions, including head on, outside or inside the offensive blocker.

For this reason, three calls were selected to be made by the offensive tackle, "odd," "even," and "cover." The call "odd" by the tackle means that the defensive tackle is in such a position that the offensive tackle can block him in by himself. The end is to get any middle linebacker; if there is no middle linebacker he blocks the closest linebacker. The guard then is assigned the defensive end. The call "even" indicates that the defensive tackle is playing

⁸ Frank Leahy, Notre Dame Football - The "T" Formation (New York: Prentice-Hall, Inc., 1949), p. 25.

too wide for the offensive tackle to block him in, and the offensive tackle would switch assignments with the end with the guard still blocking the defensive end outward. The call "cover" means that a defensive man has moved up on the line of scrimmage in front of the end. In this case the tackle blocks the man "over" him, or the first man to his inside; the end blocks the first man to his outside, not counting the man "covering" him. The guard is then assigned to pull behind his tackle and block the man "covering" the end outwardly. (See Figure 3) These calls only have significance when the play is to be run off tackle. Both tackles make one of these calls on each play calling whatever happens to be the defensive situation on his side on that particular play. This avoids giving the defense any indication of which side will be attacked or revealing when the play will actually be run off tackle.

This call is made after the quarterback has made his decision whether to remain with the play called in the huddle or use an automatic. The complete count from both the quarterback and the tackle is as follows:

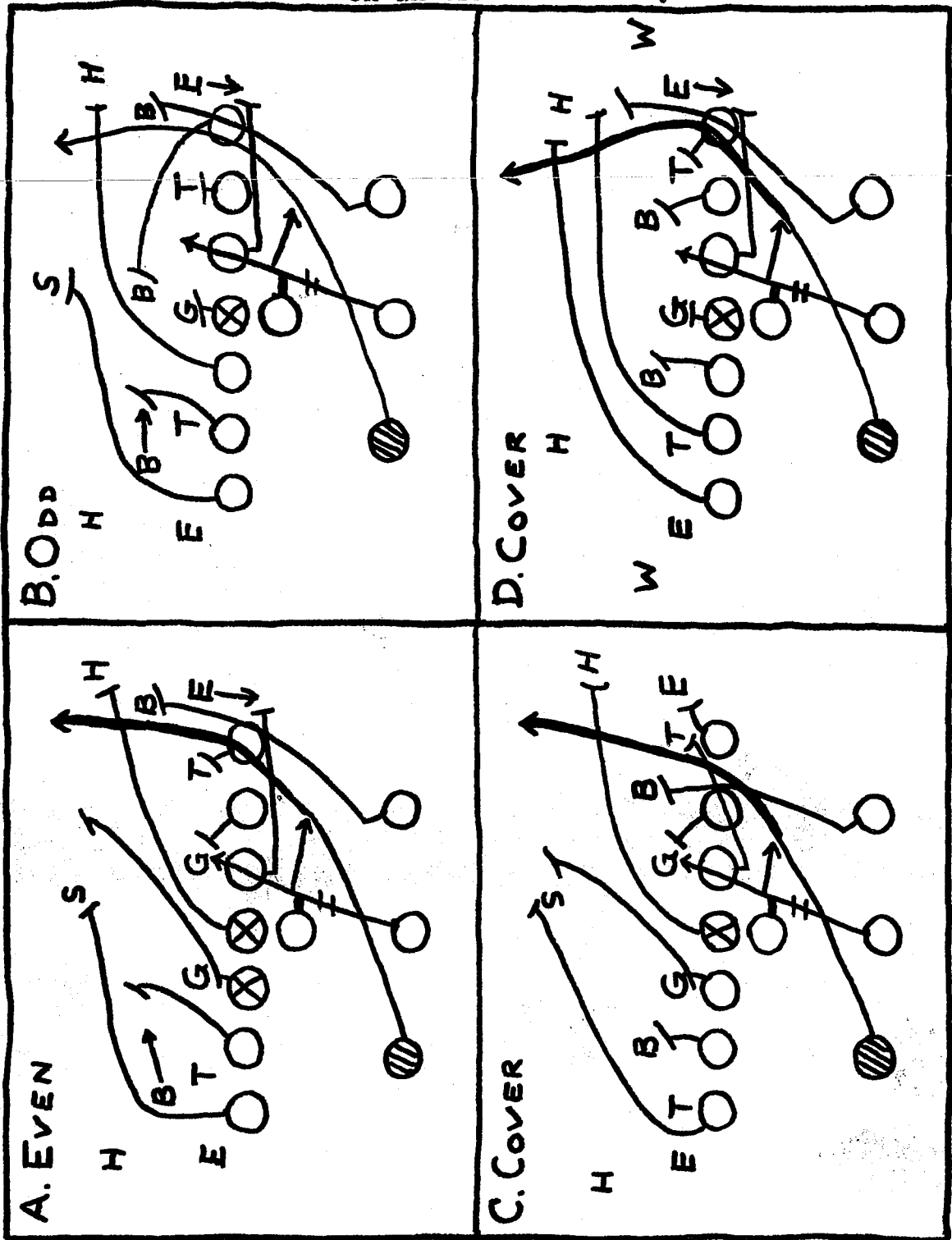
Quarterback: "Down, blue,"

Tackle: "odd"

Quarterback: "let's go, one up, two up, three up."

When the play is to be changed, the count would be the same except that the play name would be substituted for

FIGURE 3
"Odd," "Even," and "Cover" Blocking Assignments
on an Off Tackle Play



the color.

When in the count, the quarterback must pause at the appropriate place to give the tackle an opportunity to make his call. This call must be made in a crisp, firm manner, loud enough for all concerned to hear.

If at any time the quarterback feels that the defense has become aware of the significance of his automatic calls, he may make a false call. This is done in the following manner. In the huddle the quarterback will call the name of the play that he wishes to run, plus the snap number; he then adds the word "phony." The addition of this word to the play name and snap number indicates that he will make an "automatic" call at the line of scrimmage, but it will be a false call and have no significance. When a false call is used the play called in the huddle must be run. There is no way of changing the play at the line of scrimmage. The use of this false call procedure enables a coach to hold intra-squad scrimmages. It prevents the defense from cueing on the quarterback's automatic calls at the line of scrimmage. The real test of an automatic system is its ability to play successfully against itself.

SELECTION OF PLAY NAMES

The first audible automatic call was used at Yale in 1872. When the quarterback coughed it meant that he wanted

the center to snap the ball to him, rather than to the man originally indicated.⁹ From this beginning the selection of words used in signal systems has developed many facets. The words must not sound enough alike to allow a misinterpretation. For instance, the word "Slam" could be used to designate one play and the word "Ram" another. When either of these words is used in the huddle or at the line of scrimmage, there is a distinct possibility that one may be confused with the other.

Dr. George Ingebo, during the interview previously mentioned, pointed out that similar thought associations may also cause a confusion between play names. For example, the thought associations between the two words "Slip" and "Slide" are so similar that one may be mistaken in the mind of a player for the other.

There are several things to be kept in mind when selecting play names. Important among these are the following:

1. The words must be phonetically different so as to prevent confusion.
2. The thought association between the words must be dissimilar enough to avoid mental error.

⁹ Amos Alonzo Stagg, in a personal interview, October, 1955.

3. The names should be suggestive of the type of play they represent.

4. The names should not be too suggestive to the defense.

An example of number 4 is the situation in which the word "Quick" is used, commonly, to designate a straight ahead handoff in the "T" formation. This would be too obvious a hint to the defense. On the other hand, the word "Throw" might be used to designate a pitch-out play because it may possibly suggest a pass to the defense.

Sam Clagg summarizes the thought on the use of suggestive names in this way:

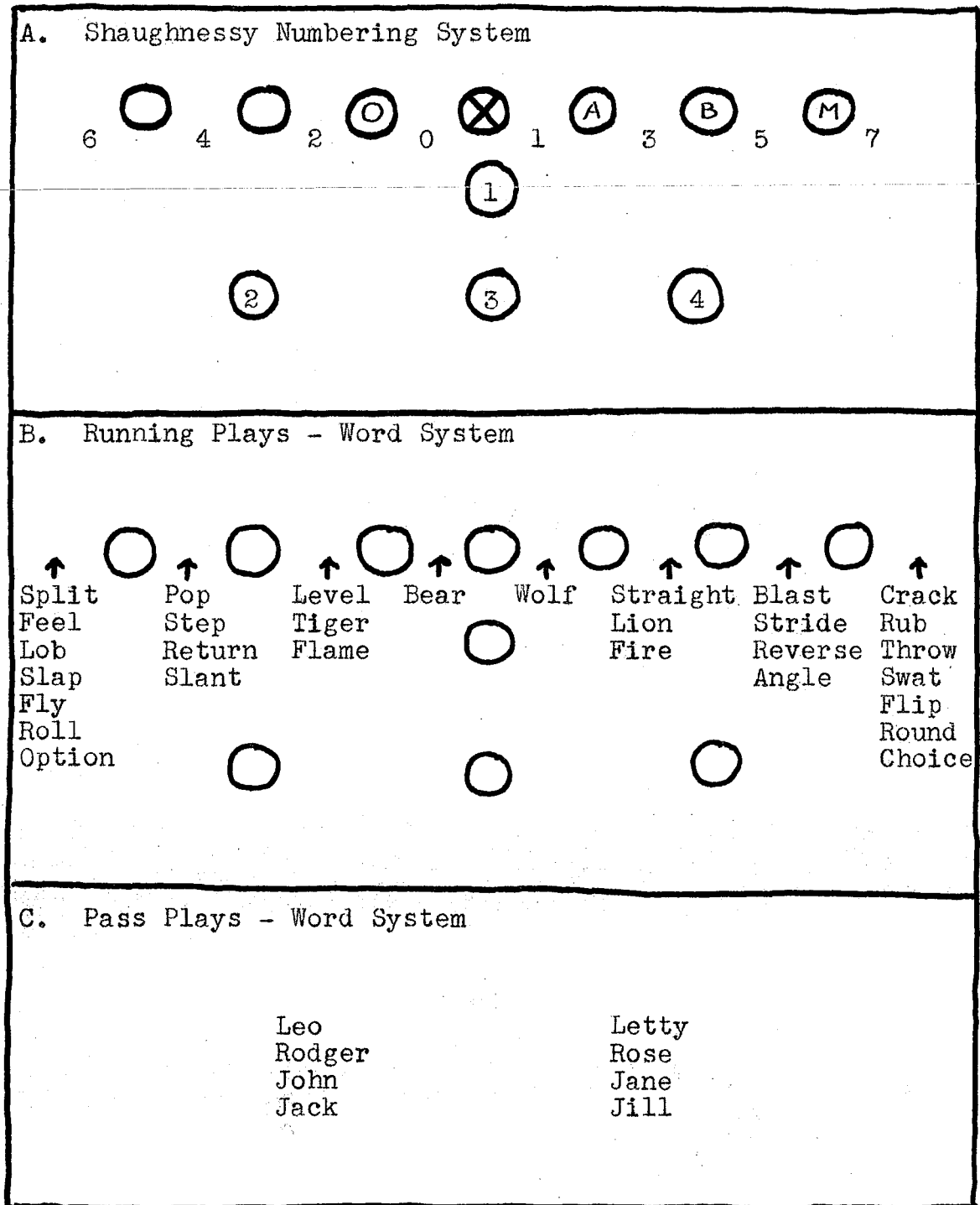
A coach will do well in his active terminology to retain the descriptive words of his coaching, if possible. Most coaches make use of brief, meaningful words, such as 'Snap,' 'Uncoil,' 'Resist,' 'Cut,' 'Follow,' and others.¹⁰

As an example of words for a complete offense, Figure 4 represents the offense used by the Calgary Stampeders in 1954. The names are listed under the offensive holes through which they are run, as compared to the number system of Mr. Shaughnessy which was explained previously. Each play has two words, one for the play to the right and one for the same play to the left. It will be noticed that the

¹⁰ Sam Clagg, "Psychology of Teaching Offensive Number System," Athletic Journal, XXXII (March, 1952), p. 50.

FIGURE 4

Comparison Between a Numbering System and the Word System



running play names are to some extent suggestive as to the type of play represented. The pass plays are named for men and women. A man's name indicates the primary receiver is on the left; a woman's name means the primary receiver is on the right. If a pass from a running play is desired, the play name is called, followed by the word "Pass." Samples of this are "Straight Pass," "Pop Pass," etc.

CHAPTER III

OTHER AUTOMATIC SYSTEMS

It is the purpose of this chapter to present all the data available on the various automatic systems that have been used or are in use today. For the convenience of the study each system will be presented separately and a brief comparison of each will be made with the word system.

San Francisco 49er Automatic System. During the 1950-51-52 seasons the following system of automatic calls was used by the San Francisco team.

As the scouting report was presented to the coaches, they analyzed the various defenses which could be expected during the game. With these defenses in mind, they selected six to eight running plays and four or five passes to be used as automatics. These plays were assigned a range of numbers. The calling of any one of the numbers within this range revealed which play was to be run. For example, if a quarterback sneak were selected for use as an automatic in this game, it would be assigned the number range from one to five; if the quick handoff to the right half were selected, an even number range from six to ten would be assigned; the quick handoff to the left half would be designated by an odd number from six to ten. This corresponded to the normal numbering system of even on the right and odd on the left.

Any other running plays selected were assigned number ranges in the same manner, the higher the range the wider the play attacked the defense. In other words, one to five indicated a quarterback sneak, six to ten the quick handoffs, eleven to twenty off tackle, and twenty-one to thirty wide. Passes had number ranges above forty. Any odd number from forty-one to forty-five would be a buttonhook to the left end; an even number in this range designated the same pass to the right.

A key phrase, such as "heads up," was used in the starting count to alert the team that a play change was in the making. Thus, the count when no automatic was called was "Down, set, one, two, three, etc.;" with an automatic it was "Down, heads up, eight, set, one, two, three." The phrase "heads up" was added when the team members had difficulty in recognizing that an automatic signal was called.

Comparison with the word system. This automatic system made it necessary for the squad members to memorize a duplicate signal system for the plays selected each week. It was also difficult to use in intrasquad scrimmages without considerable renovation by the offensive team.

This method necessitated a large amount of mental alertness and a great deal of practice time to perfect. As pointed out in Chapter I, the occasion to use an automatic arises only five or six times in a ball game; therefore, the

time and effort needed to perfect it seems excessive.

This system was designed and used at the professional level and then with some difficulty. It is not suggested for use at any lower level of competition.

U. S. Naval Academy Automatic System. This system was described to the investigator by Ernie Jorge, line coach at the Academy since the 1955 season.¹¹ The Naval Academy team numbers the offensive holes from the center outwardly, with the odd numbers on the right and the even numbers on the left.

The coaches choose from their offensive repertoire ten plays they feel will be effective automatics. To these plays they then assign numbers from zero to nine. Again the small digits indicate the inside holes, the large digits the wide holes. But now the odd numbers are used for the right side, the even for the left. Incorporated with these digits is a key number from one to nine that will validate the automatic number. Let us say that for a given game five is the key number. If the quarterback were to call "Down, five - two" the automatic play number two would be run; if he called "Down, six - two" the play decided upon in the huddle would be run because six is not the key number.

At the Academy the tackles are asked to make a

¹¹Personal interview, June, 1956.

blocking call on each play. If the play is to be run inside tackle and the offensive tackle wishes to exchange blocks with the offensive guard, he calls "Switch." If the play is to be run off tackle and the offensive tackle wishes to exchange blocking assignments with the offensive end, he calls "Change." The quarterback pauses after his automatic call to allow the tackle to make his decision and call. The count with no automatic call is:

Quarterback: "Down, O. K.,"

Tackle: "Change,"

Quarterback: "Hut two, hut two, etc."

When an automatic call is made it would be as follows:

Quarterback: "Down, five - two,"

Tackle: "Switch,"

Quarterback: "Hut two, hut two, etc."

Comparison with the word system. Again the complaint arises that the automatic system used requires the player to learn a duplicate set of signals for those plays that are selected as automatics. Time must be set aside for the practicing of automatics. Also, the addition of the key number technique requires more thought at a time when the player is concentrating on the assignment at hand.

The key number method does contain the advantage of flexibility. It may be changed from game to game, or from quarter to quarter. However, the added burden of learning

and recognition remains.

Detroit Lions Automatic System. Buddy Parker, coach of the Detroit Lions professional football team, feels that the huddle will soon be eliminated from offensive football. With the huddle too many plays are being wasted.¹² He has placed great emphasis on automatics.

Mr. Parker makes no attempt to change a sweep once it has been called in the huddle. The switch usually is made when a play has been called to one of the inside holes.¹³ These changes are made by the use of two key colors, one designating that the play called in the huddle will be run, the other that a change will be made. After the key colors have been selected, plays are chosen to be designated as automatics. The plays in which the left half carries the ball are numbered in the forties, the fullback plays in the thirties, and those of the right half in the twenties.

Let us suppose that blue indicates that the play called in the huddle will be run, and orange signals a change will be made. The count then would be "Down, blue, thirty-one, O. K., one, two, etc." if the original play is to be retained, or "Down, orange, thirty-one, O. K., one,

¹² Buddy Parker, We Play to Win (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1955), p. 206.

¹³ Ibid., p. 57.

two, etc." if the change is desired.¹⁴ The use of the two key colors is similar to the use of key numbers in the Naval Academy automatic system. In the case mentioned above, "Blue, thirty-one" is a false call for the fullback play, whereas "Orange, thirty-one" is the automatic call for that play to be run.

Comparison with the word system. Again the first objection is that the numbers assigned to the automatics and the key colors are not a part of the signal system normally used. This again represents a duplicate learning situation. The differentiation between the key colors is sometimes hard under the stress of the game. This system also requires that time be set aside for the practice of the automatic system itself.

It would be difficult for a squad to have intrasquad scrimmage and use automatics unless the key colors were changed frequently and the thirty - forty - twenty series numbers were changed so as not to indicate fullback, left half, and right half. If this were not done the defense could play the back called (the fullback when any thirty number was called, the left half when any forty number was called, etc.).

Addition and Subtraction Automatic System. This

¹⁴ Personal interview with Doak Walker, former Detroit Lions player, February, 1954.

system of calling automatics is widely used by split "T" teams. Its origination is commonly attributed to Bud Wilkinson of the University of Oklahoma. This method uses simple arithmetic. Wilkinson describes it in his book.

We have a very simple method of checking signals. When the quarterback is up over the ball and wishes to change the play, he simply makes the statement, "add two," "subtract 1," "add 4," or something of a similar nature. The players do the mathematics in their heads and immediately come up with the new play number.

For example, play No. 30 has been called in the huddle, and when the quarterback gets to the line of scrimmage he sees that the three hole is open. He says, "add three." Everyone on the team would know that No. 33 was going to be run. Similarly, if he had called play No. 39 and upon reaching the line of scrimmage saw that the No. 40 play was open he would say, "add one" to change the play to No. 40.¹⁵

The use of this system necessitates that the normal signal system be called by just the use of the number, and that the blocking assignments be made by the use of rules. At Oklahoma they call only the formation, play number, and snap signal in the huddle. It is then up to the tackle on the "on" side to indicate the blocking pattern.¹⁶

Comparison with the word system. In discussing this system, Stanley West, a player at the University of Oklahoma from 1946 through 1949, stated that the automatic call was

¹⁵ Wilkinson, op. cit., p. 237.

¹⁶ Ibid., pp. 78-82.

not incorporated into the starting count on each play, and on the occasions that it was used it came as a surprise to the team members. He felt that if an automatic were considered, and run or discarded on each play, then the system would be more effective.¹⁷

The objection of additional learning, over and above the normal signal system, is again present. The addition and subtraction, simple as it may seem, is a task when the players are under emotional strain. The perfection of this system depends upon practice time being devoted strictly to the automatics.

In use this system sometimes gives a cue to the defense; the word "add" indicates that a play is being directed further out along the defensive line, and the word "subtract" shows that the play is being directed to a hole closer to the center. This may help the defense to know the approximate area to be attacked by the offense.

Terry Brennan, head coach at the University of Notre Dame, has objections to this method.

This system may appear simple enough, but I feel this way: There are only a few seconds to make a decision at the line of scrimmage, and while the quarterback might do the addition or subtraction with ease, the other players--particularly the line-men--may encounter some difficulty. Even the rela-

¹⁷Personal interview in Los Angeles, August, 1952.

tively simple arithmetic can, in that brief interval, mar their concentration on their actual duty --that of blocking the man up front.¹⁸

Notre Dame "Live" and "Dead" Color System. This system parallels quite closely the one used by the Detroit Lions. Notre Dame's entire running offense is incorporated, however. The offensive numbering system used at Notre Dame is the conventional "T" numbering system, with the even numbers on the left side and the odd on the right. The backs are numbered one through four; the quarterback is one, the left half two, the fullback three, and the right half four. The play is called simply by calling the ball-carrier's number through the desired hole. No blocking word or descriptive phrase is used.

A color is chosen and designated as "live," meaning that when prefaced by this color the play called at the line of scrimmage will be run. If "Blue" were selected as the "live" color and "Blue twenty-nine" were called, it would indicate that play number twenty-nine was to be run. If "Red twenty-nine" were called it would be a false call and would not be run.

Mr. Brennan feels that the use of the "live" color serves as an alerting mechanism to the members of the team.

¹⁸ Terry Brennan, "Changing Your Plays on the Line of Scrimmage," Scholastic Coach, XXV (September, 1955), p. 14.

When they hear a "live" color called they are immediately aware that a change of play will follow. If they hear a "dead" color then they concentrate on the job at hand as designated by the play called in the huddle. The quarterback is instructed to make a call using a "dead" color often enough to keep the defense honest.¹⁹

Comparison with the word system. Once again, another learning situation for the team members arises, this time because the use of colors is not encountered in the normal signal system. In order for the squad to hold scrimmages, these "live" and "dead" colors must be changed before each scrimmage so that the defense will not be given a cue. Practice time must be set aside for the squad to be able to execute the "live" and "dead" calls with the degree of efficiency necessary in a game. These calls of colors are not made on every play, but only as the quarterback feels that an automatic is needed, or when he decides that a false call should be used to confuse the defense.

Los Angeles Rams Automatic System. During the season of 1952, Hampton Poole was head coach of the Los Angeles team. In a personal interview with Duane Putnam, Ram guard, he explained Mr. Poole's system.

The plays that were selected to be used as automatics

¹⁹ Ibid., p. 15.

were given names. The names that began with the letter "L" were plays run to the left; those that began with "R" were to the right. Running plays were named for objects and pass plays for men or women. These names were given over and above the regular signal system. They represented a dual-designation system for the selected plays. The fullback slant play, normally called "Thirty-six drive A" to the left and "Thirty-five drive A" to the right, became "Rock" to the right and "Log" to the left under the automatic system. The play, "Twenty-nine H sweep," was a wide end run to the right, and "Forty-eight H sweep" was the wide end run to the left. They were designated as "Round" to the right and "Loop" to the left as automatics.

The "L" and "R" principle also applied to the men's and women's names assigned to the pass plays. The longer the name used, the longer the pass pattern to be run. For instance, "Lou" was a hook pass to the left end; "Ray" was a hook pass to the right end. "Rosey" was a deep pass to the right end; "Larry" was a deep pass to the left end.²⁰

This system worked well for the Los Angeles Rams. However, it must be kept in mind that the players involved were of a professional level, both in ability and experience.

Comparison with the word system. This automatic

²⁰ Personal interview, December, 1952.

system represents a pure dual-designation method, requiring the players to learn two systems of signals. There is also a recognition problem involved when the play is called during the game. Practice time in considerable quantity must be devoted to the learning and recognition of these name designations. At the professional level this system did function to the satisfaction of those concerned, but even there some errors and memory lapses occurred.²¹

Numbers in Series Automatic System. In using this system the offense is set up in series as to the type of play run, and the series is given a one digit number. Then each play within this series is given a one digit number corresponding with the numbering of the offensive holes. A third single digit is added, representing the snap number. For example, "One nine two" would describe the number one series, the nine--or wide--play in that series, and the snap of the ball on two.

The number series are called in sets of three, and the team selects either the first, second, or third set of digits to be the significant set. The set selected will vary from quarter to quarter or game to game to keep the defense honest.

²¹ Personal interview with Duane Putnam, December, 1952.

Coach Bud Andrus of Minnetonka High School, Excelsior, Minnesota, used this system in the following manner:

Assume that we are operating from a basic split T formation with an occasional shift to the short punt to keep the defense guessing. The offensive holes are numbered from one through nine, starting on the right flank. For example, we might call our running plays from this basic formation our 100 series. If the quarterback notices that only one man is playing outside our left end in the scrimmage area, he will direct a play from the split T at the 9 hole. Then the play is 190; one means split T formation, and 9 means the play is to be run at the nine spot. If the ball is to be snapped on the three count, the play will be 193. . . .

The split T pass patterns will be our 200 series. If our quarterback should call (here . . . we are listening to the second set of digits only) 142-211-525, it would mean that we would throw split T pass pattern No. 1 on the count of 1.

Our short punt running plays could be called the 300 series, and the short punt pass plays could be the 400 series. The shift from the split T to the short punt formation could be made on a predetermined key number.²²

This system may be used as a complete offensive signal system, eliminating the huddle completely, or it may be used as a supplement to the normal signal system and function as an automatic system alone.

Comparison with the word system. Here the offensive team encounters the problem of listening to three sets of

²² Bud Andrus, "The Huddle--Is It Old-fashioned?" Athletic Journal, XXXVI (April, 1956), p. 42.

numbers, selecting the one set that has meaning, and then breaking this set down into series, play, and snap number. All of this must be done very quickly. As Coach Brennan pointed out (pp. 34-35), there are only a few seconds to make decisions at the line of scrimmage, and any mental effort on the part of the linemen especially may detract from their primary task, that of blocking the man over them.

This system, by varying the significant set of numbers, could be used in an intrasquad scrimmage without giving the play away to the defense. If the system were used to supplement the normal signal system, it would require extensive practice time to perfect; if it were used as the only signal system, this objection would be eliminated.

These, then, are the basic systems of automatics in use today. There are other systems, but they are combinations or offshoots of these.

There is, for example, the color system used by Coach John McMahon, Tappan Zee High School, Piermont, New York.

He describes it this way:

1. In the huddle every play is given a color. For example, Red 42 on 2 might be the quarterback's call.

2. Up on the line the quarterback may wish to change the play. To make the change he merely calls out any color but the one called in the huddle. Then he waits a second and calls a play right at the line. Naturally the snap signal remains constant.

3. If the quarterback feels that the defense is catching on to his signals, he merely uses a dummy call by calling out the same color that was given in the huddle. As soon as his teammates hear a color that matches the huddle color, they disregard any play that is subsequently called. This dummy call is used a few times in each game to keep the defense honest.

4. The rule to follow for easy learning is as follows:

- a. Color same, play the same.
- b. Color change, play change.²³

This obviously is an adaptation of the "live" and "dead" color system and would have the same objectionable features, plus the additional one that the player must remember the color designation given to the play in the huddle.

Visual Automatic System. There is another type of automatics that must be mentioned. It involves just the flankered end or back and the quarterback. By a visible sign or set position, the flanker informs the quarterback what his pass route will be.

Coach Brennan describes this method as used by the Chicago Bears professional football team in 1954, as follows:

The Chicago Bears last year used hand signals in calling automatics on pass patterns. They'd have a back flankered on one side and an end split

²³ John J. McMahon, "Say It With Colors," Athletic Journal, XXXVI (April, 1956), p. 28.

on the other. These players would size up their defensive coverage and then hand signal the quarterback that they were going to change their path.²⁴

This type of automatic, while limited to pass plays with flankers, does afford two advantages. Without speaking a word the play has been changed, and the blocking assignments have not been altered.

The Los Angeles Rams made extensive use of this type of automatic under Hampton Poole. In a personal interview Tom Fears, Rams end, stated that although the Rams used this visual automatic with both the flanked back and the split end, the preference was to use it with the split end. The purpose of the flanked back was to obtain as much rotation as possible from the defensive backfield, in order to get a man to man coverage situation on the split end opposite the flanker. The end could then tell the quarterback, by body position, what pass pattern he was going to run.

For instance, if the end felt that the man covering him was too deep, he might want to run a "buttonhook" pattern. The signal for this pattern was a three point stance by the end. Perhaps the end felt that the defender was too far to his inside, and he wanted to run a "corner" pattern; he would then stand erect with his hands at his sides. The signal for a "sideline" pattern was standing

²⁴ Brennan, op. cit., p. 90.

erect with the hands on the hips.

This type of visual automatic pass was called in the huddle by the quarterback, who would say "left half set right, left end pass," or "right half set left, right end pass."²⁵

This visual method depends on the end or flanker having a sound knowledge of defensive pass coverage and defensive backfield play. For this reason it may be difficult for college and high school teams to use. Coach Brennan also feels that this is the case.²⁶

Automatic system to change pass patterns in route.
During the 1953 football season, Bill Wilson, end for the San Francisco 49ers, and Y. A. Tittle, quarterback for that team, developed a method by which a pass pattern could be changed while it was actually in the process of being run. It hinges on the quarterback and end both recognizing the defensive pass coverage and executing a pattern that will be successful against this coverage.

For example, if a pass play were called in the huddle that required Wilson, as left end, to run a "corner" pattern, and as he moved down the field on this pattern he saw the defensive back playing him deep and to the outside,

²⁵ Personal interview with Tom Fears, December, 1953.

²⁶ Brennan, loc. cit.

then, rather than run the covered pattern, Wilson would execute a deep "buttonhook" maneuver. Tittle, the quarterback, watching Wilson in the pattern, also recognized that the defensive back was playing him for the "corner" pattern and knew that in this situation Wilson would switch to the deep "buttonhook" maneuver.²⁷

The situations and their alternate patterns were agreed upon by the end and the quarterback. This type of change is difficult to effect at the lower levels of competition. A great deal of practice is necessary between the end and quarterback, not only to execute the alternate patterns successfully, but also for both players to recognize the situation correctly.

²⁷ Personal interview with Bill Wilson, February, 1954.

CHAPTER IV

COMMENTS OF THE COACHES USING THE WORD SYSTEM

The contents of this chapter are devoted to the comments and reactions of nine coaches to the word system. These nine men have used this system for one year or more. Any variations they have introduced will also be included here. The coaches are:

1. Larry Siemering--Calgary Stampeders, 1954, and Santa Cruz High School, 1956.
2. Jack Myers--College of the Pacific, 1955-56.
3. Don Hall--Stockton College Mustangs, 1955-56.
4. Harry Kane--Stockton College Colts, 1955-56.
5. Charles Gordet--Stagg High School, 1956.
6. Bill Parton--Edison High School, 1956.
7. George Brumm--Franklin High School, 1956.
8. Wilbur Wood--Novato Union High School, 1956.
9. Bill Gott--Stockton College Colts (assistant coach), 1956, and Stagg High School (head coach), 1957.

These coaches were each interviewed personally and they were asked the following questions:

1. Does the word system eliminate practice time for just automatics?
2. Do you feel that plays are easier or more

difficult to learn as compared with the numbers-plus-words system?

3. Do you feel that your opponents at any time "caught on" to the automatic system?

4. Do you feel that intrasquad scrimmages are possible with the word system?

5. Do you plan to continue using the word system?

Their reaction to these questions and their general comments are presented separately under their names.

Larry Siemering, Coach, Calgary Stampeders, Calgary, Alberta, Canada, 1954, and Santa Cruz High School, Santa Cruz, California, 1956. Mr. Siemering was one of the originators of the word system and was the first head coach to use it. It was initially used with the Calgary team during the 1954 season. His answers and comments are as follows:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes, automatics are practiced by having the team run dummy scrimmage with no huddle.

Question No. 2. Do you feel plays are easier or more difficult to learn as compared to the numbers-plus-words system?

Answer. Easier. Easier to teach also, because no time need be taken to acquaint players with a numbering

system plus words indicating the play pattern.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. Not that we were able to observe.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. Certainly. With the use of phony calls such as scrimmages are possible. This is the real test: to be able to use it against your own men.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes, definitely.

General Comments. With this system it is easier to add plays to the offense during the season. When a play is added, the team will absorb it faster and retain it longer if they are asked for name suggestions for the play.

It is possible to use more plays per game with this method because less time is spent in the huddle. It is also possible to eliminate the huddle if the situation warrants it near the close of the first half or the end of the game.

Jack Myers, Coach, College of the Pacific, Stockton, California, 1955-56. Coach Myers first used the word system in the 1955 season. His reactions are as follows:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes. There is no need to devote any time to automatics if plays are run with no huddle occasionally.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. Plays are easier to learn with the word system. We feel that the player learns the whole play, as well as what we are trying to do with the play.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. No, they never reacted to the automatic call.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. Yes. However, enough false calls must be used to keep the defense from listening to the quarterback.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes.

General Comments. The biggest advantage of the word system is that it is a whole system; the signal system and the automatics are one. The players learn the play by seeing the entire pattern, rather than just their own separate part.

Don Hall, Coach, Stockton College Mustangs, Stockton, California, 1955-56. Coach Hall has used the word system since 1955. He comments as follows:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes. It also saves practice time by doing away with the huddle during dummy scrimmage.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. They are easier to learn in the word system. Time is saved, too, by not having to teach the players the location of the offensive holes.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. No, we never found that they did.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. Yes, so long as phonies are used.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes.

General Comments. The word system has speeded up our practice sessions. We spend less time in the huddle and often eliminate it completely. Plays are more easily added to the offense. With the word system we are able to run more plays per ball game.

Harry Kane, Coach, Stockton College Colts, Stockton,

California, 1955-56. Coach Kane used the word system during the 1955 and 1956 seasons with the Colts. His thoughts and observations are presented here:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Definitely, because automatics and the signal system are the same.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. They are easier to learn, but it is hard to eliminate any confusion that develops late in the season, with regard to such things as blocking assignments.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. We did not use automatics to any great extent.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. Yes. If we had used automatics we would have been able to do so without our defense being able to key on the calls.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes, we are sold on it.

General Comments. We found that we could get plays in to the quarterback more easily during a ball game. The nomenclature is simpler for the players, especially the quarterback. In general it is less complicated than the numbers-plus-words method. The words have more meaning than the numbers.

Charles Gordet, Coach, Stagg High School, Stockton, California, 1956. Coach Gordet used the word system during the 1956 season, his first as Stagg High School football coach. His answers to the questions are listed below:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes. No practice time at all need be assigned to the sole practice of automatics.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. The words are easier if there is some association between the plays and the words.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. No. No one ever "caught on."

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. Yes, as long as phonies are used.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes, most definitely.

General Comments. This was Stagg High School's first varsity team, and in such a situation the word system was a natural. It is easy to learn, complete with automatics, and foolproof. The players are enthusiastic about it. Our team members helped in choosing names for the plays we added during the season. They enjoyed doing this and remembered them well.

Bill Parton, Coach, Edison High School, Stockton, California, 1956. Coach Parton became familiar with the word system as backfield coach for the Stockton College Mustangs during the 1955 season. The next year, as head coach at Edison High School, he installed it with his team. These are his answers to the questions:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes. Just run your offense with no huddle.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. Easier. With a new group, scrimmages are possible several days sooner.

Question No. 3. Do you feel that your opponents at

any time "caught on" to the automatic system?

Answer. We did not use automatics much, but I do not feel that they would have.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. Yes, but phony calls must be incorporated.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes, we do.

General Comments. I was dubious in 1955, when I first heard about the word system, but during that season I became convinced of its practicability. It is very popular with the players, simple to teach and learn, and is complete within itself.

George Brumm, Coach, Franklin High School, Stockton, California, 1956. Coach Brumm used the word system during the 1956 season. Listed here are his answers:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes, it does.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. The words are easier to learn; the players remember them better.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. No, definitely not.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. Yes, but the quarterback must make use of phony calls.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes, we do.

General Comments. It is difficult to find words that are synonymous to use as play names. We encountered some trouble in calling the formation by words. In general, however, we feel that the use of words is superior to the usual numbers method.

Wilbur Wood, Coach, Novato Union High School, Novato, California, 1956. Coach Wood used the word system first in 1956. He has a unique situation because he is working with a particularly young group. Novato is a new high school and it has no senior class as yet. The first class came in as freshmen and will be the first to graduate. During the 1956 season Mr. Wood had only freshmen and sophomores on his team. His comments are presented here:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes. We run our dummy scrimmage without a huddle.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. Easier. Our boys had very little difficulty in learning the plays with words.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. We employed automatics in only two games to any extent, but I do not feel that they ever did.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. It is hard to do unless the phony calls are used.

Question No. 5. Do you plan to continue using the word system?

Answer. Very definitely.

General Comments. We are very pleased that the words have worked out so well for us. We feel that this system is a real development in offensive football.

Bill Gott, Coach Stagg High School, Stockton, California. Coach Gott served as backfield coach for the Stockton College Colts and is now head coach for Stagg High School. The 1957 season will be his first in the latter

position. He has set up his offense for the coming season, using the word system. His comments are quoted here:

Question No. 1. Does the word system eliminate practice time for just automatics?

Answer. Yes, definitely.

Question No. 2. Do you feel that plays are easier or more difficult to learn as compared with the numbers-plus-words system?

Answer. Words are much easier. I was a firm believer in the number method of calling plays, but I found the words to be easier as long as some association was used.

Question No. 3. Do you feel that your opponents at any time "caught on" to the automatic system?

Answer. We did not use many automatics while I was with the Colts, but I do not think that they would.

Question No. 4. Do you feel that intrasquad scrimmages are possible with the word system?

Answer. If you make use of phony calls, yes.

Question No. 5. Do you plan to continue using the word system?

Answer. Yes. We are going to use it next season at Stagg High School.

General Comments. This method worked very well last year with the Stockton College Colts. I am sold on it.

INNOVATIONS

1. Coach Myers has used a color call by the tackles to indicate the blocking pattern for the linemen. Suggestive names, such as "Tank" or "Ram," were chosen to designate the various plays.

2. Coach Hall has substituted the word "out" for the color in the starting count. He uses suggestive names for his plays, plus an extra memory jolter; any play that goes to the left has a name with an "l" in it, and any play that goes to the right has an "r" in its name.

3. Coach Kane called his formations by the names of the schools that popularized that formation. For instance, the name "Stanford" indicated a split left end and the right halfback flanked right. The word "Michigan" designated an unbalanced-line single wing; and so forth.

4. Coach Parton used a remarkable innovation in his word system. He named his plays with only one word, not naming the reciprocal play. In the huddle his quarterback would call "Blast left" or "Blast right."

He also categorized his holes by letters; any word with an "s" in it was up the middle, and "q" in a word indicated the "Quick" or direct handoff, and the off tackle words all contained "b," the wide plays "r,"

The word endings were used to indicate blocking.

"Ast" endings were wedge blocking, "air" indicated both guards were to pull, and the "it" ending meant that the off guard was to lead.

This method incorporated all the pertinent information in the word and has given meaning to the different word parts.

When the quarterback wanted to call an automatic to the left side and the play called in the huddle was to the right, he called the new play name and added the word "over" to indicate it would go to the opposite side. If it was to go to the same side as the original play, then the word "over" was omitted.

These were the only notable innovations used by the nine coaches who employed the word system.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter is to present a summary of the study and the conclusions drawn from the findings of the study and to make recommendations based on the conclusions. The chapter will include the conclusions drawn from the nine coaches using the word system, as well as recommendations for additional related studies.

General Summary. After a careful study of the available published and unpublished materials, a shortage of such material was apparent, with regard to automatics and how any particular coach chooses to run them. It seems many coaches consider them trade secrets. Many of the books published by recognized authorities contain a chapter, or a portion of a chapter, devoted to their signal system, but they do not mention their automatic system. As a result, much of the content of this study has come from the investigator's personal experience, from personal interviews with people who played for various teams, and from the coaches themselves.

Of the nine coaches using the word system, all agreed that this method was superior to the numbers-plus-words system.

There were two difficulties pointed out. George

Brumm had trouble calling the formations to be used by one word, and Harry Kane found it hard to clear up any confusion that developed late in the season with regard to the blocking assignments. The other coaches had no adverse reactions at all.

Conclusions. The conclusions of this study are presented below:

1. The word system eliminates practice time for automatics as a separate unit.
2. Plays are easier to learn with the word system than with the numbers-plus-words system.
3. As far as the nine coaches could ascertain, the defense never "caught on" to the automatic system.
4. It is feasible to use the automatics during an intrasquad scrimmage if phony calls are used.
5. All of the nine coaches plan to continue using the word system.
6. The nine coaches prefer the word automatics to the basic types and their offshoots presented in Chapter III.
7. Care should be exercised in the selection of words to be used in the naming of plays. The names should be suggestive of the type of play. Any other kind of thought association between the word and the play is also helpful.
8. The players themselves should be consulted about

the play names.

Recommendations for additional studies needed. The following are the investigator's considered recommendations for further studies:

1. It is recommended that a follow-up study be made as more coaches use the word system.

2. It is recommended that a study be made which includes offensive formations other than the "T" formation.

3. It is recommended that a study be made of the significance of thought associations between play types and the words.

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