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**A SCORING DEVICE FOR ANALYZING INDIVIDUAL
DEFENSIVE FOOTBALL PERFORMANCE**

BY

THOMAS FRANCIS MCGAULEY

**A thesis submitted
in partial fulfillment of the requirements for the
degree Master of Science, Department of
Physical Education, South Dakota State
College of Agriculture
and Mechanic Arts**

August, 1959

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A SCORING DEVICE FOR ANALYZING INDIVIDUAL
DEFENSIVE FOOTBALL PERFORMANCE

This thesis is approved as a creditable, independent investigation by a candidate for the degree, Master of Science, and acceptable as meeting the thesis requirements for this degree; but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

ACKNOWLEDGMENT

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TFM

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CHAPTER I

INTRODUCTION

Coaches are endlessly searching for ways to improve their football teams offensively and defensively. Film evaluation has become a very sound method for analyzing the performances of players, the result of play patterns, and the result of coaching strategy and technique.

It was with this in mind that the author began to create a defensive scoring device for rating individual defensive performance from game films. His first experience with player rating scales was at Holy Cross College. Later at Dickinson State Teachers College, Dickinson, North Dakota, some additional experience, both as a player and coach was obtained in player rating. When the author coached at Saint John's Academy, in Jamestown, North Dakota, he rated his players using a very simple chart scored by a manager in the press box. When the author came to South Dakota State College as a graduate assistant in the fall of 1958, he helped to evaluate games which had been filmed as well as scrimmage and games on the actual playing field.

Problem

The purpose of this study was to develop and to test a scoring device for analyzing individual defensive football performance.

Sub. Problems

1. To rate by means of the scoring device the defensive player from the time of his first movement until the play was over.
2. To score according to a point system the player's total

defensive performance for the game and season.

3. To analyze and portray through the use of graphs the total defensive performance for each of the six 1958 North Central Conference football games and for the total season.

Delimitations

This study was limited in the following respects:

1. This study was confined to individual defensive performance.
2. The six 1958 North Central Conference football games played by South Dakota State College were scored.
3. The players were scored according to the defensive position played regardless of the defensive alignment employed by the team. The players out of camera range were not scored.

Significance of the Study

This study should be of value to players and coaches who are searching for a method of individual defensive analysis. It should also be of value to the players for they can see in what phase of defense they need to improve. As a result of their observation, coaches may also wish to make changes in personnel. The use of rating films tends to make coaching more objective and gives a clear method for the evaluation of player personnel. This method is time consuming, but the findings may prove very worth while to the person who wants to analyze objectively the game of defensive football. The scoring of each player may show that a player, who was used sparingly, played very well for the time in which he participated in the game. The importance of pursuit may be impressed upon the players when they see quantitatively

and objectively how they performed in game competition. On the basis of the scoring chart, proper credit may be given to the boy who has blocked a punt, recovered a fumble, or intercepted a pass. This chart will enable the coaches to observe from the points earned in each game which individuals put forth the greatest effort.

From reading the ideas and comments of many well known coaches, the author believes that the use of film analysis has helped their teams to be better prepared than were their opponents. These coaches and their staffs have taken time to analyze and evaluate on film the strengths and weaknesses of their own team and their opponents team. After scoring six games of football using a scoring device, the author thinks that film analysis has a very strong claim for usage as a valuable aid in coaching procedure.

History and Previous Research

Today the game of football has become highly developed from an offensive point of view with many teams employing two or more offenses. With these multiple offenses the use of film analysis as a media of preparing for an opponent is a great help. It is not only in connection with a study of football offense, however, that film analysis may be helpful. It may be used with equal effectiveness to analyze defensive strengths and weaknesses. There is therefore a need for an objective scoring device.

Sterling Geesman compiled an evaluation chart for offensive line-man and graded each player on the following nine phases of offensive football.

1. Stance
2. Charge
3. Line Blocking
4. Pulling Out
5. Trapping
6. Downfield Blocking
7. Protecting Passer
8. Protecting Punter
9. Covering On Punts

The linemen were rated according to the consistency with which he performed in each of these nine phases.

The point system for scoring this chart follows:

A for always	4 points
M most of time	3 points
O occasionally	2 points
S seldom	1 point

This chart was used to awaken the players to their faults and to give an incentive for the linemen to become better offensive football players.¹

The foremost users of film analysis are the coaches in professional football and Raymond K. Parker in his book writes:

Visual education is a relatively new development in the field of teaching. I do not know of any group that has seized on motion pictures more avidly or used them more thoroughly than football coaches. Football films have become a vital part of our preparation for

¹Sterling Geesman, "An Evaluation Chart for Offensive Lineman," Athletic Journal, vol. XXXII, pp. 76-77: Chicago, Illinois, September, 1951.

any game. They increase the work load tremendously, but I feel it would be impossible to do an adequate coaching job without them.²

Hampton Pool in his book Fly T Football believes film analysis in many ways is superior to recent eye witness reports.³

L. R. Meyer the leading collegiate exponent of spread formation football believes that through film analysis one can learn a great deal about an opponents style, methods, and general game philosophy.⁴

Howard Odell has stated that with film analysis he tries to make an actual decision on how well the players carried out their assignment on each play.⁵

At the present time film analysis has been well represented in recently published football books and periodicals as an area to be explored as an effective method of coaching. Jordan Olivar, coach at Yale University, pens these words.

The movies are a multifold check--first, for the players; second for the coaches; and third, of the plays themselves. The players get criticism in techniques that help to perfect their performances. They can watch themselves in slow motion and see exactly what their job is in relation to everyone else's. This provides a real appreciation of team work as a whole as well as an insight into the job his buddy next to him is doing.⁶

²Raymond K. Parker, "The Use of Game Movies," We Play to Win, p. 154, Prentice-Hall Inc.: Englewood Cliffs, New Jersey, 1955.

³Hampton Pool, "Film Scouting," Fly T Football, p. 214, Prentice-Hall Inc.: Englewood Cliffs, New Jersey, 1957.

⁴L. R. Meyer, "Planning the Attack," Spread Formation Football, p. 229, Prentice-Hall Inc.: Englewood Cliffs, New Jersey.

⁵Howard Odell, "Motion Picture Symposium," Athletic Journal, vol. XXVII, p. 12: Chicago, Illinois, April, 1948.

⁶Jordan Olivar, "Specific Values of Movies," Offensive Football, p. 90, Ronald Press Co.: New York, 1958.

CHAPTER II

PROCEDURE

Source of Data

The source of data consisted of the sixteen millimeter black and white films of the six north central conference games played during the 1958 South Dakota State College football season. This included approximately 4800 feet of film.

Method of Collecting Data

A sixteen millimeter Bell and Howell projector was used to project the films of the six games on a Kodak Daylight Projector Viewer that had a screen measuring twelve inches by nine inches. Some experimentation was conducted by the author employing a film editor. However, the screen was too small and individual players were difficult to follow. If the device could have had an enlarged screen it would have proven invaluable in analyzing films.

The following games were viewed:

South Dakota State College (20) vs. Augustana College (6)
Oct. 4, 1958

South Dakota State College (12) vs. North Dakota University (30)
Oct. 11, 1958

South Dakota State College (7) vs. South Dakota University (28)
Oct. 18, 1958

South Dakota State College (20) vs. North Dakota State College (33)
Oct. 25, 1958

South Dakota State College (26) vs. Morningside College (6)
Nov. 1, 1958

South Dakota State College (13) vs. Iowa State Teachers College (8)
Nov. 8, 1958

Each defensive position was studied separately. A conscientious effort was made to view and re-view each play so as to arrive at a true score. The scoring device recorded the charge of the defensive player, his block reaction, pursuit, assists, tackles, clobbers, blocked punts, intercepted passes, and recovered fumbles.

The basic football terms used in this study are defined as follows:

Charge--The ability of a defensive player to move quickly and vigorously to block the offensive man with his forearm, hands, or shoulders.

Reaction to Block--The ability of a defensive player to react to the offensive pressure of a block and maintain his area of defense and be ready to move in pursuit of the ball carrier.

Pursuit--The ability of a defensive player to give chase and tackle an offensive ball carrier away from his area.

Tackle--The ability of a defensive player to meet the ball carrier and stop his forward progress by driving him to the ground.

Assist--The ability of a defensive man to assist with a tackle.

Clobber--The ability of a defensive player to tackle ferociously and to completely stop the forward progress of a ball carrier. Sometimes referred to as a "form tackle" as taught by the coaching staff.

Area--The specified amount of territory which each defensive player is responsible for covering and protecting. Usually approximately one half the distance between defensive players.

Key--Movement of an offensive player that gives an indication of the path of the ball carrier.

Roll-out Play--An offensive maneuver whereby the offensive quarterback attempt to skirt the opposition carrying the football. He may either run or pass in this maneuver.

After careful consideration and experimentation the following point values were assigned to the various items to be rated.

	<u>Below Average</u>	<u>Average</u>	<u>Above Average</u>	<u>Successfully Executed</u>
Charge	-1	0	+1	
Reaction to Block	-1	0	+1	
Pursuit	-1	0	+1	
Pass Defense	-1	0	+1	
Assist				2
Tackle				3
Clobber				4
Intercept Pass				5
Block Punt				5
Recover Fumble				5

Treatment of Data

When all of the necessary data was collected and compiled the following procedure was followed.

1. The players charge, reaction to block, and pursuit were combined and scored on a plus or minus basis as shown in Table I on page 10.

2. The total defensive points scored by a player for one game were divided by the number of plays in which he participated and this gave the average points per play for each player as shown on the Table I.

3. The assists, tackles, clobbers, intercepted passes, blocked punts, recovered fumbles, and pass defense items were also scored to give the player his total points scored for one game and for the season.

4. The bar graphs, figures one through seven, were created to present graphic pictures of the game and season point totals.

5. The rating of minus one meant the defensive man performed very poorly his charge, reaction to block, and pursuit. The rating of zero meant the defensive player did not have a play run in his area, or he executed his charge, reaction to block, and pursuit well enough so as to not hinder his area defense play. The rating of plus one meant the defensive player executed his charge, reaction to block, and pursuit outstandingly.

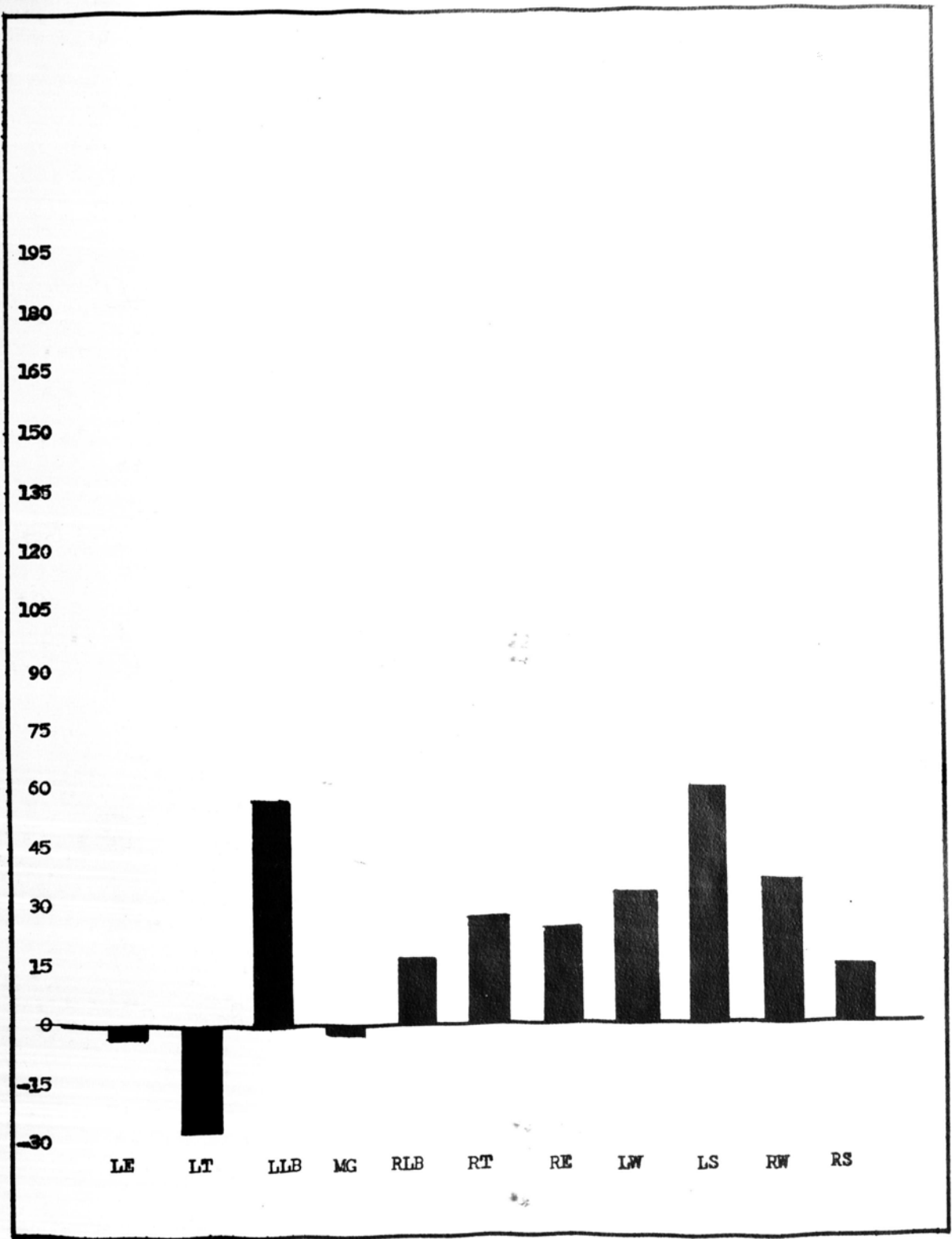


Figure 1. Defensive Points by Positions
(Augustana College Game)

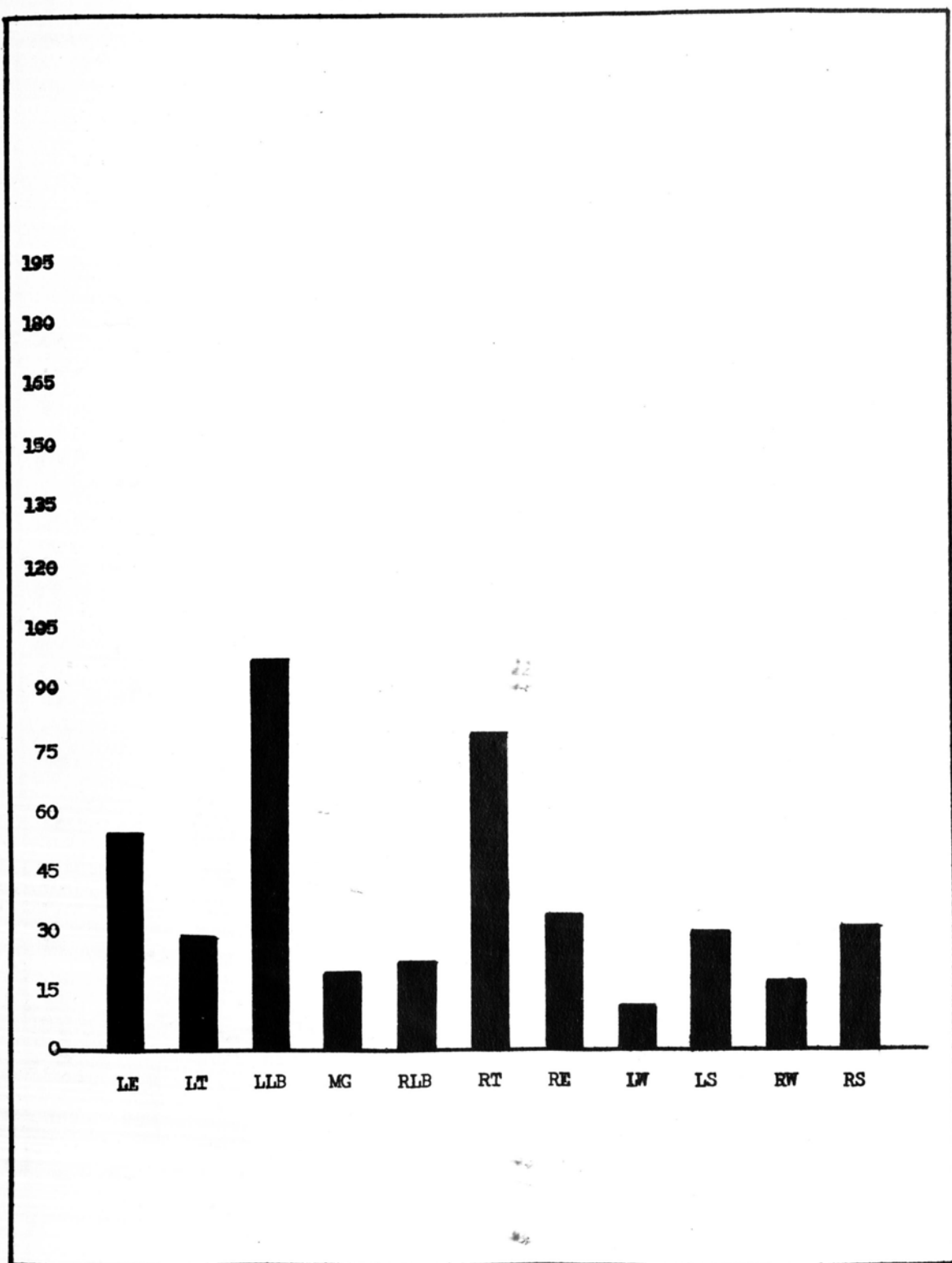


Figure 2. Defensive Points by Positions
(North Dakota University Game)

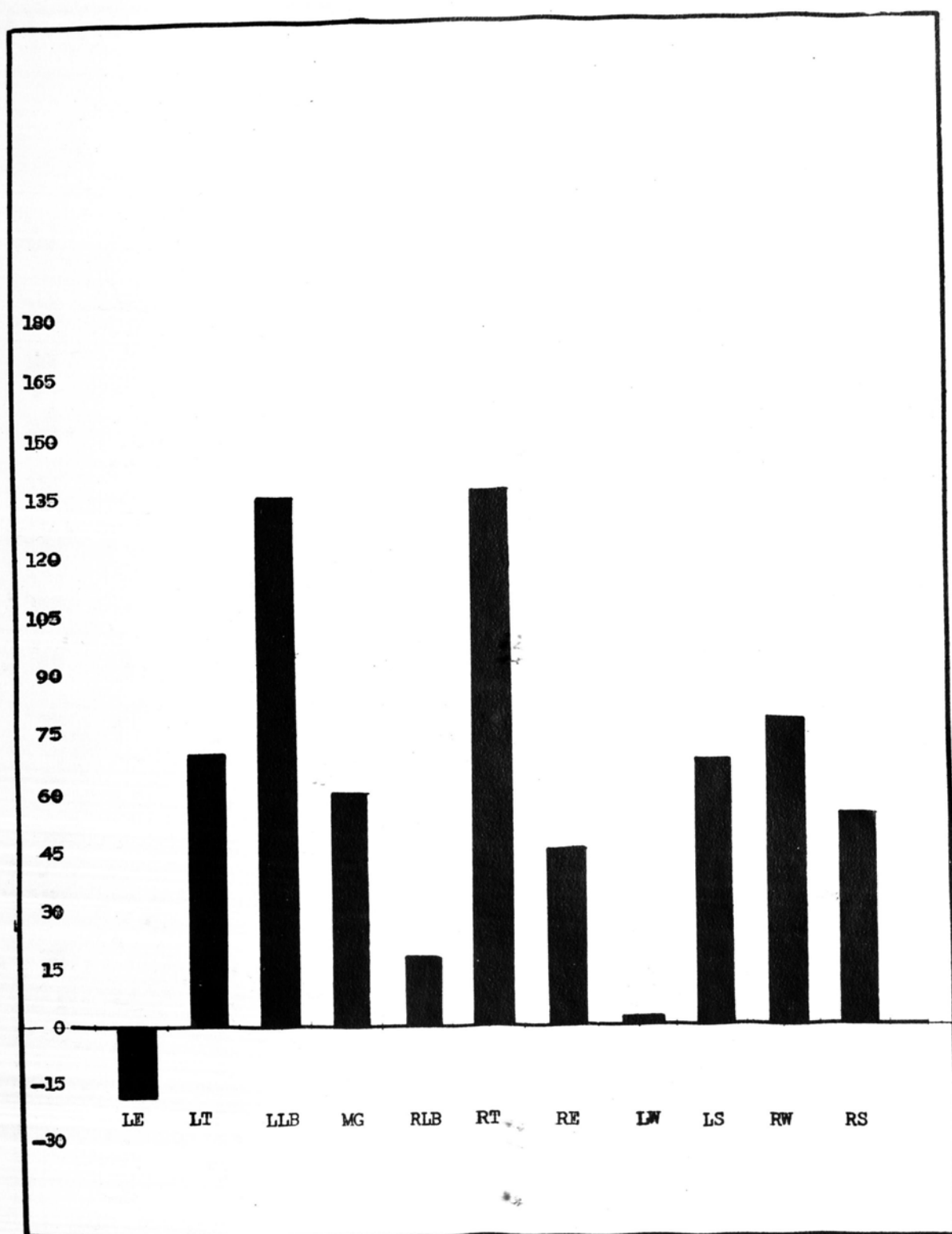


Figure 3. Defensive Points by Positions
(South Dakota University Game)

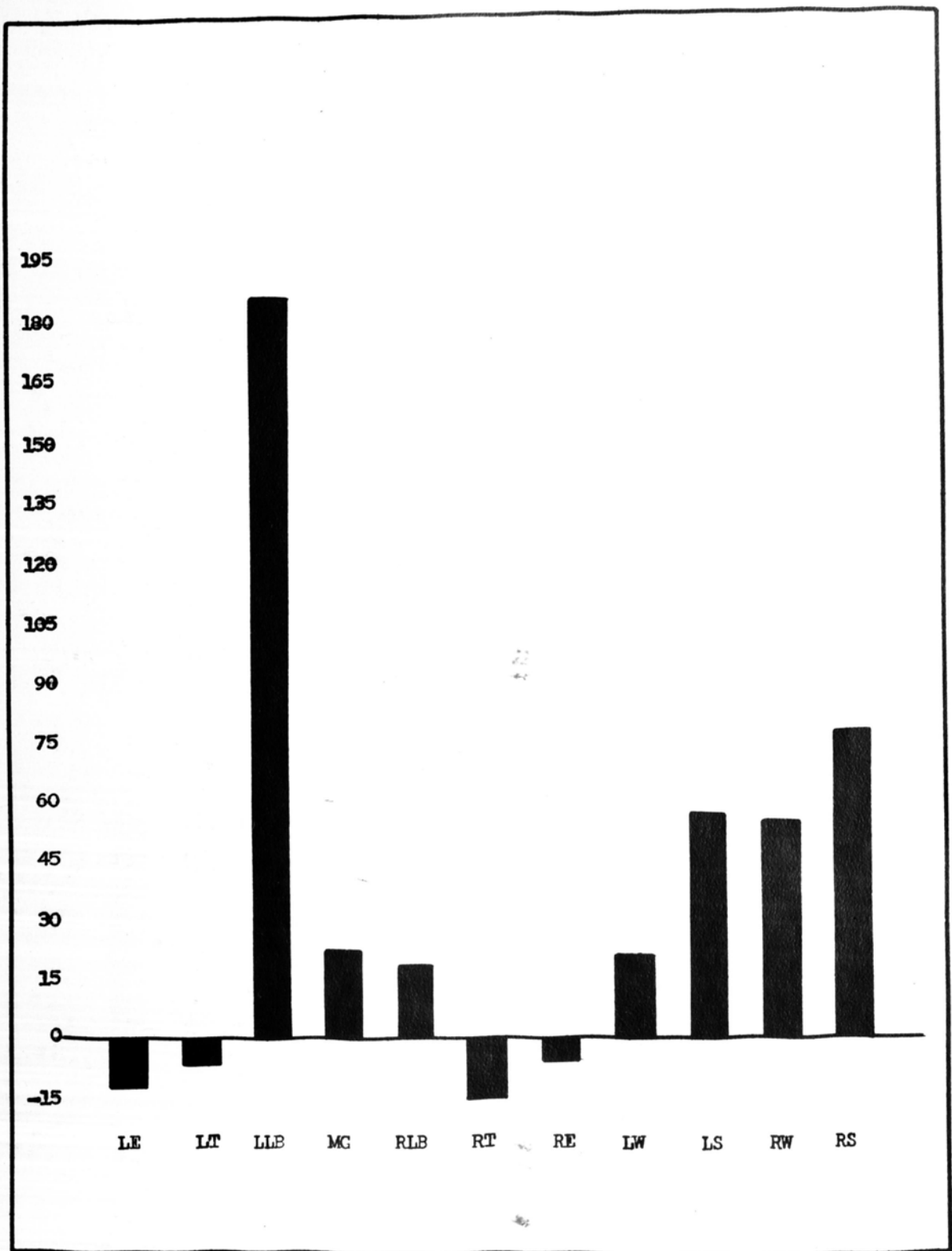


Figure 4. Defensive Points by Positions
(North Dakota State College Game)

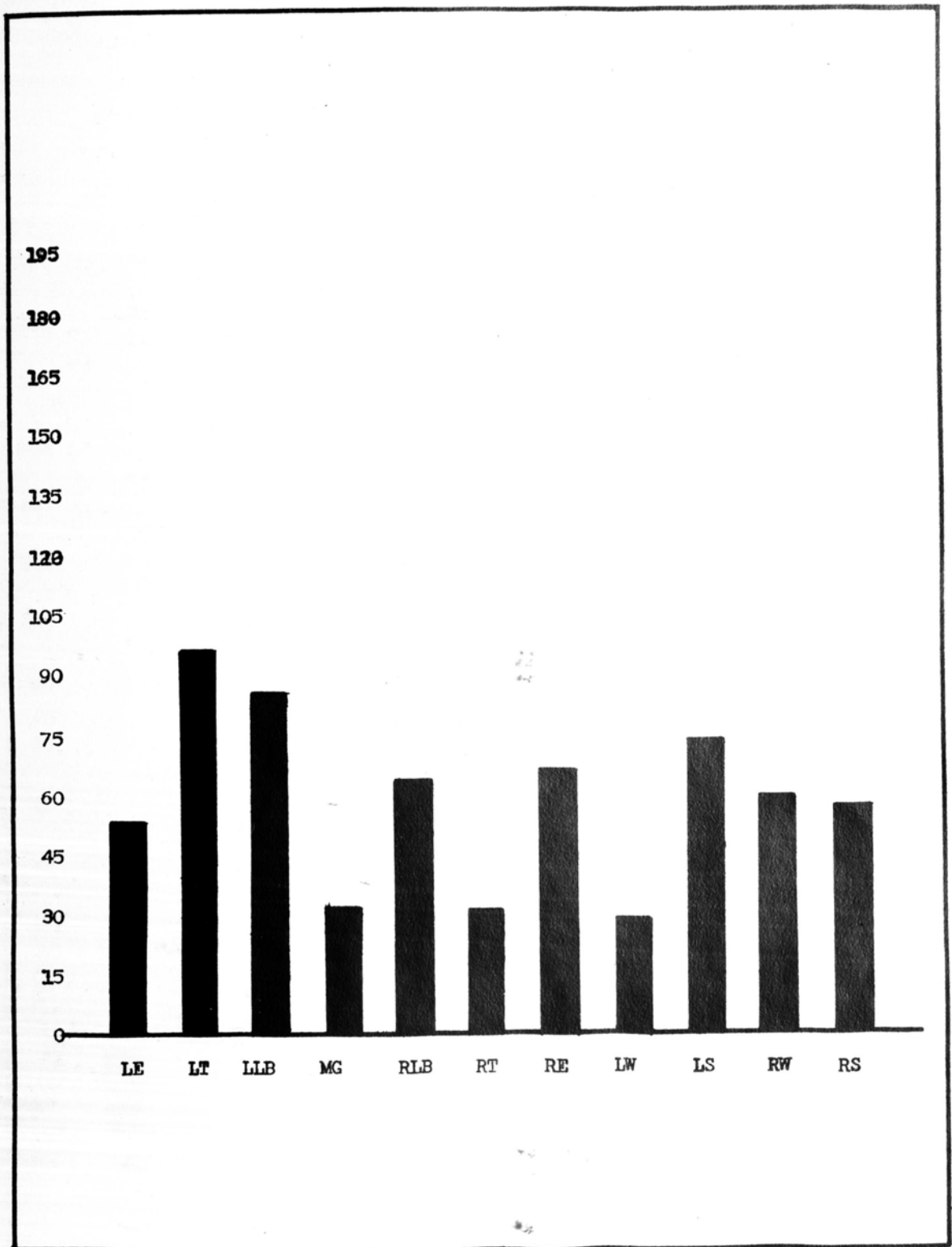


Figure 5. Defensive Points by Positions
(Morningside College Game)

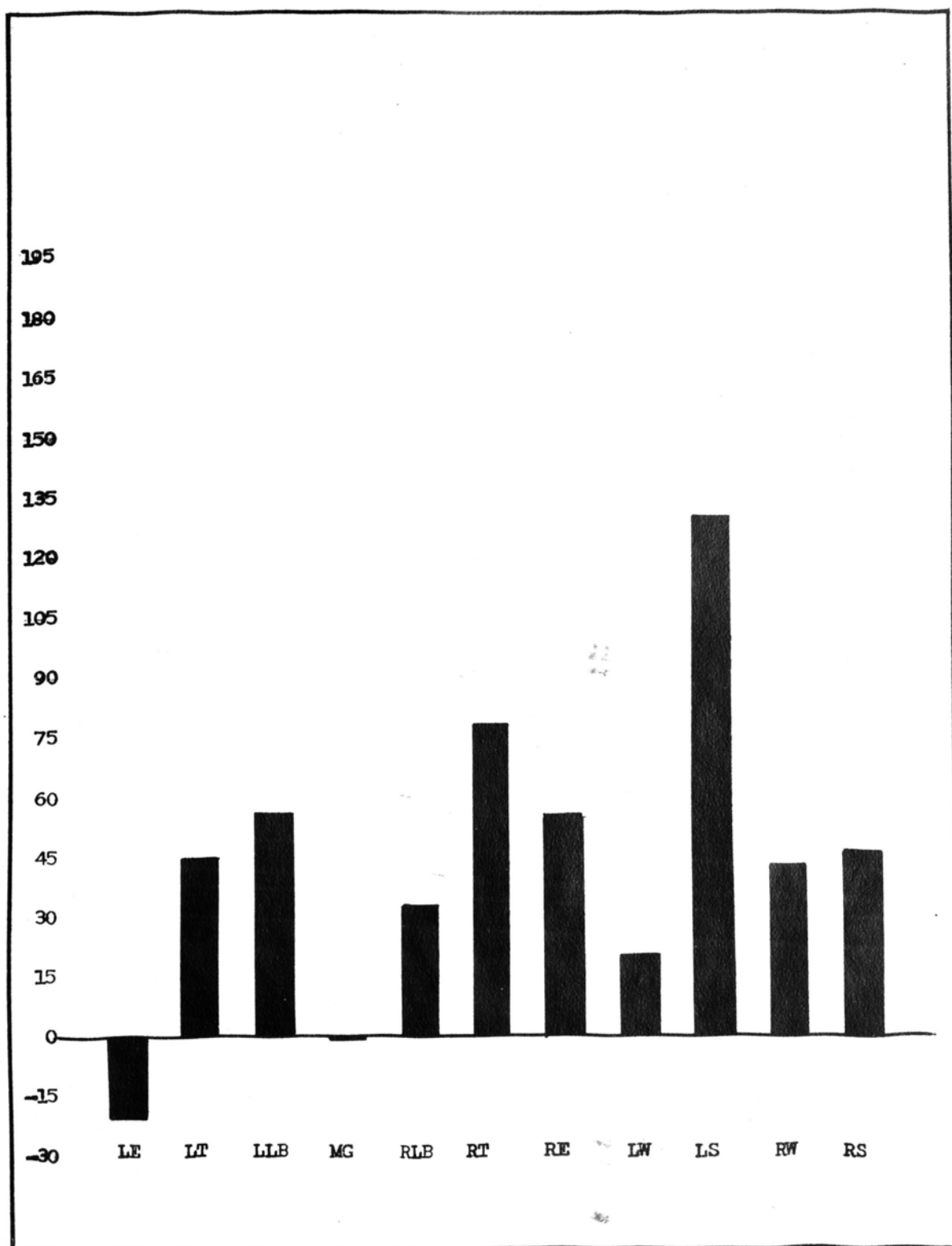


Figure 6. Defensive Points by Positions
(Iowa State Teachers College Game)

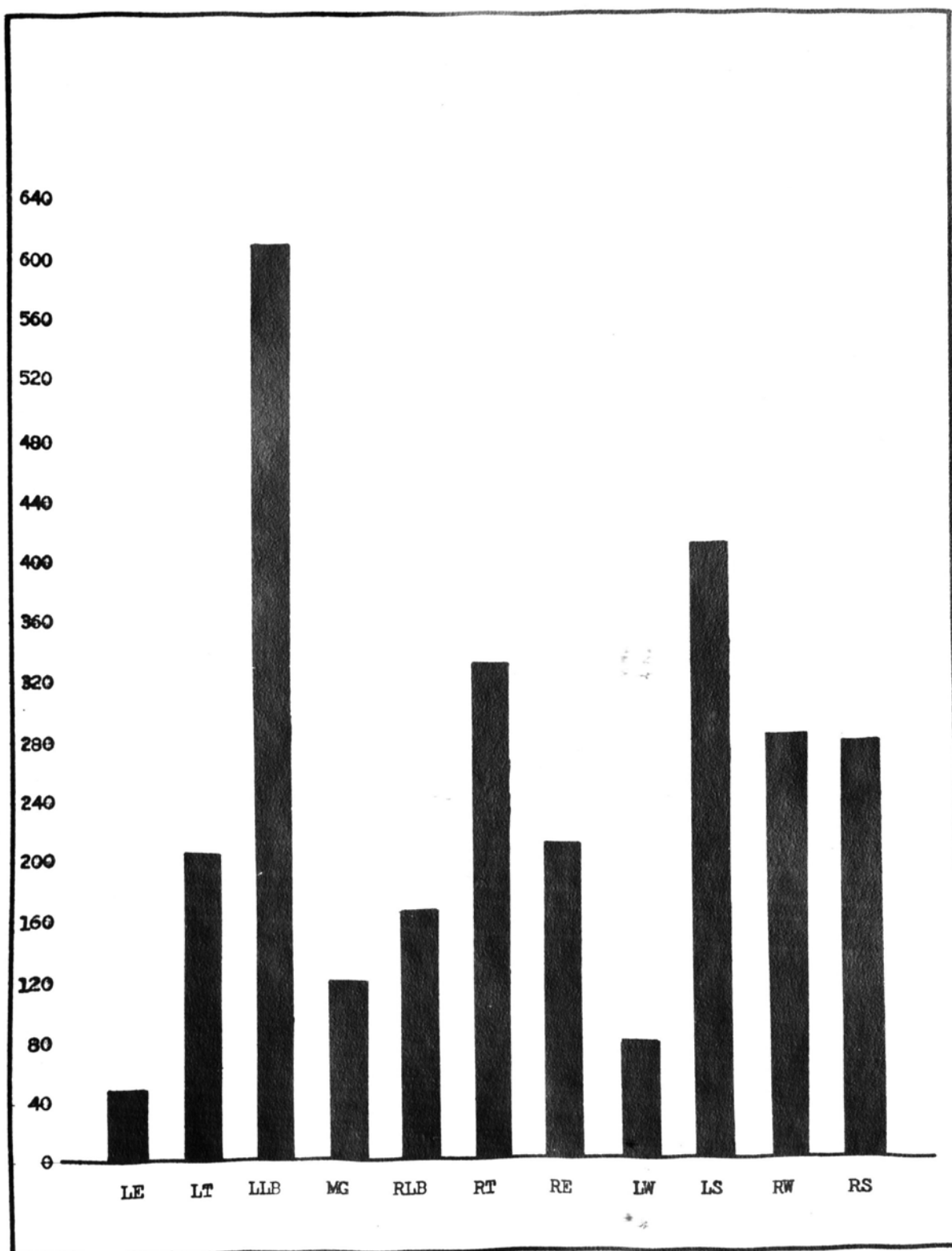


Figure 7. Total Defensive Points by Positions
for the Six Conference Games

CHAPTER III

ANALYSIS OF THE DATA

Analysis of Figures one to seven

The eleven defensive positions shown graphically by the seven bar graphs have abbreviations below each position. The meanings for these abbreviations are as listed below.

<u>Abbreviation</u>	<u>Name of Position</u>
LE	Left End
LT	Left Tackle
LLB	Left Linebacker
MG	Middle Guard
RLB	Right Linebacker
RT	Right Tackle
RE	Right End
LW	Left Wing
LS	Left Safety
RW	Right Wing
RS	Right Safety

Figure I

South Dakota State College (20) vs. Augustana College (6)

The chart upon analysis disclosed the following picture. The left end and left tackle for South Dakota State College were repeatedly being outcharged and outplayed by their Augustana College opposites. The middle guard played a poor game according to the scoring device although

he did disrupt the opponents attack by breaking into their backfield on several occasions. The right end and right wing played outstanding defensive football contributing greatly to the victory. Because of the poor play by the left end and left tackle, the left linebacker and left safety had more opportunities to score than is usually true. The right end made several tackles behind the line of scrimmage to contribute to the victory.

Figure II

South Dakota State (12) vs. North Dakota University (30)

This chart indicates that North Dakota University defeated South Dakota State College not by dominating play at any one position, but rather by gaining yardage and scoring through several different mediums. The left end, right tackle, and left linebacker played quite well on defense. If one position was especially weak it was the left wing position. This game was one of breaks and alertness and the alert North Dakota University team capitalized on several good breaks to score and dominate play.

Figure III

South Dakota State College (7) vs. South Dakota University (28)

Figure three indicates that the left end and left wing played very poor defensive football; especially against quarterback rollout plays. The right tackle played a very good game on defense as indicated by the point total.

The left linebacker pursued well and made several tackles. The middle guard played a strong defensive game compared with performances in other games. The secondary players played an adequate defense. The

most apparent defensive weakness in the game appeared to be the inability to stop South Dakota Universities quarterback rollout play.

Figure IV

South Dakota State College (20) vs. North Dakota State College (33)

Figure four reveals that the left linebacker played an exceptionally fine defensive game. The South Dakota State College tackles and ends were outplayed consistently by their opponents. This factor alone is sufficient to account for North Dakota States ability to control the football and score thirty-three points. However, three early game fumbles by South Dakota State College gave the North Dakota State team three easy scoring opportunities.

Figure V

South Dakota State College (26) vs. Morningside College (6)

After the first few minutes of play, the South Dakota State College football team played quite well defensively in this game. However, the left wing, middle guard and right tackle did not perform as well as the other team members. The middle guard was being trapped thereby allowing sustained gains through his area. The winning margin in this game was probably more the result of an improved offense than it was the result of defensive strength.

Figure VI

South Dakota State College (13) vs. Iowa State Teachers College (8)

Viewing the graph of the Iowa State Teachers game, discloses the fact that the play of the defensive left end, and middle guard was very poor.

The right tackle position was well handled in this game and the left safety gave an excellent exhibition of defensive football. The low point totals accumulated by the left end and middle guard were overcome by the remainder of the team in this game. In general the graph indicates defensive balance.

Figure VII

This graph shows the total points for all positions in the six conference games. The play of the left end and left wing was generally poor for all games. The author feels that the left offensive guards who were the right linebackers should have scored more defensive points. For the most part they did not make solid tackles nor pursue quickly and this reduced their point totals. The fact that the left safety scored over four hundred points is indicative of two facts. First, because of the inferior performance by the left wing and left end especially, the man at this position had more opportunities to score than is normally true. Second, the man playing this position was a truly outstanding defensive safety.

The bar graph for the left linebacker position shows a very high point score. The man who played this position did a commendable job; however, the author feels that too large a percentage of the total came as a result of assists rather than through solo tackles. The tackles, middle guard, right guard, right wing, and right safety sometimes appeared to have been played in an adequate fashion defensively.

CHAPTER IV

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Conclusions

1. A scoring device was developed with which an individual's performance could be objectively rated.
2. The scoring device was tested on six games films of the 1958 South Dakota State College football team.
3. Each game scored was portrayed by a bar graph as shown in figures one to seven on pages 11 to 17. These figures gave the total defensive performance by position for each game and for the season.

Implications

These implications apply to the 1958 South Dakota State College football team as rated by the author using the scoring device.

1. The 1958 South Dakota State College football team lacked team speed. This shortcoming severely hampered the pursuit phase of the team defense. Injuries to key personnel further reduced team speed and agility.
2. A lack of agile personnel at the left end position created a distinct problem in defending against the opponents power plays aimed at that position.
3. The defensive play of the right end was generally strong although a few errors at this position resulted in long gains by the opponents.
4. The inability of the tackles to pursue quickly against wide

plays placed additional pressure on the ends and wingman. The tackles performed reasonably well within their own territory.

5. The defensive performance of the middle guards ranged from outstanding to mediocre. Several of the key players at this position were handicapped by injuries and this fact may have accounted for their inconsistent performances.

6. Most football coaches feel that every good defensive football team must have outstanding linebackers. Football experts also feel that the linebackers should lead the team in tackling by a substantial margin. This weakness probably hampered the overall team defense more than any other single factor.

The left linebackers generally played steady conservative defensive football. However, one of the men playing this position was quite obviously handicapped in tackling because of his short arms.

The right linebackers were definitely less effective than the left linebackers. The men playing at this position appeared to be handicapped by a distinct inability to react quickly to movement by the opposition. Because of this inability, these players were unable to affectively take advantage of the opponents keys. None of the South Dakota State College linebackers at either position exhibited the ability to score a large number of tackles or clobbers.

7. The author believes it is very difficult to rate objectively any football game due to the many psychological factors entering into the makeup of a player, team, or coach. These factors all have a bearing on the manner in which players will participate in game competition.

Recommendations

The author after viewing the six games believes the following recommendations may be helpful to a person interested in grading football films.

1. A regulation height and distance from the football field for all camera men taking films of football games should be established.
2. A projector that could stop a play, run a play in slow motion, reverse the film, and start the film by a mechanism in the viewers hand would aid the scorer greatly.
3. A film editor with a large screen would be of great assistance in grading the individual player and would make the task easier for the scorer.
4. Every player should have the opportunity and be encouraged to view himself on film in game action.
5. A film room should be established for viewing of game films, preferably to be used only as a film room.
6. For persons wishing to perform further study on a defensive rating device an area for future study could be the nearness to the line of scrimmage where tackles were made.

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APPENDIX

A. 1. 1

Position	Jersey Number	Assist	Tackle	Clobber	Intercept Pass Block Punt Recover Fumble	Pass Defense	Charge Reaction to Block Pursuit	Total Points Scored	Average Points Per Play	Number of Plays
LE	56	2	3				-16	-3	-.05	66
LT	76	3	1		1 (RF)		-35	-21	-.70	30
LT	73		1				0	3	.75	4
LT	79	1					-11	-9	-.75	12
LLB	42	8	1	1			34	57	1	57
RLB	67		1				-33	-30	-.73	41
RLB	63	1	2				20	28	1.12	25
MG	69	2	1				-11	-4	-1.25	32
MG	66	5	2				5	21	.62	34
RT	75	4	1				-1	10	.50	20
RT	77	3	2		1 (RF)		0	17	.37	46
RE	85	2	6				3	25	.38	66
LW	82	8	5		1 (RF)	-2	-7	27	.47	58
LW	83						6	6	.55	11
LS	36	6	6			4	26	60	1.66	36
RW	12	2	3			6	20	39	.83	47
RW	40						-3	-3	-.1	3
RS	24					4	10	14	.58	24

FIGURE I. PLAYER RATING DEVICE
South Dakota State College vs. Augustana College

Position	Jersey Number	Assist	Tackle	Globber	Intercept Pass Block Punt Recover Fumble	Pass Defense	Charge Reaction to Block Pursuit	Total Points Scored	Average Points Per Play	Number of Plays
LE	56	2	4				35	51	.73	70
LE	54						3	3	.43	7
LT	75	1	2				-26	-26	-.39	54
LT	77	1	2				41	49	2.13	23
LIB	42	7	5				41	70	1.71	41
LIB	46	2	1				20	27	1.42	19
MG	69	2					-9	-15	-.5	34
MG	63	1	1				18	23	.79	29
MG	62		1				3	6	1.	6
MG	65						2	2	.67	3
MG	66	1					-9	-7	-1.40	5
RLB	67	4						8	.19	43
RLB	66	1					-14	-12	.09	14
RLB	62	4					18	26	1.30	20
RT	76	8					49	65	9.28	70
RT	73		1				11	11	1.83	6
RT	79							3	3.	1
RE	85	2	3					13	.22	59
RE	89		1				17	20	1.11	18
LW	82			1			-23	-19.	-.55	34
LW	86						4	4	.67	6
LW	83	1					18	20	2	10
LW	81	1					4	6	3.	2
LS	32	2	1		1 (IP)		10	22	1.16	19
LS	34	2					3	7	.58	12
LS	36						-3	-3	-3.	1
LS	30	1					1	3	1	3
RW	12	2	2				-5	5	.22	23
RW	40		2				5	11	.65	17
RW	14		1				-3	0	0	5
RS	24	4					14	22	.78	28
RS	22	1					6	8	4.	2

FIGURE II. PLAYER RATING DEVICE
South Dakota State College vs. North Dakota University

Position	Jersey Number	Assist	Tackle	Clobber	Intercept Pass Block Punt Recover Fumble	Pass Defense	Charge Reaction to Pursuit	Total Points Scored	Average Points Per Play	Number of Plays
LE	56	2	3				-27	-14	-.25	57
LE	54						-9	-9	-.50	18
LE	52						5	5	1	5
LT	76	1	2				10	18	.40	44
LT	79	2	1				40	47	1.34	35
LT	74	1					3	5	5	1
LLB	42	3					45	51	1.64	31
LLB	38	3	1				32	41	1.70	24
LLB	46	2	1				28	33	1.94	17
LLB	44	2					6	10	2	5
RLB	62	9	1				43	64	1.14	56
RLB	66	1					0	2	.13	16
RLB	69						-6	-6	-.75	8
MG	67	1					-15	-12	-.38	32
MG	63	5					18	28	.93	30
MG	65	1					-1	1	.06	18
RT	73		1				15	18	1.8	10
RT	75	1					-1	1	.03	31
RT	74	2	1				34	41	2.73	15
RT	77	4	2				60	77	3.21	24
RE	85	3					28	34	.52	65
RE	86						5	5	1	5
RE	89	1					4	6	.60	10
LW	82	5	1		1 (RF)		-28	-10	-.20	50
LW	83		1		4 R		11	14	.93	15
LW	81	1					-4	-2	-.50	4
LS	30	2					1	5	.42	12
LS	34					1	4	5	.39	13
LS	36	4	4		1 (IP)	2	31	58	2.76	21
RW	40	1	1		1 (RF)		11	16	.55	29
RW	28		2				14	25	3.13	8
RW	14		1				-2	1	.09	11
RW	12	1					10	12	1.20	10
RW	16	1					3	5	2.50	2
RW	18	1	1				14	19	2.37	8

FIGURE III. PLAYER RATING DEVICE
South Dakota State College vs. South Dakota University

Position	Jersey Number	Assist	Tackle	Clobber	Intercept Pass Block Punt Recover Fumble	Pass Defense	Reaction to Block Pursuit	Charge	Total Points Scored	Average Points Per Play	Number of Plays
RS	24		1					33	36	1.33	27
RS	28	2	2			2		6	18	2.0	9

FIGURE III. PLAYER RATING DEVICE
South Dakota State College vs. South Dakota University

Position	Jersey Number	Assist	Tackle	Globber	Intercept Pass Block Punt Recover Fumble	Pass Defense	Charge Reaction to Block Pursuit	Total Points Scored	Average Points Per Play	Number of Plays
LE	56	6					-29	-17	-.02	77
LE	54		1				-2	-2	-.1	2
LE	52						6	9	1.50	6
LT	76	5	2				-17	-1	-.01	82
LT	79						-5	-5	-1.66	3
LLB	42	17	3		1 (BP)	9	122	179	2.41	74
LLB	46	1					5	8	2.66	3
RLB	63	1					13	15	.65	23
RLB	67	5	2				-9	7	.11	62
MG	62	2	2				2	12	.54	22
MG	63	5					-4	6	.10	63
RT	75	4	1				-26	-15	-.02	85
RE	85	1	2				-11	-3	-.04	82
RE	3						-2	-2	-.66	3
LW	83	1	1			-1	19	23	.61	38
LW	82	1				1	-6	-3	-.08	38
LS	36	4	3			1	38	56	1.64	34
LS	34						-2	-2	-.28	7
LS	30		1				-2	-2	-.50	4
LS	32						1	4	4.0	1
RW	40	7	3		1 (RP)	2	23	53	.68	78
RS	28	2	4	1			22	42	2.63	16
RS	24	3	2			2	18	32	1.45	22
RS	22		1				0	3	1.50	2

FIGURE IV. PLAYER RATING DEVICE
South Dakota State College vs. North Dakota State College

Position	Jersey Number	Assist	Tackle	Clobber	Intercept Pass Block Punt Recover Fumble	Pass Defense	Charge Reaction to Block Pursuit	Total Points Scored	Average Points Per Play	Number of Plays
LE	56	3	6				23	47	.65	72
LE	52	5					1	1	.20	5
LE	54						6	6	2	3
LT	76	7	3				61	84	1.31	64
LT	73	2					10	14	2.33	6
LT	79						-1	-1	-.01	10
LLB	42	4					9	17	.68	25
LLB	46						3	3	1.50	2
LLB	22	5					37	57	1.54	37
LLB	38	1			1 (IP)	5	6	9	1.	9
MG	69	3					36	42	.64	66
MG	62	3					17	23	1.64	14
RLB	67	1					-10	-8	-.15	54
RLB	63	8					24	40	1.53	26
RT	75	3					-16	-10	-.02	44
RT	77	3	1				26	35	1.16	30
RT	74						6	6	2.	3
RE	85	5	2				37	53	.80	66
RE	86		1				2	5	.71	7
RE	89	1					3	5	.83	6
RE	88	1					2	4	4.	1
LW	82	4	2			1	14	29	.73	40
LW	83						-3	-3	-.08	36
LW	88		1					3	3.	1
LS	36	4	3				38	66	1.05	63
LS	32	1				11	5	8	.80	10
RW	40	4	1			1	23	34	.67	51
RW	28	2	2				10	20	1.44	14
RS	26	4	3		1 (IP)	4	31	57		

FIGURE V. PLAYER RATING DEVICE
South Dakota State College vs. Morningside College

Position	Jersey Number	Assist	Tackle	Clobber	Intercept Pass Block Fumble	Pass Defense	Charge Reaction to Block Pursuit	Total Points Scored	Average Points Per Play	Number of Plays
LE	56	4	2				-37	-20	-.03	72
LT	76	10	2		1 (RF)		12	43	.63	68
LT	73	1					0	2	.50	4
LLB	22	1	2		1 (RF)	1	16	30	1.07	28
LLB	44						0	0	0	3
LLB	46	6					14	26	.72	36
RLB	69	5					-11	-1	-.01	72
MG	63	9					25	43	1.02	42
MG	67						-9	-9	-.30	30
RT	75	9	2		1 (RF)		15	44	.76	58
RT	77	3	1				26	35	1.45	24
RE	85	3	2				43	55	.80	69
RE	89						0	0	0	3
LW	83	1					20	22	.66	32
LW	82						1	1	.04	26
LW	87						-3	-3	-.43	7
LS	36	8	6			3	73	110	2.44	45
LS	32		2				15	21	2.62	8
RW	28	2	2			-1	16	25	.80	31
RW	40		1			1	14	18	2.0	9
RS	26	3	1		1 (IP)		32	46	1.24	37

FIGURE VI. PLAYER RATING DEVICE
South Dakota State College vs. Iowa State Teachers College