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A BIORHYTHMIC STUDY OF ATHLETES: CON-  
CEPTION DATES RELATED TO ABILITY

A thesis

Submitted to the Graduate Faculty of Appalachian  
State University in Partial Fulfillment of the  
Requirement for the Degree Master

of Art

in

The Department of Health, Physical  
Education and Recreation

by

Larry B. Holt

Appalachian State University

March, 1977

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CEPTION DATES RELATED TO ABILITY

by

Larry Holt

*R. E. Thomas*  
COMMITTEE CHAIRMAN

*Vaughn Bruster*  
COMMITTEE MEMBER

*E. Ole Larson*  
COMMITTEE MEMBER

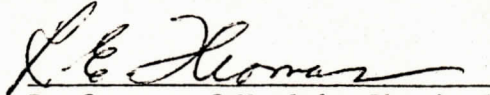
*Ellen B. Thomas*  
COMMITTEE MEMBER

*Richard H. Rupp*  
DEAN OF GRADUATE SCHOOL

## ABSTRACT

Title of Thesis: A Biorhythmic Study of Athletes:  
Conception Dates Related to Ability

Candidate: Larry Holt

Thesis Directed and Abstract Approved by:   
Professor of Health, Physical  
Education and Recreation

The purpose of the investigation was to determine where the greatest percentage of parents stood on the Biorhythm charts during conception of subjects recognized as national class performers in track. The subjects were thirteen males who were at one time recognized in Track and Field News magazine's annual national and world list for events ranging from the 800 meter run to the marathon.

A questionnaire was mailed to each runner inquiring subject's birthdate, date of conception, and birthdate of subject's parents. If date of conception was not known, information regarding premature, delayed or normal birth was supplied by the runner. From this information, date of conception was determined and the parent's state of Biorhythm was plotted for this date.

The first analytical technique applied to the information indicated the Biorhythmic position of each parent at time of conception. A tabulation of Biorhythm positioning at time of conception was made for all the

mothers as an aggregate. The same analysis was also applied to the father's rhythms.

The next analysis designated the percentage of mothers, as an aggregate, and fathers, as an aggregate, that were experiencing a favorable or unfavorable state for each of the three rhythms.

Parent compatibility was then considered by placing an overall value on each parent's rhythms. Couples were grouped according to type of compatibility. Possible combinations of parent compatibility consisted of:

(1) aggregate favorable for the mother and aggregate favorable for the father; (2) aggregate favorable for the mother and aggregate unfavorable for the father; (3) aggregate unfavorable for the mother and aggregate favorable for the father; and (4) aggregate unfavorable for the mother and aggregate unfavorable for the father.

The investigation revealed the following findings:

1. As an aggregate, the mothers were experiencing lows at time of conception for all three cycles.

2. As an aggregate, the fathers were experiencing lows at time of conception for all three rhythms.

3. The highest percentage of mothers fell in the unfavorable range at time of conception.

4. The highest percentage of fathers fell in the unfavorable range at time of conception.

5. A higher percentage of conception dates occurred when at least one parent was experiencing an unfavorable



period and the largest percentage of conception dates occurred when both parents were exhibiting unfavorable periods.

It is concluded from the investigation that an inverse relationship appears to exist in relation to Bio-rhythm cycles of parents and superior athletic ability of runners.

#### ACKNOWLEDGMENTS

The writer wishes to express appreciation to those who made this study possible. Appreciation is expressed to Dr. Vaughn Christian, Dr. Ole Larson, Roger Thomas, and Ellen Thomas for their advice, guidance, and patience. Appreciation is also expressed to the athletes who served as subjects.

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Chapter I

INTRODUCTION

Through the ages man has dwelled upon the idea of producing the ideal being. The possibility of projecting only desirable traits into future generations may not be as impractical or impossible as the idea implied.

Scientists have tested many theories in an attempt to establish a method of trait selection. The impracticality of trait selection diminishes when one thinks of all the advances mankind has made toward the reduction of birth defects and inherited diseases.

Biorhythm has been employed in theorizing about future generations. Although Biorhythm is a relatively unexplored science, it has been used in predicting desirable periods for certain tasks. Limited research has found some relationship in Biorhythmic cycles of parents and the intellectual capacities of their offspring.<sup>1</sup> Biorhythm has also been used in predicting the sex of unborn children.<sup>2</sup>

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<sup>1</sup>Harold R. Willis, "Biorhythms Influence in Ovum Selection of the Spermatozoan at Conception." Joplin, Missouri: Missouri Southern State College, May 1975. (Unpublished.)

<sup>2</sup>George Thommen, Is This Your Day? (New York: Crown Publishers, Inc., 1973), p. 110.

Superior physical and athletic attributes can possibly be determined through Biorhythm. The individual gene may be influenced by the position of a person's Biorhythmic cycles and according to the period of the cycle, certain genes may be selected toward the formation of a new life. If this holds true, then the capabilities of offspring could be accurately determined.

#### STATEMENT OF THE PROBLEM

The investigator attempted to determine where the greatest percentage of parents stood on the Biorhythm graph at time of conception of subjects recognized as national class performers in track.

#### Sub-problems

The following were the sub-problems of this investigation:

1. The method for selecting the subjects.
2. Collection of data.
3. Interpretation of the data.

#### HYPOTHESIS

It was the belief of the investigator that the greatest percentage of parents of national class runners would be exhibiting positive Biorhythmic patterns in all three cycles at time of conception.

#### DEFINITION OF TERMS

##### Biorhythm

Biorhythm means "life rhythms."

The Biorhythm theory postulates that there are certain life rhythms that rise and fall at a regular pace in each human organism, and the current state of these rhythms has much to do with our resistance to disease, our emotional reactions, and intellectual response.<sup>3</sup>

##### Critical

Critical can be described as "full of danger or difficulty." The critical days are defined in accordance to Thommen's studies in which a critical day is defined as "the first day of a new cycle and the day when a rhythm changes from its high or discharge phase into the recuperating phase."<sup>4</sup>

##### Cycles

In Biorhythm there are three behavioral cycles:

Intellectual cycle. The intellectual cycle is a thirty-three day cycle governing "intelligence, memory, mental alertness, logic, reasoning power, reaction, and ambition."<sup>5</sup>

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<sup>3</sup>Maxine Lewis, "Biorhythm: How to Cope with Your Ups and Downs," Family Circle, June 1971, p. 36.

<sup>4</sup>Thommen, op. cit., p. 57.

<sup>5</sup>Ibid., p. 175.



Physical cycle. The physical cycle is a twenty-three day cycle "of physical strength, endurance, energy, resistance, confidence."<sup>6</sup>

Sensitivity cycle. The sensitivity cycle is the twenty-eight day cycle "governing sensibility, nerves, feelings, intuition, cheerfulness, moodiness, creative ability."<sup>7</sup>

#### Discharge Phase

The discharge phase refers to the upper phase when the traits of the particular cycles are functioning at their optimum. It is all the days in the upper half of the Biorhythm charts.<sup>8</sup>

#### Flux

The state of flux is the period of changeover. A person is neither discharging nor recharging. This is also referred to as a critical point.<sup>9</sup>

#### High

The high state of Biorhythmic cycles refers to the time when the cycles are acting with increased efficiency.

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<sup>6</sup>Ibid.

<sup>7</sup>Ibid.

<sup>8</sup>Hans J. Wernli, Biorhythm (New York: Crown Publishers, Inc., 1961), p. 22.

<sup>9</sup>Ibid.

It is all the days above the horizontal line that divide each cycle in half. Also referred to as the discharge phase.<sup>10</sup>

#### Low

Decreased efficiency constitutes the low state in the Biorhythm cycle; the days below the horizontal line on the Biorhythm chart that divide each cycle in half. Also referred to as the recharge phase.<sup>11</sup>

#### Phase

The term phase is used to make reference to a certain period in the Biorhythmic cycles.

#### Recharge Phase

The recharge phase is the lower phase of the cycles and is a time of lessened efficiency. It is all the days on the lower half of the Biorhythm graphs.<sup>12</sup>

#### Rhythm

Rhythm will refer to any of the three cycles: physical, emotional, or intellectual.

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<sup>10</sup>Thommen, op. cit., p. 51.

<sup>11</sup>Ibid.

<sup>12</sup>Wernli, op. cit., p. 22.



## BASIC ASSUMPTION

The investigator assumed that all the information supplied by the subjects was accurate. Therefore, all data based on the information was considered accurate also.

## DELIMITATIONS

The subjects utilized were limited to national class performers in the area of middle distance and distance running.

## Chapter II

## REVIEW OF RELATED LITERATURE

## HISTORICAL DEVELOPMENT

The term Biorhythm is derived from two words, biology and rhythm.<sup>1</sup> Biology is indicative of life, and rhythm indicates a "regulated beat" or cycle.<sup>2</sup> Therefore, Biorhythm means the regulated beat common to living organisms.

Some 2,400 years ago, Hippocrates first recognized the existence of "good and bad days." He taught his students the importance of considering the whole human when administering therapy and to take note of the good and bad days.<sup>3</sup>

The modern concept of Biorhythm was formulated in 1780 by Goethe, as shown in an excerpt from his diary:

I must consider more closely this cycle of good and bad days which I find coursing within myself. Passion, attachment, the urge to action, inventiveness, performance, order, all alternate and keep their orbit; cheerfulness, vigor, energy,

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<sup>1</sup>Hans J. Wernli, Biorhythm (New York: Crown Publishers, Inc., 1961), p. 11.

<sup>2</sup>George S. Thommen, Is This Your Day? (New York: Crown Publishers, Inc., 1973), p. 22.

<sup>3</sup>Wernli, op. cit., p. 13.

flexibility and fatigue, serenity as well as desire. Nothing disturbs the cycle, for I lead a simple life but I still must find the time and order in which I rotate.<sup>4</sup>

Over a century passed before Fleiss investigated the idea of these good and bad days. Fleiss, a physician, noted that a fever might "suddenly" occur in a patient and just as "suddenly" disappear after a certain lapse of time. "A study of case histories indicated that a definite periodic cycle governed the sudden flare-up and abating of an illness."<sup>5</sup> Fleiss concluded that all changes in a human organism are "cyclic developments of a rhythmic nature."<sup>6</sup>

As a result of research with children, Fleiss became convinced that a twenty-eight day and a twenty-three day rhythm existed. He found that some children would, when exposed to a contagious disease, remain immune for a period of time, but would fall ill on a periodic day.<sup>7</sup>

Fleiss felt that both males and females contained characteristics of the two sexes. The twenty-three day cycle was attributed to masculine characteristics and it was concluded that this rhythm affected the physical conditions of man. The twenty-eight day cycle involved

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<sup>4</sup> Ibid.

<sup>5</sup> Ibid., p. 14.

<sup>6</sup> Ibid.

<sup>7</sup> Thommen, op. cit., p. 19.

feminine characteristics and affected the sensitivity and emotional cycle.<sup>8</sup>

Freud corresponded with Fleiss and applied much of the information concerning Fleiss' theory on bisexuality in developing psychoanalytical techniques. Unfortunately, most of the information compiled by Freud and Fleiss was destroyed during World War II.<sup>9</sup>

About the time Fleiss was developing the biological rhythm theory, a psychologist, Dr. Hermann Swoboda of Vienna, considered the idea of good and bad days and attempted to determine if any degree of regularity existed. Swoboda reported:

One does not need to have lived a long span of life before he comes to realize that life is subject to consistent changes. This realization is not a reflection on the changes in our fate of the changes which take place during various stages of life. Even if someone could live a life completely devoid of outside influences, a life during which nothing whatever disturbs the mental or physical aspect, life would nevertheless not be the same day after day. The vest of health does not prevent man from feeling unwell at times, or less cheerful than he is normally.<sup>10</sup>

In Swoboda's research, the recurrence of pain and tissue swelling is recorded. Swoboda observed outbreaks of illness, fever, and heart attacks and became convinced of the existence of some sort of periodicity. These

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<sup>8</sup> Ibid., p. 20.

<sup>9</sup> Ibid., p. 22.

<sup>10</sup> Ibid., p. 14.



observations led to the discovery of two basic rhythms--one a twenty-three day cycle and the other a twenty-eight day cycle.<sup>11</sup>

Swoboda was also interested in dreams and their origin. During consultation sessions with patients, Swoboda noted that

. . . melodies and ideas would often repeat in one's mind after periodic intervals, generally based on a twenty-three day or a twenty-eight day rhythm.<sup>12</sup>

Swoboda documented the twenty-three and twenty-eight day rhythmical repetition of birth through generations. This endeavor verified that most major events in life fell on periodic days. Unfortunately, Swoboda lost much of the research findings as a result of Russian occupation of Vienna in 1945.<sup>13</sup>

The third rhythm, the rhythm of the mind, was discovered in the 1920s by Teltscher. Teltscher collected data on 5,000 high school and university students to determine why the intellectual capacities of students seemed to be different from time to time.<sup>14</sup> The investigation hoped to determine if some pattern existed to account for this

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<sup>11</sup>Ibid., p. 13.

<sup>12</sup>Ibid., p. 15.

<sup>13</sup>Ibid., p. 18.

<sup>14</sup>David Martin and John Elliott, "Biorhythms--Do Your Ups and Downs Have Reasons?" (Unpublished research paper, Georgia State University, May 1976), p. 2.

variance. Teltscher administered various tests to students and concluded that the good and bad days a student experienced intellectually followed a thirty-three day cycle.<sup>15</sup>

Biorhythm is now explained as being composed of three behavioral patterns. A twenty-three day physical cycle, a twenty-eight day emotional cycle, and a thirty-three day intellectual cycle together comprise Biorhythm.

The need to simplify the mathematical process involved in computing the cycles has resulted in research concerning this particular area. During the 1920s, Judt designed a table to simplify Biorhythmic calculations. Judt's primary interest was in the variations in performance of sports figures.<sup>16,17</sup>

During the same period, Freuh perfected the calculation tables established by Judt. Freuh designed a hand-operated calculator which could readily compute Biorhythm.<sup>18</sup>

The mathematical process involved in Biorhythm is a simple procedure. Calculations involve adding the total number of days an individual has lived from birth to a particular day in question. This total is divided by the number of days in each cycle (twenty-three days of the physical cycle, twenty-eight days of the emotional cycle,

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<sup>15</sup>Thommen, op. cit., p. 25.

<sup>16</sup>Martin, op. cit., p. 2.

<sup>17</sup>Thommen, op. cit., p. 28.

<sup>18</sup>Ibid.



and thirty-three days of the intellectual cycle). The remainder in each division indicates the number of days a person is into that cycle. Modern charting techniques, graphs, and electronic calculators have simplified the process further.<sup>19</sup>

Evidence supporting Biorhythm has been compiled all over the world. The consistency of findings appears to reaffirm the fact that Biorhythm has some value in the study of behavioral characteristics of man.

#### RESEARCH STUDIES

A forword to this section is appropriate to explain the theory behind Biorhythm.

Biorhythm includes three rhythms: (1) a physical cycle, which affects our physical strength, stamina, energy, resistance, and vitality, (2) a sensitivity or emotional cycle that affects our feelings, affections, creativeness, and moods, and (3) an intellectual cycle that affects our memory, logic, intelligence, reaction rate, and ambition.<sup>20</sup>

The physical rhythm is a twenty-three day cycle with eleven and one-half days in a positive zone and eleven and one-half days in a negative zone. The positive zone indicates when the individual feels best and accomplishes the most and the negative zone indicates the reverse. The

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<sup>19</sup>Ibid., p. 25.

<sup>20</sup>Ibid., p. 175.

sensitivity rhythm has a twenty-eight day cycle with fourteen days in a negative zone. The intellectual rhythm is a thirty-three day cycle with sixteen and one-half days in the positive and sixteen and one-half days in the negative.

These cycles follow a sine-curve with the upper curve indicating the positive position and the lower curve indicating a negative position. The curves are divided by a horizontal line that separates the cycles into two equal parts, making half of each cycle positive and half of each cycle negative. The point at which each cycle crosses the line, either passing into the positive phase or passing into the negative phase, is the switch point or a critical point. The days in a person's life that occur at this time are referred to as critical days.<sup>21</sup>

During critical days, the cycle is in a state of flux. The potential for human errors and accidents is greater on these days. If two rhythms are passing into another zone at the same time, this is referred to as a double critical day and if three rhythms are passing into another zone this is considered a triple critical day.<sup>22,23</sup>

Studies of Biorhythm concern critical days and their effect on individuals. Companies and businesses follow the

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<sup>21</sup>Ibid.

<sup>22</sup>Thommen, op. cit., p. 57.

<sup>23</sup>Rummel, op. cit., p. 2.

critical days of employees to increase efficiency and help reduce accidents.

Bus drivers for the Olimi Railway Company in Japan receive a card warning them of critical days, and advising them to be especially careful. In 1969, the first year this system was employed, the drivers achieved a fifty percent drop in accidents.<sup>24</sup>

On November 11, 1960, Thommen made a statement on a New York radio show. Thommen stated that Clark Gable's recent heart attack had occurred on a physically critical day. Thommen urged the hospital to watch Gable carefully on the sixteenth of the month because the physical cycle was due to switch into the low phase. Gable died on the sixteenth, of a second heart attack.<sup>25</sup>

"President Kennedy, while physically and emotionally strong, was shot on an intellectual critical day." This could account for Kennedy's unwise decision not to use the bullet-proof bubble top on the car.<sup>26</sup>

At National Airport in Washington, D.C., the Biorhythms of United Airlines' ground crew were plotted. Supervisors warned employees on critical mornings to use

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<sup>24</sup>Jean Mackenzie, "How Biorhythms Affect Your Life," Science Digest, August 1973, p. 18.

<sup>25</sup>Diane K. Shah, "Biorhythm Blues," National Observer, December 7, 1974, p. 1.

<sup>26</sup>Ibid., p. 21.

extra caution, thereby cutting or reducing accidents by more than one-half over a one-year period.<sup>27</sup>

Neil found a higher percentage of accidents occurred when people were in a negative phase of the cycles.

In a sample group of 60 persons at a Canadian pulp plant, forty-four accidents occurred when people were in the negative part of their cycles, while twenty-two accidents were observed in the positive biorhythmic period.<sup>28</sup>

Neil, in a study of 141 airline mechanics, showed that ninety-one had accidents in negative periods and thirty-six during positive periods.

Further laboratory studies of performance levels indicated that nine of fourteen detected cycle shifts were within twenty-four hours of a Biorhythm 'critical day.'<sup>29</sup>

Biorhythm has been used to account for super-performances and slumps in athletics. People, with the sole purpose of gambling on athletic contests, were a major factor in developing charts and graphs that have aided in Biorhythmic plotting.

Herring studied the Biorhythm and performance of forty male swimmers. The swimmers were divided into four groups. Daily logs were kept of all the swimmers and comparisons made with the Biorhythm charts. Group A had Biorhythm calculated in advance and both athlete and coach

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<sup>27</sup>Tom Zito, "'Down' Days Key to Accidents?" Charlotte Observer, n.d., p. 1A.

<sup>28</sup>Ibid.

<sup>29</sup>Ibid.



discussed the position of the cycles each day and before and after meets. Group B's Biorhythm were calculated in advance but only the coach was aware of the athlete's position on the charts. Group C's Biorhythm were calculated and only the athlete was aware of chart positioning. Group D did not have the cycles calculated until the end of the season, when daily logs were compared with the charts.<sup>30</sup>

This study found no significant difference in the results of the four groups, ruling out the power of suggestion. Workouts were not altered as a result of the Biorhythm position. It was found that the physical cycle most affected the swimmers, although some were strongly affected by the emotional rhythm. Practice times followed the curves with ninety percent accuracy, and meet times followed with sixty percent accuracy. The percentage rate was lowered as a result of those swimmers who trained the hardest and posted good times in meets during negative periods. Good times were achieved during negative periods, but with few exceptions, were poor times achieved during a positive period. Herring also noted that the results of national level swimmers showed that it failed to live up to expectations in favored events. This was consistent with the athlete's state of Biorhythm.<sup>31</sup>

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<sup>30</sup>Vincent Herring, "Biorhythm in Swimming," Swimming Technique, Vol. 8, No. 3, October 1971, pp. 74-75.

<sup>31</sup>Ibid.

Rummel studied the Biorhythm and performances of women basketball players. Biorhythm graphings were made of the players on sixteen teams and team Biorhythm were obtained by plotting each individual physical curve on one chart, emotional curve on a second chart, and intellectual curve on a third chart. From these a "line of best fit" was used to determine a team curve. Each player's performance was compared to her position on the charts and the team Biorhythm were compared among the teams. Rummel found there was a higher than expected number of individuals who were at a double or triple high who performed above average. There was a higher than expected number of players who performed below average or above average in a higher than expected number of cases. Teams which showed a higher Biorhythmic position were winners at a higher than expected rate.<sup>32</sup>

The predictive powers of Biorhythm in the performance of football players was studied by Case. The study was conducted on thirty-eight members of a college football team. A total of 355 player/games was involved. Case predicted the performance of each player according to the Biorhythmic curves. The coach rated the player's performance after the game and after receiving the game film.

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<sup>32</sup>Rose Mary Rummel, "Individual and Team Biorhythms and Team Performance in the 1975 AIAW National Basketball Championships" (unpublished research paper, Madison College, Harrisonburg, Virginia, 1975), p. 8.



Results showed that in seventy-seven percent of the cases the players performed as good or better than predicted and fifty-two percent of these were the same as predicted. It was found that sixty-nine percent of the injuries to players occurred during critical periods.<sup>33</sup>

Willis studied the Biorhythmic positions of Mark Spitz and Jim Ryun in the Twentieth Olympiad and of the Billie Jean King and Bobby Riggs' tennis match.

The swimming medals of Spitz were won on days when both the physical and emotional cycles were in the positive phase. The intellectual cycle was in the negative, but it was concluded that this rhythm has little significance to this event.<sup>34</sup>

Ryun was experiencing a triple low on the day of the 1500 meter run in the 1972 Olympics. During this event, Ryun fell and failed to make the finals.<sup>35</sup>

King was the prematch favorite in her match with Riggs. King's intellectual and emotional curves were in a positive state which was interpreted to mean she would probably play an intelligent game, with much determination

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<sup>33</sup>Jann Case, "Predictive Powers in Bio-Rhythm Analysis in the Performance of Football Players" (research study, Missouri Southern State College, Joplin, Mo., 1973), p. 1.

<sup>34</sup>Harold Willis, "The Effect of Biorhythm Cycles" (research study, Missouri Southern State College, Joplin, Missouri, 1973), p. 9.

<sup>35</sup>Ibid.

and inspiration. Her physical cycle was low, and this would have possibly had an effect if the game had proceeded to some length. King won in three straight sets, demonstrating a smart game.<sup>36</sup>

Riggs was experiencing an intellectual critical day on the day of the game, which may account for the fact that he did not play a smart game. Riggs' physical cycle was in a positive state but within a day and a half of a critical day. The emotional cycle was at an absolute low, making inspiration and determination weak.<sup>37</sup>

Not all studies have shown a positive correlation between the state of the cycles and performance. A few studies of this nature will be considered.

Klug performed a study in which he obtained statistical evidence regarding the existence of a relationship between the position of high school athletes on the Biorhythmic scale and the occurrence of injuries. Klug only used the emotional and physical rhythms in his study and only critical days were considered significant. It was found that there was no significant relationship between the position on the Biorhythm graphs and the occurrence of athletic injuries. Klug reported that out of eighty

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<sup>36</sup>Ibid.

<sup>37</sup>Ibid.

injuries, seventeen fell on critical days and nineteen occurred within one day of a critical day.<sup>38</sup>

In a study by Martin, the performance of twenty-three runners was analyzed to determine if Biorhythmic patterns played a role in determining the outcome of "all-out performances." The group consisted of distance runners who had collectively compiled a total of 1395 races over a period of three years. The runners submitted dates of races, times, and a subjective rating of performance of each race. The runners were to base their subjective rating with respect to their intellectual, physical, and emotional feelings. The ratings of each race ranged from A to D; A indicated an excellent race, and D indicated a poor race, with B and C indicating performance between the two extremes.<sup>39</sup>

After an analysis of data, it was concluded that performance times in races were not "significantly related to the predisposing trends for better or worse performance as indicated by Biorhythm patterns." Races run on critical days were relatively unaffected by the cycles also.<sup>40</sup>

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<sup>38</sup>Gary A. Klug, "An Analysis of Biorhythms and Their Effect on Athletic Injuries" (Thesis, University of Wisconsin--La Crosse, 1973), p. 22.

<sup>39</sup>Martin, op. cit., p. 23.

<sup>40</sup>Ibid.

#### STUDIES REGARDING SPERM SELECTION

According to scientific findings, the male sperm is the determining factor as to the sex of a child. Semen contains both male and female sperm. The sperm is of different sizes and shapes. With this fact known, it was the hope of Skettles to confirm that one specific type of sperm was female and another male.<sup>41</sup>

Skettles' research has led to the conclusion that the male sperm is faster-moving but has a shorter life. The female sperm moves more slowly but lives longer. If intercourse between husband and wife takes place some time before the ovum in the wife is ready, the male sperm, being forced to remain idle for a longer period of time, will die. The sturdier female sperm will live and take over, thereby producing a baby girl.<sup>42</sup>

Willis has been prompted to consider if the selectivity of spermatozoa is possibly influenced by Biorhythmic cycles. Limited research has revealed a pattern which shows that highly superior children have been born when conception took place during a time the Biorhythm cycles were at a peak, or either the physical or emotional cycles

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<sup>41</sup>Dr. Irving C. Fischer, "Can You Choose the Sex of Your Child?" Ladies Home Journal, February 1962, p. 12.

<sup>42</sup>Ibid.



were in a high position combined with a high intellectual cycle.<sup>43</sup>

Better than sixty-eight of the cases examined by Willis showed that superior children were conceived during high Biorhythmic phases.

In a lesser number of cases of superior children the physical and emotional cycles were low at conception when boys and girls respectively were produced.<sup>44</sup>

It is postulated that nerve cells in one part of the brain might seek out "specific targets." The body is a bundle of electron-packed molecules and electrical impulses and it can be inferred that polarities might exist which attract or repel. If this is true, it can be rationalized that the ovum might have a particular pattern dictated by the Biorhythmic cycles of the mother. The ovum therefore seeks to match with the sperm bearing like Biorhythmic characteristics.<sup>45</sup>

One case study in which the mother's cycles were all at a peak during conception adds credence to the belief that Biorhythm has some influence upon exceptional children. In this case, the child was very well developed at birth,

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<sup>43</sup>Harold Willis, "Biorhythm Influence in Ovum Selection of the Spermatozoan at Conception" (Missouri Southern State College, Joplin, Missouri, May 1975), p. 3.

<sup>44</sup>Ibid.

<sup>45</sup>Ibid., p. 4.

crawled at six months, walked at eight months, and had a projected I.Q. of 140.<sup>46</sup>

Thommen believed that if a high physical phase exists in the mother at time of conception, the egg will accept the Y sperm cell which will produce a male child; if the emotional cycle is high in the mother during conception, it is suggested that the child will probably be a girl. Thommen reasoned that a high physical state favors a condition of alkalinity in the blood and a high emotional cycle creates a condition of acidity. The alkali state favors acceptability of the XY sperm cell, whereas an acid condition is more favorable to the XX sperm cell.<sup>47</sup>

Thommen has aided couples in selecting the sex of the child desired. In one case, a couple with two daughters desired to have a son. Thommen plotted the couple's cycles and chose a clear high in the physical cycle of the mother as the period for conception. It turned out that a boy was produced, demonstrating that in this case Biorhythm may have had some merit.<sup>48</sup>

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<sup>46</sup>Ibid.

<sup>47</sup>Thommen, op. cit., p. 111.

<sup>48</sup>Ibid.



## COLLECTION OF DATA

A questionnaire was sent to fifty male runners (see Appendix A). The questionnaire included a brief description of Biorhythm and the nature of the study. There was no restriction on the number of athletes receiving the questionnaire, although the addresses of only a limited number were made known to the investigator.

The data submitted by subjects consisted of each runner's birthdate, date of conception, and the birthdate of each parent. If the exact date of conception was not known, the runner gave information regarding whether birth was premature, delayed, or normal.

## INTERPRETATION OF THE DATA

When all the data had been collected, the time of conception was calculated by counting back 280 days from the time of birth, provided the gestation period was of normal length. In situations of premature or delayed birth, the number of days of gestation were added or subtracted, respectively.

When the conception date was determined, the birthdate of each parent was fed into an RCA Spectro 70/46 computer to determine the Biorhythmic patterns during the conception date of the runner. The data from the computer print-outs were transferred to a sine-graph with date of computed conception designated (see Appendix B).

## Chapter III

## PROCEDURE

## SELECTION OF SUBJECTS

The subjects used in this study were distance and middle distance runners. All runners were at one time listed in the annual world and national list of Track and Field News magazine. This list was composed of the top runners in the United States and the world according to individual times for particular events. The subjects in this study appeared on the list in events ranging from the 800 meter run to the marathon. Many of the subjects were, or at one time were, national or world record holders.

A random sample of fifty class runners was contacted according to address availability. A total of thirteen subjects cooperated. The thirteen subjects ranged in age from twenty-four to thirty-two.

Included in the fifty runners contacted for this study were six female runners. All female subjects failed to respond; therefore, the scope of the study was limited to male runners.

To determine the relative positions of Biorhythmic patterns of each parent, a tabulation chart was constructed. From the tabulation chart the percentage of Biorhythmic patterns indicating a high, low, critical, or unfavorable day during conception was determined. High, low, and critical were plotted according to Thommen's definition of these terms. Unfavorable was considered as the critical point, one day above the critical point, or any day in the low zone. One day above the critical point was considered unfavorable because of its close proximity to the critical point. Since the exact hour of birth or conception was not known, conception could have fallen within this time span.

Parent compatibility was determined by placing an overall value on each parent's rhythms. If two of the three cycles were in a favorable position, this was considered an aggregate favorable; if two of the three cycles were in an unfavorable position, this was termed an aggregate unfavorable. A tabulation was made of the couples as they were placed in the groups indicated below and a percentage value was placed on the groups.

I.	<u>Mother</u> Aggregate Favorable	<u>Father</u> Aggregate Favorable
II.	<u>Mother</u> Aggregate Favorable	<u>Father</u> Aggregate Unfavorable
III.	<u>Mother</u> Aggregate Unfavorable	<u>Father</u> Aggregate Favorable
IV.	<u>Mother</u> Aggregate Unfavorable	<u>Father</u> Aggregate Unfavorable

## Chapter IV

## RESULTS AND DISCUSSION

This study was an attempt to determine where the greatest percentage of parents stood on the Biorhythm graph during conception of superior athletes. "Favorable" and "unfavorable" were terms used to designate the parent's Biorhythm positioning. A favorable period was considered any point above the critical period and not within one day of the critical period. Unfavorable was considered as the critical point, one day above the critical point, and any day in the low zone.

## RESULTS

The Biorhythmic position of each parent at the time of conception of the runner is illustrated in Table 1.

Table 1

Position of Each Parent's Biorhythmic Cycles  
at Time of Conception of the Subject

Subject	Physical	Emotional	Intellectual
B.J.B.			
Mother (12-12-31)	+	-	+
Father (10-16-30)	0	-	-



Subject	Physical	Emotional	Intellectual
D.C.B.			
Mother (5-13-31)	-	+	-
Father (3-16-37)	+	+	+
	(u)		
B.L.A.D.			
Mother (8-23-21)	-	-	-
Father (8-23-18)	-	-	-
L.W.F.			
Mother (6-22-25)	0	+	+(u)
Father (10-12-21)	+	-	-
T.J.F.			
Mother (11-18-29)	-	-	+
Father (4-18-27)	-	+	-
D.E.K.			
Mother (5-11-23)	-	+	-
Father (1-28-24)	+	-	-
E.C.L.			
Mother (11-11-19)	+	+	-
Father (12-13-21)	+(u)	-	-
M.W.L.			
Mother (9-24-28)	+	-	+
Father (3-7-28)	-	+	+
J.L.			
Mother (10-7-17)	-	0	+
Father (6-16-19)	-	+(u)	-
K.C.M.			
Mother (12-27-14)	+	+	-
Father (5-3-15)	-	-	-
W.H.R.			
Mother (4-26-23)	+	-	+
Father (11-6-23)	-	-	-
E.W.S.			
Mother (1-28-17)	-	-	-
Father (2-1-1896)	-	+	-

Subject	Physical	Emotional	Intellectual
T.G.W.			
Mother (8-2-23)	-	-	-
Father (7-5-24)	+	-	-

## KEY

+ = Positive or High

- = Negative or Low

0 = Critical

u = Unfavorable for High

The positive period was considered any day above the Biorhythm horizontal line. The negative period was considered any day below the Biorhythm horizontal line. The critical period was considered any day that fell on the Biorhythm horizontal line.

As shown in Table 2, a tabulation of the Biorhythmic positioning was made from the data presented in Table 1 and percentage values were applied to the tabulation.

Table 2

Composite Tabulation and Percentage Application of Parents' Biorhythmic Cycle at Time of Conception

Rhythm	MOTHER		
	Positive	Negative	Critical
Physical	1111	1111 11	1
Emotional	1111	1111 11	1
Intellectual	1111 1	1111 11	

FATHER			
Rhythm	Positive	Negative	Critical
Physical	1111	1111 11	1
Emotional	1111	1111 111	
Intellectual	111	1111 1111	

## Percentage Application

MOTHER			
Rhythm	Positive	Negative	Critical
Physical	38.46%	53.84%	7.69%
Emotional	38.46%	53.84%	7.69%
Intellectual	46.15%	53.84%	

FATHER			
Rhythm	Positive	Negative	Critical
Physical	38.46%	53.84%	7.69%
Emotional	38.46%	61.53%	
Intellectual	23.07%	76.92%	

The tabulation reveals that as an aggregate, the mothers were experiencing lows at time of conception of the subject for all three cycles. As an aggregate, the fathers were also experiencing lows at time of conception of the subject for all three cycles.

Table 3 designates the favorable or unfavorable percentage of mothers and fathers for each of the three rhythms.

Table 3  
Composite Percentage Tabulation for Mothers of  
Favorable or Unfavorable State  
of the Rhythms

Rhythm	Favorable	Unfavorable
Physical	38.46%	61.53%
Emotional	38.46%	61.53%
Intellectual	38.46%	61.53%

Composite Percentage Tabulation for Fathers of  
Favorable or Unfavorable State  
of the Rhythms

Rhythm	Favorable	Unfavorable
Physical	30.76%	69.23%
Emotional	30.76%	69.23%
Intellectual	23.07%	76.92%

As shown in Table 3, as an aggregate, the mothers fell in the unfavorable range at time of conception. This also held true for the fathers as an aggregate.

Table 4 places an overall value on each parent's three rhythms to distinguish couple compatibility.

Table 4  
Comparison of Relative Position of Each Parent's  
Three Cycles to Distinguish  
Couple Compatibility

Subject	Mother	Father
B.J.B.	Aggregate Favorable	Aggregate Unfavorable



Subject	Mother	Father
D.C.B.	Aggregate Unfavorable	Aggregate Favorable
B.L.A.D.	Aggregate Unfavorable	Aggregate Unfavorable
L.W.F.	Aggregate Unfavorable	Aggregate Unfavorable
T.J.F.	Aggregate Unfavorable	Aggregate Unfavorable
D.E.K.	Aggregate Unfavorable	Aggregate Favorable
E.C.L.	Aggregate Favorable	Aggregate Unfavorable
M.W.L.	Aggregate Favorable	Aggregate Favorable
J.L.	Aggregate Unfavorable	Aggregate Unfavorable
K.C.M.	Aggregate Favorable	Aggregate Unfavorable
W.H.R.	Aggregate Favorable	Aggregate Unfavorable
E.W.S.	Aggregate Unfavorable	Aggregate Unfavorable
T.G.W.	Aggregate Unfavorable	Aggregate Unfavorable

If two of the three cycles were in a favorable position, this was considered an aggregate favorable; if two of the three cycles were unfavorable, this was considered an aggregate unfavorable. The couples were grouped according to type of compatibility.

A percentage value was placed on each group for the purpose of composite comparison and is shown in Table 5.

Table 5  
Percentage Value Application  
to Couple Compatibility

	Mother	Father
I.	Aggregate Favorable	Aggregate Favorable
	7.69%	
II.	Aggregate Favorable	Aggregate Unfavorable
	30.76%	
III.	Aggregate Unfavorable	Aggregate Favorable
	15.38%	
IV.	Aggregate Unfavorable	Aggregate Unfavorable
	46.15%	

As shown in Table 5, a higher percentage of conception dates occurred when at least one parent was experiencing an unfavorable period and the highest percentage of conception dates occurred when both parents were exhibiting unfavorable periods.

#### DISCUSSION

This study gave evidence that the greatest number of superior subjects were conceived when parents were experiencing an unfavorable state of the Biorhythm cycles. Willis found in a study of superior children, parents were experiencing highs in the Biorhythm cycles at time of conception.

The findings of this study appear to conflict with Willis' findings.<sup>1</sup>

The results of the study revealed the most mothers were experiencing lows in the physical cycle during conception. Thommen found that mothers experiencing highs in the physical cycle during conception were more susceptible to receive the Y sperm, thereby producing a boy. The findings of this study are not consistent with Thommen.<sup>2</sup>

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<sup>1</sup>Willis, op. cit., p. 3.

<sup>2</sup>Thommen, op. cit., p. 111.

## Chapter V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### SUMMARY

The purpose of this study was to determine where the greatest percentage of parents stood on the Biorhythm charts during conception of subjects recognized as national class performers in track. Thirteen male subjects were used. All subjects at one time were listed in Track and Field News magazine's annual national and world list for events ranging from the 800 meter run to the marathon.

The runners were mailed a questionnaire inquiring about subject's birthdate, date of conception, and birthdate of subject's parents. If date of conception of the subjects was not known, the runner gave information regarding premature, delayed or normal birth. From this information, date of conception was determined and the parent's state of Biorhythm was plotted for this date.

The first analytical technique applied to this information indicated the Biorhythmic position of each parent at time of conception of the runner. A tabulation of the Biorhythmic positioning at time of conception of the subjects was made for all mothers as an aggregate. This analysis was also applied to the father's rhythms.



The next analysis designated the percentage of mothers, as an aggregate, and fathers, as an aggregate, that were experiencing a favorable or unfavorable state for each of the three rhythms. Favorable was considered any position above the Biorhythm horizontal line, excluding one day above the critical point. Unfavorable was the critical point, one day above the critical point, or any day in the low zone. One day above the critical point was considered unfavorable because of its close proximity to the critical point. Since exact hour of birth or conception was not known, conception that was determined to have fallen one day above the critical point could have been closer to the critical point.

Parent compatibility was considered by placing an overall value on each parent's rhythms. If two of the three rhythms were in a favorable position, this was considered an aggregate favorable; if two of the three rhythms were in an unfavorable position, this was termed an aggregate unfavorable. The couples were grouped according to type of compatibility. Four groups of all possible combinations existed. A tabulation was made for the number of couples in each group. A percentage value was then placed on each group.

#### FINDINGS

The findings of this investigation were as follows:

As an aggregate, the mothers were experiencing lows at time of conception of the subject for all three cycles.

As an aggregate, the fathers were experiencing lows at time of conception of the subjects for all three rhythms.

The highest percentage of mothers fell in the unfavorable range at time of conception of the runner.

The highest percentage of fathers fell in the unfavorable range at time of conception of the runner.

A higher percentage of conception dates occurred when at least one parent was experiencing an unfavorable period and the largest percentage of conception dates occurred when both parents were exhibiting unfavorable periods.

#### CONCLUSIONS

The hypothesis, that parents would be experiencing a positive position for all cycles at time of conception of the superior subject, was rejected. This investigation revealed that most parents were experiencing lows for the three cycles during conception. It appears, from the findings, that national class distance runners may be conceived during unfavorable biorhythmic cycles.

## RECOMMENDATIONS

1. It is recommended that a study similar to the present be repeated involving more subjects.

2. It is recommended that a study similar to the present be repeated involving female subjects.

3. It is recommended that a study similar to the present be repeated involving subjects in other areas of sport.

4. It is recommended that a study similar to the present be repeated with other methods of treatment of the data.

5. It is recommended that this study be repeated with sprinters and a comparison made with distance runners.

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## BIBLIOGRAPHY

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## APPENDIX A

## QUESTIONNAIRE

You have probably been exposed to the theory of Biorhythms and its relation to the athlete. Runner's World, Track Technique, and Track and Field News have all published articles concerning this topic.

Briefly, Biorhythm is the study of life rhythms. "The Biorhythm theory postulates that there are certain life rhythms that rise and fall at a regular pace in every human organism, and the current state of these rhythms has much to do with our resistance to disease, our emotional reactions, and intellectual response." There are three cycles concerned with Biorhythm; a thirty-three day intellectual cycle, a twenty-three day physical cycle, and a twenty-eight day sensitivity cycle.

The topic of this study is concerned with how a parent's Biorhythm cycles might have influenced your future abilities. To investigate this problem it is necessary to answer a few questions concerning you and your parents.

This study is very select, so it is very important that you take a few minutes to complete this questionnaire. It is realized that these questions are of a personal nature, but this is a necessity, and will remain in the strictest professional confidence.

1. Your name as it appears on your birth certificate.

\_\_\_\_\_

2. Your birth date. \_\_\_\_\_

3. Place of birth. \_\_\_\_\_

4. Father's birth date. \_\_\_\_\_ Mother's  
birth date. \_\_\_\_\_

5. Your date of conception, if known. \_\_\_\_\_  
If not known, was your birth premature and by how  
many days or post-mature and by how many days?  
\_\_\_\_\_
6. Your weight at birth. \_\_\_\_\_
7. List what you consider your five most outstanding  
athletic achievements.

If you desire any further information concerning this study, feel free to ask. If you desire a summary of the results of the outcome of this investigation, please specify also.

Thank you very much for your cooperation.

Sincerely,

Larry Holt  
Department of Physical Education  
Appalachian State University



APPENDIX B  
GRAPH OF PARENT'S CYCLES

