

Personality Profiles of North American Professional Football Players

**Nancy A. Schaubhut, David A.C. Donnay, and
Richard C. Thompson**
CPP, Inc

This study used a sample of 812 North American professional football players who completed the CPI 260™ assessment. Average profiles for selected groups of players were evaluated. Logistic regression and discriminant function analyses were used to examine personality differences among groups of players, including several positions, and offense versus defense.

Personality is typically measured using a self-report questionnaire on which respondents indicate their feelings or behaviors, yielding measurements of traits such as neuroticism, anxiety, extraversion, dominance, assertiveness, sensitivity, conscientiousness, and agreeableness. Personality either predicts or is related to many things, including performance motivation (Judge & Ilies, 2002), leadership (Judge, Bono, Ilies, & Gerhardt, 2002; Hogan & Kaiser, 2005), and job performance (Thoresen, Bradley, Bliese, & Thoresen, 2004). Researchers have studied personality in various areas ranging from the workplace to athletics.

Athlete personality has been examined by researchers in a number of ways. For example, many have studied personality differences between athletes and nonathletes (Curry, Snyder, Cook, Ruby, & Rehm, 1997; Schroth, 1995; Davis, & Mogk, 1994). Although no specific profile has been found for athletes (Vealey, 1992; Wann, 1997), there are some general differences reported. Athletes typically are more extraverted, tough-minded, assertive, emotionally stable, and self-confident than those who are not athletes (Butt, 1976; Cox, 1998). Others have examined players of team and individual sports (Luparini, Guidoni, la Malfa, & Rossi, 1989), players of different sports (Ibrahim, 1988), different

positions of the same sport (Cox & Yoo, 1995; Kirkcaldy, 1982), and personality characteristics of athletes of specific sports such as tennis (Gondola & Wughalter, 1991), wrestling (Silva, 1985), rugby (Golby & Sheard, 2004), and acrobatics (Bai & Meng, 2000).

Some researchers have focused on personalities of college football players. Personality differences have been found between successful and unsuccessful players (Schurr, Ruble, & Nisbet, 1984), by positions (Schurr, et al., 1984; Nation & LeUnes, 1983), and classification – playing or not playing (Nation & LeUnes, 1983). Elman and McKelvie (2003) found that narcissism predicted membership as a university football player. Extraversion, emotional stability, tough-mindedness, and group-dependence were found to be predictive of collegiate football player performance (Garland & Barry, 1990). Aggressiveness is also among the predictors of playing ability for college fullbacks and halfbacks (Secunda, Blau, McGuire, & Burroughs, 1986).

One area that lacks study is the personality characteristics of professional football players. This study helps to fill this gap in the literature by examining personality profiles of professional football players who were considered for a North

American football draft, focusing on those who eventually made a professional football team roster through the draft or other means such as training camp tryouts or post draft selection. Differences between players in different positions and those playing offense versus defense were also evaluated.

Method

Respondents. One thousand one hundred ninety-three male athletes who were candidates for a North American professional football draft completed the CPI 260™ assessment from 2002 to 2005. Most participants did not provide demographic information, such as ethnicity and occupation. Slightly more than half reported age, with a mean of 22.21 (SD = 1.01). Of those who reported their highest level of education completed (about 46%), the modal response was Bachelor's degree, followed by some college. The analyses focus on the 812 players who made a professional football team roster.

Measures. The CPI 260 assessment is a measure of normal personality that is often used in coaching, leadership development, retention, and as one component of selection programs. It is comprised of twenty folk scales, three vector scales, and six special purpose scales. The folk scales are grouped into four broad categories measuring interpersonal aspects, self-management, motivations and thinking style, and personal characteristics. The vector scales assess orientations toward the interpersonal world, societal values, and self (Gough & Bradley, 2005). The special purpose scales typically measure various work-related dispositions.

Variables were also collected via information available from a North American professional football league website. This data included which players were drafted,

their draft number, and the round in which they were selected. Also gathered was information on whether each player made a professional team roster, number of games played per regular season, classification as offensive, defensive or special teams player, and position.

Procedure. First, mean scores were calculated for groups of players in order to compare CPI profiles for players by offense or defense, linemen and backfield, and several selected positions including quarterbacks, running backs, defensive backs, and linebackers. These mean profiles of interest are summarized in Figures 1 and 2.

Past research has been successful at differentiating linemen from backfield football players (Cox & Yoo, 1995), as well as offensive from defensive players (Schurr, Ruble, & Nisbet, 1984), on psychological and personality variables. Therefore, a similar approach was used in the current study. Players were first classified as offensive linemen, offensive backfield, defensive linemen, or defensive backfield. Descriptive statistics were then calculated. Three binary logistic regressions were conducted. The first used classification as offensive or defensive players as the dependent variable, and CPI 260 scales as the independent variables. Next, a binary logistic regression was performed on offensive players' line status (i.e., linemen or backfield) as the dependent variable and CPI 260 scales as the independent variables. Another binary logistic regression was performed on defensive players' line status (i.e., linemen or backfield) as the dependent variable and CPI 260 scales as the independent variables. A discriminant function analysis was also conducted using the CPI 260 scales as predictors of players' positions.

Results

Figure one shows the mean CPI 260 profiles for a select set of positions. It includes quarterbacks, running backs, wide receivers, linebackers, kickers/punters, defensive backs, and defensive tackles. Quarterbacks score, on average, higher than the other positions on many of the scales including Dominance (Do), Independence (In), Good Impression (Gi), and Leadership (Lp). Since leadership is an important part of being a quarterback (Read, 2002), it is not surprising that they score higher than the others on the Lp and Do scales. The Do scale measures prosocial interpersonal power and influence, and people who score high on this scale are often described as assertive, outgoing, self-confident, ambitious, and they seek to influence others to help achieve goals (Gough & Bradley, 2005; Gough & Bradley, 1996). The Lp scale measures initiative and effectiveness in leading others, and descriptors of people who score high on this scale include alert, ambitious, energetic, and poised (Gough & Bradley, 2005; Gough & Bradley, 1996). Defensive tackles score lower than the others on several scales, such as Self-acceptance (Sa), Social Conformity (So), Achievement via Conformance (Ac), and Work Orientation (Wo).

Average CPI 260 profiles for linemen and backfield (separated by offense and defense) are shown in Figure 2. Offensive players (backs and linemen) are quite similar to each other, as are defensive players (backs and linemen). However, defensive backs average slightly higher scores than defensive linemen on the Gi and Ac scales. Backs, offense and defense, are very similar in their mean scores, but linemen (offense and defense) show more differences. For example, offensive linemen average higher scores than defensive linemen on the So, Well-being (Wb), and

Tolerance (To) scales. One notable pattern is that offensive linemen have the highest average scores on eighteen of the twenty-nine scales, while defensive linemen average the lowest scores on nineteen of the scales. Average CPI 260 profiles for players who were selected by teams in 2003-2005 North American professional football drafts and those who were not selected were also compared, but not included because their means were remarkably similar. Those selected in the draft average slightly higher scores on the Self-control (Sc) and Gi scales.

Logistic Regressions. The first binary logistic regression for players with offensive/defensive status as the dependent variable and CPI 260 scales as the independent variables reliably distinguished between offensive and defensive players. The test with all predictors was statistically significant, $\chi^2 = 51.38 (29)$, $p < .01$. The model shows that offensive players were correctly classified 66.4% of the time, while defensive players were correctly classified 54.1%. The Nagelkerke R^2 , an approximation of variance accounted for, is .08. According to the Wald statistic, Sociability (Sy) ($z = 4.70$, $p < .05$), Social Presence (Sp) ($z = 4.27$, $p < .05$), So ($z = 4.8$, $p < .05$), Sc ($z = 4.36$, $p < .05$), Conceptual Fluency (Cf) ($z = 6.59$, $p < .05$), and Participating/Private (v.1) ($z = 6.03$, $p < .05$) were significant contributors to the classification of status as offensive or defensive players (see Table 1).

The next binary logistic regression for offensive players with line status (linemen or backfield) as the dependent variable and CPI 260 scales as the independent variables reliably distinguished between linemen and backfield players. The test with all predictors was statistically significant, $\chi^2 = 76.17 (29)$, $p < .01$. The model indicates that linemen and backfield were correctly classified 62.0% and 79.7%

of the time, respectively. The Nagelkerke R^2 , an approximation of variance accounted for is .23. According to the Wald statistic, Capacity for Status (Cs) ($z = 6.39, p < .05$), In ($z = 3.98, p < .05$), Wb ($z = 6.40, p < .05$), To ($z = 4.69, p < .05$), Sensitivity (Sn) ($z = 4.26, p < .05$), Approving/Questioning (v.2) ($z = 4.24, p < .05$), and Managerial Potential (Mp) ($z = 4.65, p < .05$) significantly contributed to classification of line status for offensive player (see Table 2). This means that as scores on Cs, In, or Sn increase, the odds of being an offensive lineman significantly increase. As scores on Wb, To, v.2, or Mp decrease, the odds of being in the offensive backfield significantly increase.

The third binary logistic regression for defensive players also reliably distinguished between linemen and backfield players. The test with all predictors was statistically significant, $\chi^2 = 60.81 (29), p < .01$. The model shows that linemen were correctly classified 84.1% and backfield 36.9% of the time. The approximation of variance accounted for, Nagelkerke R^2 , is .20. According to the Wald statistic, Sa ($z = 4.99, p < .05$), Ac ($z = 8.09, p < .01$), Insightfulness (Is) ($z = 5.28, p < .05$), and Sn ($z = 5.76, p < .05$) significantly contributed to classification of line status for defensive players (see Table 3). This means that as scores on Sa, Ac, or Sn increase, the odds of being a defensive lineman significantly increase. Odds of being a defensive backfield player significantly increase as scores on Is decrease.

Discriminant Function Analysis. Twenty-nine univariate analyses of variance (ANOVAs) were calculated to reflect the separation between fourteen North American professional football positions on the twenty-nine CPI 260 scales (see Table 4). The results for twenty-three of the scales were significant, meaning each made a contribution to player position

separation. The scales that did not significantly contribute to separation are Cs, Sy, Achievement via Independence (Ai), Flexibility (Fx), v.1, and Creative Temperament (CT). The So scale had the smallest Wilks' lambda (.92) indicating the greatest contribution of the CPI 260 scales, accounting for 8.0% of variance.

Group (position) separation was also examined multivariately through a discriminant function analysis, which was performed on the fourteen football positions from the sample. The overall model had two significant functions (see Table 5), accounting for 42.3% of variance in personality variables among the fourteen positions studied. Twenty CPI 260 scales contributed to separation among the groups in the first function: So, Wb, Lp, In, Do, Mp, Ami, To, Responsibility (Re), Fulfillment (v.3), Ac, Sa, Communality (Cm), Law Enforcement Orientation (Leo), Cf, v.2, Empathy (Em), Wo, Is, and Ai. Two scales, Gi and Sn, contributed to the separation in the second function. Figure 3 shows a graphical representation of the group centroids for the two significant functions. Defensive tackle and Quarterback show the most separation on the set of scales contributing to the first function. Quarterbacks average higher scores on all of these scales. Cornerbacks and Tackles show the greatest separation on the two scales contributing to the second function, and Cornerbacks average higher scores on these scales.

Discussion

The current study is interdisciplinary in nature, and contributes to both Industrial Organizational and Sport Psychology literature. Certain CPI 260 scales may be used to identify offensive and defensive players who may be successful at line or backfield positions. Interestingly, this initial

study shows that there appear to be some personality differences among players of different positions. A follow-up study may seek to determine whether there are differences between more and less successful North American professional football players.

One limitation is that performance measures, such as number of tackles, passes, and receptions, were not available for a sufficient number of players to be included in the current study. Future research should examine personality in sports longitudinally, an approach that has been utilized little, and include performance measures. Additionally, researchers may want to control for other variables, such as abilities, when studying personality among athletes. Another interesting approach would be to study athletes' CPI 260 scores in terms of misconduct, such as penalties

and fines in the game, and arrests or other misbehaviors outside the game.

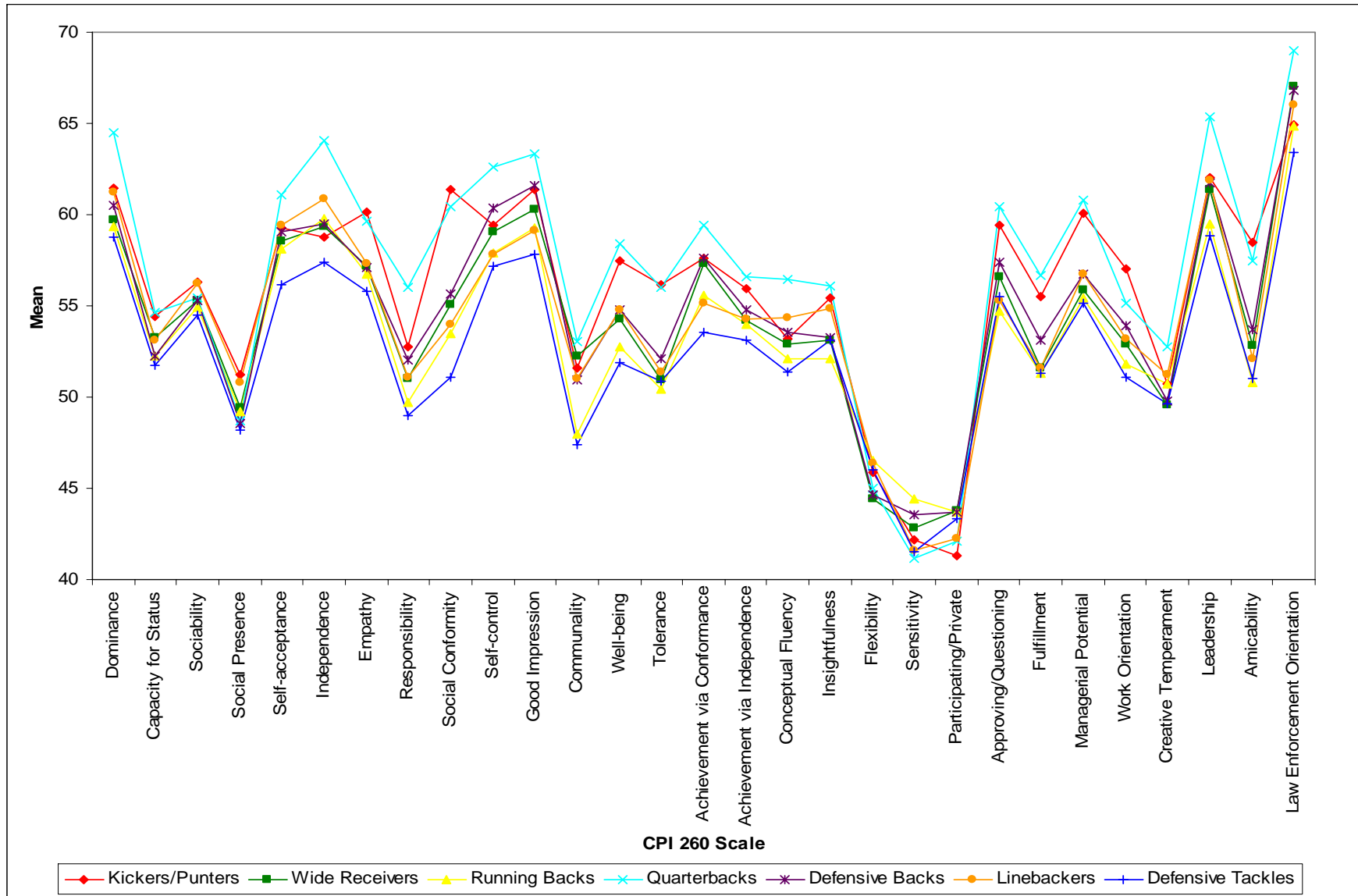
Mean scores for these players are well above average on many of the CPI 260 scales, including Do, Sy, In, Em, Is, Mp, and Lp. In fact, the players' mean profiles look more like leaders than people in general, and they average higher scores than a sample of leaders on the Do, Sa, Em, and Leo scales (Gough & Bradley, 2005). This evidence suggests that media portrayals and stereotypes of North American professional football players may be unfair and inaccurate. In some respects, the personality characteristics of these athletes are perhaps more comparable to the most successful people in any other field. This said, the average scores for these athletes on the Sp, Re, Cm, Fx and CT scales do reflect development opportunities for these professionals.

References

- Bai, X., & Meng, J. (2000). An exploratory study on the psychological characteristics of outstanding acrobats. *Psychological Science (China)*, 23(5), 624-624.
- Butt, D.S. (1976). *Psychology of Sport: The Behavior, Motivation, Personality, and Performance of Athletes*. New York: Van Nostrand Reinhold Co.
- Cox, R.C. (1998). *Sport Psychology: Concepts and Applications* (4th ed.). Boston, MA: WCB McGraw Hill.
- Cox, R.H., & Yoo, H.S. (1995). Playing position and psychological skill in American football. *Journal of Sport Behavior*, 18(3), 183-194.
- Curry, L.A., Snyder, C.R., Cook, D.L., Ruby, B.C., & Rehm, M. (1997). Role of hope in academic and sport achievement. *Journal of Personality and Social Psychology*, 73(6), 1257-1267.
- Davis, C., & Mogk, J.P. (1994). Some personality correlates of interest and excellence in sport. *International Journal of Sport Psychology*, 25(2), 131-143.
- Elman, W.F., & McKelvie, S.J. (2003, March). Narcissism in football players: Stereotype or reality? *Athletic Insight*, 5. Retrieved August 2, 2005, from <http://www.athleticinsight.com/Vol15/151/Narcissism.htm>
- Garland, D.J., & Barry, J.R. (1990). Personality and leader behaviors in collegiate football: A multidimensional approach to performance. *Journal of Research in Personality*, 24(3), 355-370.
- Golby, J., & Sheard, M. (2004). Mental toughness and hardiness at different levels of rugby league. *Personality and Individual Differences*, 37(5), 933-942.
- Gondola, J.C., & Wughalter, E. (1991). The personality characteristics of internationally ranked female tennis players as measured by the Cattell 16PF. *Perceptual & Motor Skills*, 73(3), 987-992.
- Gough, H.G., & Bradley, P. (2005). *CPI 260™ Manual*. Mountain View, CA: CPP, Inc.
- Gough, H.G., & Bradley, P. (1996). *CPI Manual* (3rd ed.). Mountain View, CA: CPP, Inc.
- Hogan, R., & Kaiser, R.B. (2005). What we know about leadership. *Review of General Psychology*, 9(2), 169-180.
- Ibrahim, H. (1988). Comparison of the personal traits of players of three different sports. *Dirasat*, 15, 150-202.
- Judge, T.A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology*, 87(4), 797-807.
- Judge, T.A., Bono, J.E., Ilies, R., & Gerhardt, M.W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87(4), 765-780.
- Kirkcaldy, B.D. (1982). Personality and sex differences related to positions in team sports. *International Journal of Sport Psychology*, 13(3), 141-153.
- Luparini, M., Guidoni, G., la Malfa, G.P., & Rossi, R. (1989). Evaluation of personality profiles in athletes from diverse disciplines using the 16PF Test by Cattell. *Movimento*, 5(2), 107-110.
- Nation, J.R., & LeUnes, A.D. (1983). Personality characteristics of intercollegiate football players as determined by position, classification, and redshirt status. *Journal of Sport Behavior*, 6(2), 92-102.

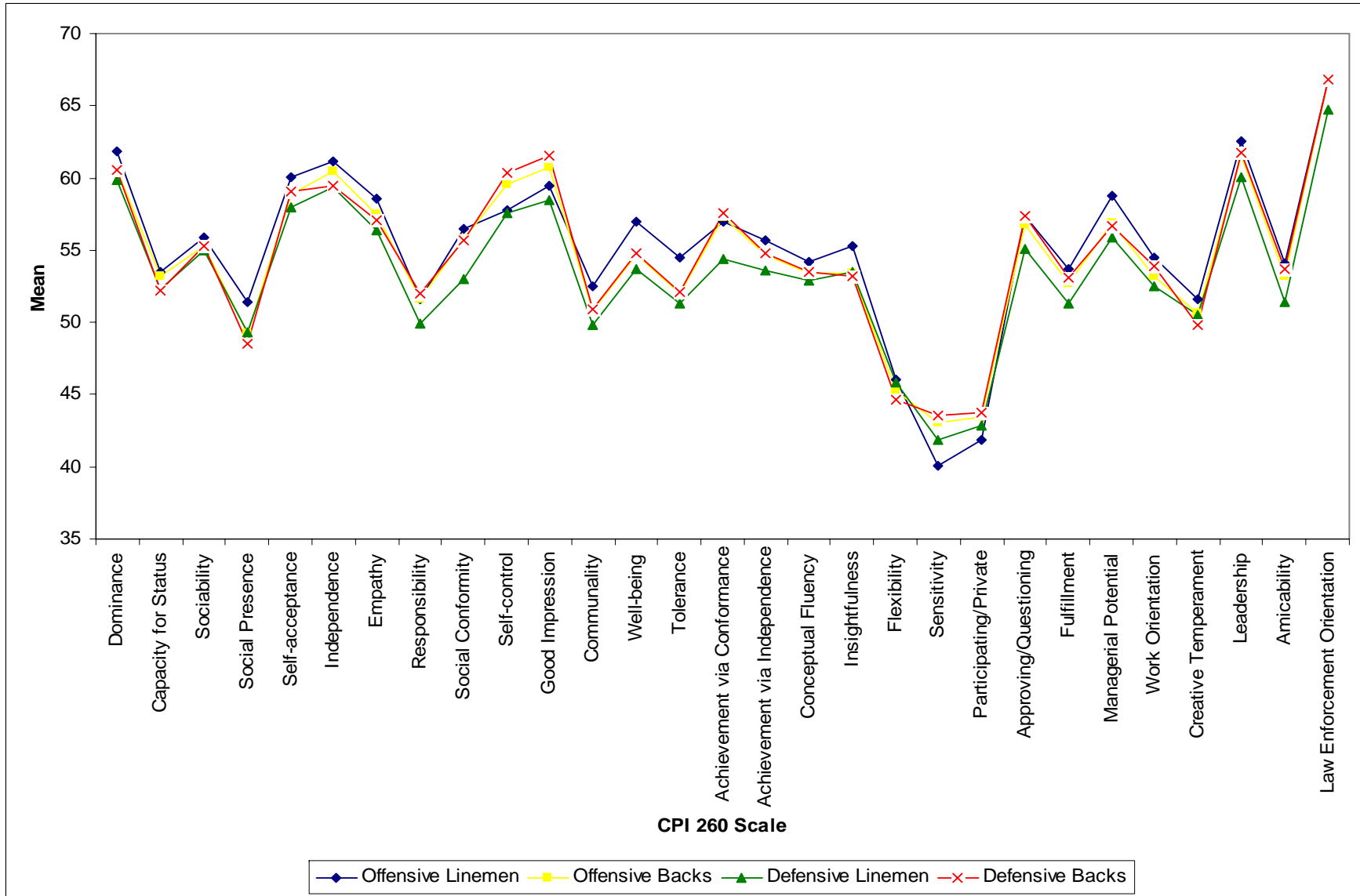
- Read, D. (2002). *Complete Quarterbacking*. Champaign, IL: Human Kinetics Publishers.
- Schurr, K.T., Ruble, V.E., & Nisbet, J. (1984). Myers-Briggs Type Inventory characteristics of more and less successful players on an American football team. *Journal of Sport Behavior*, 7(2), 47-57.
- Secunda, M.D., Blau, B.I., McGuire, J.M., & Burroughs, W.A. (1986). Psychobiomotor assessment of football-playing ability. *International Journal of Sport Psychology*, 17(3), 215-233.
- Schroth, M.L. (1995). A comparison of sensation seeking among different groups of athletes and nonathletes. *Personality & Individual Differences*, 18(2), 219-222.
- Silva, J. (1985). Discriminating characteristics of contestants at the United States Olympic Wrestling Trials. *International Journal of Sport Psychology*, 16(2), 219-222.
- Thoresen, C.J., Bradley, J.C., Bliese, P.D., & Thoresen, J.D. (2004). The big five personality traits and individual job performance growth trajectories in maintenance and transitional job stages. *Journal of Applied Psychology*, 89(5), 835-853.
- Vealey, R.S. (1992). Personality and sport: A comprehensive view. In T.S. Horn, (Ed.), *Advances in Sport Psychology*, pp.25-60. Champaign, IL: Human Kinetics Publishers.
- Wann, D.L. (1997). *Sport Psychology*. Upper Saddle River, New Jersey: Prentice Hall.

Figure 1. Mean CPI 260 Profiles for Selected North American Professional Football Positions



Note: N = 11 Kickers/Punters, 100 Wide Receivers, 77 Running Backs, 44 Quarterbacks, 144 Defensive Backs, 105 Linebackers, and 68 Defensive Tackles.

Figure 2. Mean CPI 260 Profiles for North American Professional Football Offensive and Defensive Linemen and Backfield



Note: N = 179 Offensive Linemen, 232 Offensive Backs, 246 Defensive Linemen, and 144 Defensive Backs.

Table 1. Results of Logistic Regression Analysis for Offensive and Defensive Players

Predictor	B	Fit Statistic
Dominance (Do)	.00	
Capacity for Status (Cs)	-.01	
Sociability (Sy)	.04*	
Social Presence (Sp)	-.04*	
Self-acceptance (Sa)	-.01	
Independence (In)	-.04	
Empathy (Em)	-.02	
Responsibility (Re)	.00	
Social Conformity (So)	-.04*	
Self-control (Sc)	.05*	
Good Impression (Gi)	-.01	
Communality (Cm)	.00	
Well-being (Wb)	.00	
Tolerance (To)	-.02	
Achievement via Conformance (Ac)	-.03	
Achievement via Independence (Ai)	-.02	
Conceptual Fluency (Cf)	.05*	
Insightfulness (Is)	.02	
Flexibility (Fx)	.00	
Sensitivity (Sn)	.00	
Participating/Private (v.1)	-.06*	
Approving/Questioning (v.2)	-.01	
Fulfillment (v.3)	.01	
Managerial Potential (Mp)	-.02	
Work Orientation (Wo)	.03	
Creative Temperament (CT)	.01	
Leadership (Lp)	-.01	
Amicability (Ami)	.00	
Law Enforcement Orientation (Leo)	.00	
Constant	7.00	
χ^2		51.38**
-2LL		1058.49

Note. -2LL = -2 log likelihood.

* $p < .05$; ** $p < .01$.

Table 2. Results of Logistic Regression Analysis for Offensive Players

Predictor	B	Fit Statistic
Dominance (Do)	-.11	
Capacity for Status (Cs)	.07*	
Sociability (Sy)	.04	
Social Presence (Sp)	-.05	
Self-acceptance (Sa)	.00	
Independence (In)	.07*	
Empathy (Em)	.00	
Responsibility (Re)	.01	
Social Conformity (So)	.03	
Self-control (Sc)	.06	
Good Impression (Gi)	.02	
Communality (Cm)	-.01	
Well-being (Wb)	-.08*	
Tolerance (To)	-.07*	
Achievement via Conformance (Ac)	.02	
Achievement via Independence (Ai)	-.04	
Conceptual Fluency (Cf)	.03	
Insightfulness (Is)	-.02	
Flexibility (Fx)	-.03	
Sensitivity (Sn)	.05*	
Participating/Private (v.1)	-.06	
Approving/Questioning (v.2)	-.05*	
Fulfillment (v.3)	.06	
Managerial Potential (Mp)	-.07*	
Work Orientation (Wo)	.01	
Creative Temperament (CT)	.02	
Leadership (Lp)	-.02	
Amicability (Ami)	.00	
Law Enforcement Orientation (Leo)	.03	
Constant	4.21	
χ^2		76.17**
-2LL		486.75

Note. -2LL = -2 log likelihood.

* $p < .05$; ** $p < .01$.

Table 3. Results of Logistic Regression Analysis for Defensive Players

Predictor	B	Fit Statistic
Dominance (Do)	.01	
Capacity for Status (Cs)	-.04	
Sociability (Sy)	-.05	
Social Presence (Sp)	.01	
Self-acceptance (Sa)	.07*	
Independence (In)	-.04	
Empathy (Em)	.00	
Responsibility (Re)	-.04	
Social Conformity (So)	.04	
Self-control (Sc)	-.04	
Good Impression (Gi)	.04	
Communality (Cm)	.00	
Well-being (Wb)	-.02	
Tolerance (To)	.00	
Achievement via Conformance (Ac)	.09**	
Achievement via Independence (Ai)	.05	
Conceptual Fluency (Cf)	-.05	
Insightfulness (Is)	-.06*	
Flexibility (Fx)	.00	
Sensitivity (Sn)	.05*	
Participating/Private (v.1)	.00	
Approving/Questioning (v.2)	-.01	
Fulfillment (v.3)	.04	
Managerial Potential (Mp)	-.05	
Work Orientation (Wo)	-.02	
Creative Temperament (CT)	-.01	
Leadership (Lp)	.08	
Amicability (Ami)	.07	
Law Enforcement Orientation (Leo)	.00	
Constant	-6.26	
χ^2		60.81**
-2LL		452.86

Note. -2LL = -2 log likelihood.

* $p < .05$; ** $p < .01$.

Table 4. Univariate Analysis of Group Separation

CPI 260 Scale	% Variance	<i>F</i> (13, 772)
Dominance (Do)	6.3	4.01**
Capacity for Status (Cs)	2.3	1.37
Sociability (Sy)	1.9	1.16
Social Presence (Sp)	3.3	2.05*
Self-acceptance (Sa)	4.0	2.50**
Independence (In)	7.2	4.63**
Empathy (Em)	3.2	1.98*
Responsibility (Re)	4.9	3.08**
Social Conformity (So)	8.0	5.17**
Self-control (Sc)	3.8	2.32**
Good Impression (Gi)	3.8	2.34**
Communality (Cm)	4.8	3.03**
Well-being (Wb)	7.8	5.03**
Tolerance (To)	5.4	3.38**
Achievement via Conformance (Ac)	4.8	3.00**
Achievement via Independence (Ai)	2.6	1.60
Conceptual Fluency (Cf)	3.5	2.18**
Insightfulness (Is)	4.3	2.69**
Flexibility (Fx)	2.1	1.28
Sensitivity (Sn)	5.7	3.62**
Participating/Private (v.1)	2.2	1.36
Approving/Questioning (v.2)	4.2	2.60**
Fulfillment (v.3)	4.8	3.02**
Managerial Potential (Mp)	6.0	3.78**
Work Orientation (Wo)	3.0	1.87*
Creative Temperament (CT)	2.2	1.35
Leadership (Lp)	7.8	5.04**
Amicability (Ami)	5.5	3.44**
Law Enforcement Orientation (Leo)	4.1	2.54**

Note. *N* = 786 (*n* = 30 Safeties, 26 Centers, 58 Cornerbacks, 56 Defensive Backs, 70 Defensive Ends, 68 Defensive Tackles, 45 Guards, 105 Linebackers, 21 Offensive Tackles, 44 Quarterbacks, 77 Running Backs, 49 Tackles, 38 Tight Ends, and 100 Wide Receivers).

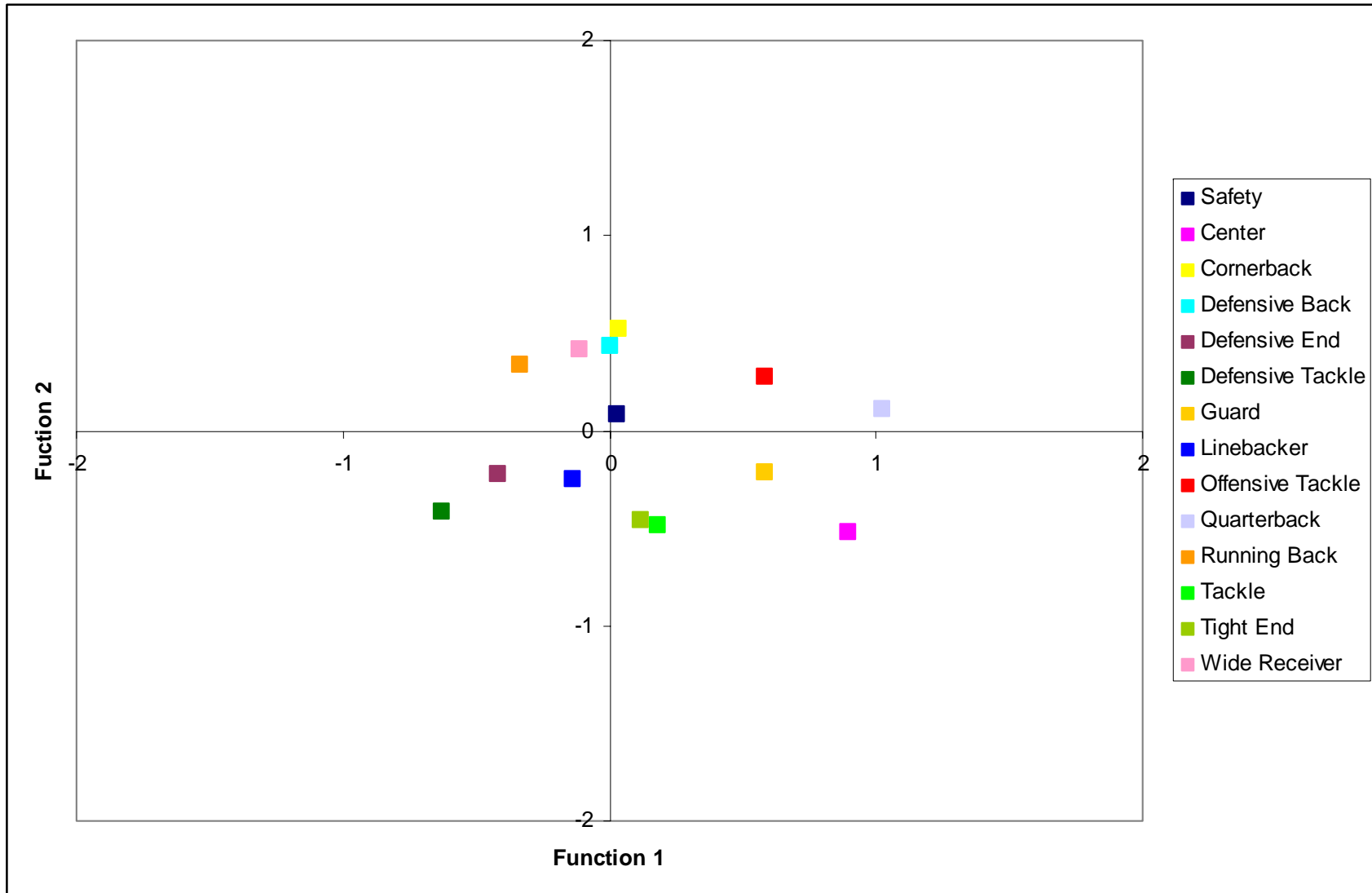
p* < .05; *p* < .01.

Table 5. Discriminant Function Analysis Results

Discriminant Function	Eigenvalue	% of Variance	Cumulative Variance	Wilks'	Canonical Correlation
1	.184	24.4	24.4	.487	.394
2	.135	17.9	42.3	.577	.345

Note. The ² was significant for two canonical discriminant functions.

Figure 3. Group Centroids from Canonical Discriminant Functions



Note. $N = 786$ ($n = 30$ Safeties, 26 Centers, 58 Cornerbacks, 56 Defensive Backs, 70 Defensive Ends, 68 Defensive Tackles, 45 Guards, 105 Linebackers, 21 Offensive Tackles, 44 Quarterbacks, 77 Running Backs, 49 Tackles, 38 Tight Ends, and 100 Wide Receivers).