Research and Development Division
Professional DynaMetric Programs, Inc.

Validation of the Professional DynaMetric Programs®, Inc. (PDP)
ProScan® and JobScan® for Predicting Driver Success

SUBMITTED BY:
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Table of Contents

Validation of the Professional DynaMetric Programs$_®$, Inc. (PDP$_®$) ProScan$_®$ and JobScan$_®$ for Predicting Driver Success

Executive Summary

A series of analyses were performed to investigate the predictive validity and disparate impact of the PDP ProScan$_®$ and JobScan$_®$. Predictive validity is evident when scores on a test are significantly related to one or more indices of job success. Disparate impact is absent when the relationship of test scores to performance indices is not a function of a demographic variable (e.g., age).

Behavioral trait data and job success criteria were examined for 218 drivers of Fleetline, Inc.

In the present investigation, the predictive validity of the PDP$_®$ behavioral traits was investigated by simulating PDP's method for recommending applicants—establishing an envelope for success (based on profiles of high job performers) and identifying candidates who fall within those envelopes on all variables. These recommendations were compared to multiple indices of job success. The Model Profile with the Job Dynamics Analysis report can be found in Appendix A.

The results indicated that the behavioral traits were valid predictors of three criteria: average miles driven per day, tenure with Fleetline, and organizational turnover. These results apply whether all primary behavioral traits are used for prediction, only the core traits, or only the energy traits. Thus, the ProScan$_®$ and JobScan$_®$ measures are valid predictors of job success in this context.

Disparate impact analyses revealed little or no evidence of disparate impact due to age.

Sufficient data were not available to test for disparate impact for other demographic variables. Thus, the ProScan$_®$ and JobScan$_®$ modules are fair for applicants regardless of age.

In sum, the analyses provided in this report support the use of the PDP ProScan$_®$ and JobScan$_®$ as predictors of job success.

Overview

The purpose of this investigation was to provide an independent evaluation of the validity of the PDP ProScan$_®$ and JobScan$_®$ for predicting job success. There are a variety of uses for the ProScan$_®$ and JobScan$_®$ measures; one is their potential for reviewing job candidate qualifications and making hiring recommendations based on their score profiles. In order for both PDP$_®$ and its franchisees to have complete confidence in the quality of these recommendations, it is valuable to have a third party conduct an empirically-based evaluation of the predictive validity of the testing procedure.

In the fall of 1992, PDP$_®$ arranged for the Center for Applied Psychology at the University of Colorado at Denver to direct and conduct a validation study of the PDP$_®$ testing system. Subsequently, a PDP$_®$ client (Fleetline, Inc.) was identified which could provide indices of job success which could be compared to incumbents' scores on the behavioral traits assessed by the ProScan$_®$ and JobScan$_®$ modules. A validation design was created by the Center which included the following characteristics:

Criterion-related validity—Behavioral trait scores could be directly compared to performance indices, and a criterion-related validity coefficient could be calculated.

Multiple, relevant criteria—Multiple archival criteria were available, allowing the calculation of separate correlation coefficients. This enabled the investigation of whether the behavioral traits were valid for one aspect of job success but not others. The archival criteria (described below) assessed both production (e.g., miles driven per day) and organizational commitment (e.g., tenure). These "hard criteria" (available from personnel files) are generally more reliable than subjective ratings, (Rothe, 1978) and were judged to be relevant to job success by the client.

Analyses simulate decision-making process—The behavioral traits can be scored and used in a number of ways. When used to recommend hires, the most frequent process used by PDP$_®$ is to test first a group of high performers and to establish a model profile on that sample. For each trait, an "envelope" is established by setting comfort intervals about the median score for

the trait. Applicants who score outside the envelope on any trait are not recommended for hire. The analyses performed in this study model this procedure.

Cross-Validation—An important quality of any good validation study is an attempt to cross-validate, i.e., to apply recommendations drawn from one sample to a new sample. In this instance, there was only one available sample. Accordingly, two separate random sub-samples were drawn (each of sufficient sample size) from this single sample. The first was used to identify the envelopes for behavioral traits, while the second was used to apply the envelopes for decision-making. This use of a "hold-out" sample is a commonly-used alternative to true cross-validation.

Details of the design and results are given below.

Method

Sample

Data were available for 218 drivers engaged by Fleetline, Inc. 207 drivers were male, 11 were female. 120 were owner/operators, while 98 were fleet drivers.

Criterion Variables

All criterion variables were collected or recorded by Fleetline during the fall of 1992. Data were available on the following criterion variables:

- Days worked in 1992 (for drivers still with Fleetline)

- Average Miles per day in 1992 (for drivers still with Fleetline)

- Turnover (scored 1 if driver left, 0 if still with Fleetline)

- Tenure (time with Fleetline in years)

- Number of Incidents (complaints, personnel incidents during tenure with Fleetline)

- Whether or not drivers were fleet drivers (scored 1 if they were Fleetline drivers, 0 if owner/operators).

Data were also recorded for the number of accidents by each driver. However, the distribution for this variable was heavily skewed and non-normal. As a result, the accidents variable was not included in the analyses since any obtained results would have been highly distorted due to the properties of the distribution.

Table 1 shows the correlations among all criterion variables. Means and standard deviations for criteria are also displayed in the lower two lines of the table.

Correlations among criterion variables are generally low, which is advantageous since the lower correlations suggest that the various criteria tap different aspects of the job performance construct domain (Campbell, 1990). The means and standard deviations for the criterion variables are appropriate for archival data, though the low means with larger standard deviations for the Tenure and Incidents variables suggest that these variables may have some range restriction problems.

Table 1. Correlations among Criterion Variables						
	Days.	Mileage	Turnover	Tenure	Incidents	Fleet/Own
Days	1.00					
Mileage	.09	1.00				
Turnover	-.65	-.03	1.00			
Tenure	.58	-.14	-.38	1.00		
Incidents	.26	.04	-.10	.30	1.00	
Fleet/Own	-.32	-.11	.41	-.31	-.18	1.00
Mean	197.6	223.5	0.42	1.58	3.90	0.45
Standard Deviation	89.3	100.3	0.49	1.71	6.21	0.50

Note: Correlations greater than $\pm$ .14 are significant at the .05 level
Correlations greater than $\pm$ .18 are significant at the .01 level

Predictor Variables

All predictor variables were measures normally measured before applicants are engaged by Fleetline.

Incumbent scores (in inches) were available for all behavioral traits. The following were used in the present study: Dominance, Extroversion, Pace, Conformity, Logic, Thrust, Allegiance, Ste-nacity, and Kinetic Energy.

Means and inter-correlations for predictor variables are shown in Table 2. Table 2 shows that all behavioral trait scores are highly correlated with each other. Thus, any predictions made on a composite or combination of trait scores would have a very reliable basis. At the same time, the high inter-correlations make it difficult to suggest that any one trait is more critical than another in predicting job success. The means and standard deviations for the behavioral traits are appropriate for use as predictor variables.

Table 2. Correlations among Major Predictor Variables

	Dom.	Ext.	Pac.	Con.	Log.	Thr.	All.	Stn.	Kin.
Dominance	1.00								
Extroversion	.57	1.00							
Pace	.60	.86	1.00						
Conformity	.85	.80	.82	1.00					
Logic	.83	.81	.83	.96	1.00				
Thrust	.62	.92	.94	.85	.91	1.00			
Allegiance	.73	.79	.75	.92	.97	.88	1.00		
Ste-nacity	.76	.88	.90	.91	.95	.94	.90	1.00	
Kinetic Energy	.54	.46	.47	.63	.65	.52	.64	.57	1.00
Mean	388.2	436.0	456.3	404.6	411.6	443.3	391.4	468.3	357.4
Standard Deviation	142.0	127.2	120.9	106.7	134.3	138.4	129.0	110.0	132.9

Note: Correlations greater than $\pm$ .18 are significant at the .01 level

Procedure

In order to investigate the predictive validity of the PDP$_{®}$ behavioral traits, a procedure was established to model the method by which scores are actually used in the selection process. The procedure was repeated for each criterion variable.

First, the mean and standard deviation was computed for the criterion variable. For example, it was determined that for all drivers, the mean miles driven per day in 1992 was 223.5, and the standard deviation across drivers was 100.3.

Second, a cutoff score defining high performance on the job was set at one standard deviation above the mean. Thus, the cutoff score for high performance in miles driven was 223.5 + 100.3 = 323.8. By definition, any drivers whose actual scores exceed this cutoff have criterion values above at least 85% of the sample.

Third, a random sample of 70% of drivers were selected, and divided into two groups, those falling above and below the cutoff score. A sample was used so that a holdout group could be used for cross-validation purposes. Minimum and maximum values on each of the behavioral traits were determined for all randomly-selected drivers falling into the group above the cutoff score.

Fourth, a second random sample of 50% of the drivers were selected. Each driver's scores on all predictor variables were compared to the minimum and maximum values determined in the third step. Drivers were classified as "Recommended," unless one of their behavioral values fell outside the high performance range, in which case they were classified as "Not Recommended."

Fifth, the Hire variable (recommended vs. not recommended) values were regressed on each of the criterion variables. Separate analyses were done for decisions based on all nine predictor variables (i.e., a driver could be classified as "Not Recommended" if their scores fell outside the high performance range on any trait), the five core traits, and the four energy traits.

Note that in an effort to employ a cross-validation design, there was some overlap between the two samples. However, most drivers were not in both samples. The degree of overlap could have been eliminated by drawing smaller samples, but the decision was made to draw larger (and overlapping) samples in order to obtain more stable estimates of population parameters.

Finally, the possibility of disparate impact due to age was investigated by a moderated regression analysis using Age, Hire, and the interaction of Hire and Age. The interaction term was calculated as the simple product of Hire and Age. In order to determine whether disparate impact occurred, the interaction term was entered into the regression analysis with the other two variables (Age and Hire) already present in the equation. No other variables could be analyzed for adverse impact due to either incomplete records (e.g., race) or lack of variability in the sample (e.g., gender).

Results

Fleet vs. Owner/Operator Drivers

Since drivers were either fleet-based or owner/operators, an analysis was performed to determine whether criterion scores differed as a result of this distinction. T-tests were performed on each variable to determine whether criterion scores differed as a function of driver group. The results are shown in Table 3. As can be seen in the table, there were significant differences between groups on four variables. Owner operators had significantly greater tenure (M = 2.06 vs. M = .98, t = 5.10, p <.001), less turnover (M = .23 vs. M = .64, t = 6.58, p <.001), more incidents (M = 4.92 vs. M = 2.65,   t = 2.72, p <.01), and more worked more days (M = 223.72 vs. M = 165.63, t = 5.04, p <.001) than did fleet drivers. There were no significant differences between groups on accidents or mileage).

Because of these significant differences, validity analyses were conducted both with the Hire variable by itself as a predictor and with Fleet vs. Owner/Operator as a covariate. Both analyses showed similar patterns of results (with respect to the validity of the behavioral traits). For ease of presentation, the covariate analyses are not presented.

Table 3. Comparison of Fleet Drivers vs. Owners/Operators						
	Owner/Operator		Fleet			
Criterion	M	Std.	M	Std.	t	Sig. (t)
Tenure	2.06	1.91	.98	1.11	5.10	p < .001
Turnover	.23	.43	.64	.48	6.58	p < .001
Mileage	233.83	98.44	210.80	101.69	1.69	n.s.
Days	223.72	78.02	165.63	92.26	5.04	p < .001
Incidents	4.92	7.05	2.65	4.73	2.72	p < .001
Accidents	1.98	4.65	1.35	4.12	1.06	n.s.

Validity for Recommendations—All Variables

The primary predictive validity results are shown in Table 4. The first column shows the criterion variable, the second shows the correlation between Hire (using all nine behavioral variables) and the criterion, while the third and fourth show the significance test on the correlation.

The results reveal that the Hire variable is a valid predictor of Mileage, Turnover, and Tenure. In other words, use of $PDP_{®}$ recommendations would have resulted in drivers who are less likely to quit, and who drive more miles per day than drivers who would not be recommended based on their $PDP_{®}$ behavioral scores. Of these criterion variables, Mileage had the strongest correlation with Hire.

Table 4. Validity of Simulated Hire Score for All Criteria

Dependent Variable	R	F	Sig. (F)
Days	.13	1.93	n.s.
Mileage	.29	10.38	$p < .002$
Turnover	.23	6.27	$p < .01$
Tenure	.21	4.87	$p < .03$
Incidents	.11	1.34	n.s.

Similar results were found using recommendations based on the core traits alone and the energy traits alone. (See Tables 5 and 6.) As shown in Table 5, using the core traits (Dominance, Extroversion, Pace, Conformity, and Logic), Hire was significantly correlated with Mileage, Turnover, and Tenure. As shown in Table 6, using the energy traits (Thrust, Allegiance, Ste-Nacity, and Kinetic energy), Hire was significantly correlated with Mileage and Turnover. In no analyses was the Hire variable correlated with days driven or number of incidents in 1992. As noted above, there were range restriction problems with the incident variable, and this could have attenuated the relationship between Hire and Incidents.

Table 5. Validity of Simulated DEPCL Scores for All Criteria

Dependent Variable	R	F	Sig. (F)
Days	.14	2.36	n.s.
Mileage	.24	6.51	$p < .02$
Turnover	.23	6.27	$p < .02$
Tenure	.34	4.52	$p < .04$
Incidents	.14	.39	n.s.

Table 6. Validity of Simulated TASK Scores for All Criteria

Dependent Variable	R	F	Sig. (F)
Days	.09	0.97	n.s.
Mileage	.22	5.73	p < .02
Turnover	.23	6.27	p < .01
Tenure	.12	1.66	n.s.
Incidents	.13	1.81	n.s.

Disparate Impact Analyses

The possibility of disparate impact due to age was investigated using moderated hierarchical regression. For each criterion variable, the interaction of Age and Hire was entered into an equation already containing main effects for Age and Hire. A nonsignificant increase in R^2 due to the interaction term would indicate the absence of disparate impact, while a significant increase would indicate the possibility of disparate impact.

The results of the disparate impact analyses are shown in Table 7. As can be shown in the table, there is no evidence of disparate impact by the behavioral traits for four of the five criterion variables—Days, Mileage, Turnover, and Incidents. This is evident from the non-significant increases in R^2 when the interaction terms (e.g., Days*Hire) are added to the regression equation.

For the fifth variable, Tenure, the possibility of disparate impact is suggested by the significant increase in R^2 when the interaction term is added to the equation. A significant interaction term generally means that the relationship between two variables (e.g., Tenure and Hire) depends on, or is contingent upon, the level of the third variable (e.g., age). That is, the behavioral traits might be more valid for applicants of one age than another.

However, in this particular study, the interaction term is actually a suppressor variable. Suppressor variables can be identified when: a) their presence in a regression equation increases the amount of variance accounted for in the criterion; b) other variables in the equation are positively

correlated with the criterion; but c) have negative regression weights when the suppressor variable is in the equation (Cohen & Cohen, 1983). In this case, both Age and Hire were positively correlated with Tenure but received negative weights in a regression equation containing the interaction.

Suppressor variables are likely whenever multi-colinearity (high intercorrelations among variables) exists. In this case, the correlation between Hire and the interaction term was .94. Suppressor variables increase the variance accounted for in the dependent variable not because they are highly correlated with it, but because they account for—or suppress—irrelevant variance in the independent variable.

Suppressor variables make the interpretation of regression results very difficult to interpret, more so when the suppressor is an interaction term. In this instance, while the significant increase for the interaction term regressed on Tenure suggests that disparate impact is possible, the fact that the interaction term is a suppressor makes this conclusion more problematic.

Accordingly, the possibility of disparate impact on Tenure was also investigated by splitting the sample into incumbents above and below the age of 40, and determining whether scores on the Hire variable differed by group. No differences were found. This, coupled with no evidence of disparate impact on other dependent variables suggests that the significant interaction for Tenure represents a statistical artifact (due to multi-colinearity and the suppressor variable) than due to disparate impact.

Table 7. Analysis of Disparate Impact with Simulated Hire Scores

Dependent Variable	Overall R	R^2	DR^2	Sig. (DR^2)
Days				
Age	.09	.01	.01	n.s.
Hire	.16	.03	.02	n.s.
Age × Hire	.18	.03	.00	n.s.
Mileage				
Age	.01	.00	.00	n.s.
Hire	.29	.09	.09	p < .001
Age × Hire	.33	.11	.02	n.s.
Turnover				
Age	.07	.01	.01	n.s.
Hire	.24	.06	.05	p < .02
Age × Hire	.24	.06	.00	n.s.
Tenure				
Age	.20	.04	.04	p < .02
Hire	.28	.08	.04	p < .03
Age × Hire	.35	.12	.04	p < .02
Incidents				
Age	.18	.03	.03	n.s.
Hire	.22	.05	.02	n.s.
Age × Hire	.25	.06	.01	n.s.

Discussion

Summary

A series of analyses were performed to investigate the validity and disparate impact of the PDP ProScan$_®$ and JobScan$_®$. A variable called Hire was created to simulate PDP$_®$ hiring recommendations. This variable was regressed onto five different variables to investigate its validity for predicting job success. A moderated hierarchical regression was also conducted to investigate the potential for disparate impact.

As a result of these analyses, it is to be concluded that:

The PDP ProScan$_®$ and JobScan$_®$ are valid predictors of job success at Fleetline, Inc.

When PDP's testing procedure is used to establish an envelope on each behavioral trait, and candidates are recommended on the basis of those envelopes, the recommendations bear a substantive and significant relationship to average miles driven per day, tenure with Fleetline, and organizational turnover. These results apply whether all primary behavioral traits are used for prediction, only the core traits, or only the energy traits.

Notably, the size of the validity coefficients are well within the range normally found for other behavioral assessment instruments (Schmitt, Gooding, Noe, & Kirsch, 1984). **There is little or no evidence of disparate impact due to age.**

For four criterion variables, analyses showed no evidence at all of disparate impact due to age. Thus, the ProScan$_®$ and JobScan$_®$ are fair for applicants regardless of age. For Tenure, the results indicate the possibility of disparate impact, but these results may be just as likely to be due to a statistical artifact. More research would be necessary to confirm that disparate impact actually occurred.

Recommendations

Given the results of this investigation, the following recommendations are offered:

1. *The PDP ProScan$_®$ and JobScan$_®$ may be used as predictors of job performance.* However,

2. *The predictive validity analyses should be repeated for different types of jobs and in additional organizations.* As additional studies are conducted, results can be aggregated, allowing

PDP$_®$ to determine an overall validity coefficient. This aggregated value would contain less sampling error than the validity coefficient, would be a more accurate estimate of the population parameter, and would be the best estimate of the validity of the behavioral traits in new locations.

3. *Additional criterion measures should be examined.* The criteria in this study were strongly oriented towards personnel indices—attendance, turnover, etc. Mileage was the only pure **performance** indicator. In future studies, other performance-based measures, such as performance evaluations should be used.

   When measures of infrequent events (such as accidents) are desired, care should be taken to collect data over a sufficient time period (i.e., several years) so that the measured variable is normally distributed. Alternatively, other types of measures may be collected. For example, performance ratings by peers or supervisors may be a legitimate measure of the accident construct.

4. *Additional studies of disparate impact should be conducted to confirm.* These studies would be useful for confirming that the significant interaction for age and test scores on tenure was a statistical artifact. Additional studies may also reveal that the test is fair across additional subgroups as well.

References

Campbell, J.P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In M.D. Dunnette & L.M. Hough (Eds.), <u>Handbook of Industrial & Organizational Psychology</u> (2nd ed., Vol. 1). Palo Alto, CA: Consulting Psychologists Press.

Cohen, J., & Cohen, P. (1983). <u>Applied multiple regression/correlation for the behavioral sciences</u> (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Rothe, H.F. (1978). Output rates among industrial employees. <u>Journal of Applied Psychology</u>, <u>63</u>, 40 – 46.

Schmitt, N., Gooding, R.Z., Noe, R.A., & Kirsch, M. (1984). Meta-analysis of validity studies published between 1964 and 1982 and the investigation of study characteristics. <u>Personnel Psychology</u>, <u>37</u>, 407 – 422.

Appendix A

This JobScan Report Is Specially Prepared for:

Miles, Turnover, Tenure

(Survey date: 01/19/11 | Generated on 01/19/11)

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0001-001.20

Job Model Basic

Based upon the job analysis input(s), the **BASIC/NATURAL PROFILE** describes a person who is:
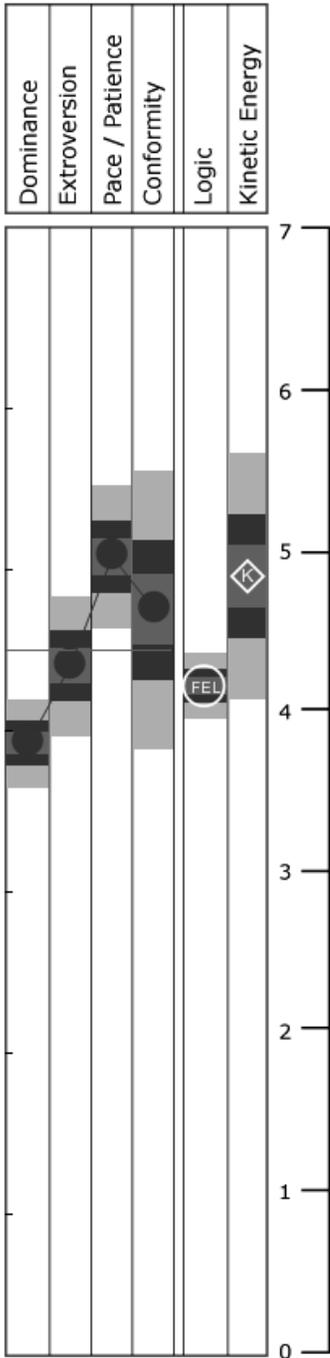
Dependable, steady and efficient. Dedicated to respected programs and people. Sincerely cautious and conscientious, wanting things done well.

Able to do repetitive tasks, usually likes a consistent routine. Makes every move count. Can be uncomfortable if placed under too much unjustified pressure or confrontational environments.

Friendly and well accepted by others. A cooperative and peaceful approach is preferred. Does not want to be taken advantage of.

Job Model profile is based on high performers for the three criteria:

- Miles driven
- Turnover
- Tenure

This Job Model profile is specific only to the Fleetline Driver Position as determined through the Validation Study.

Availability of this Job Model is made for information only.

Usage of this Job Model is not advised for other positions with Fleetline as well as for other organizations, since model profiles will vary from position to position and from organization to organization.

Job Model Basic
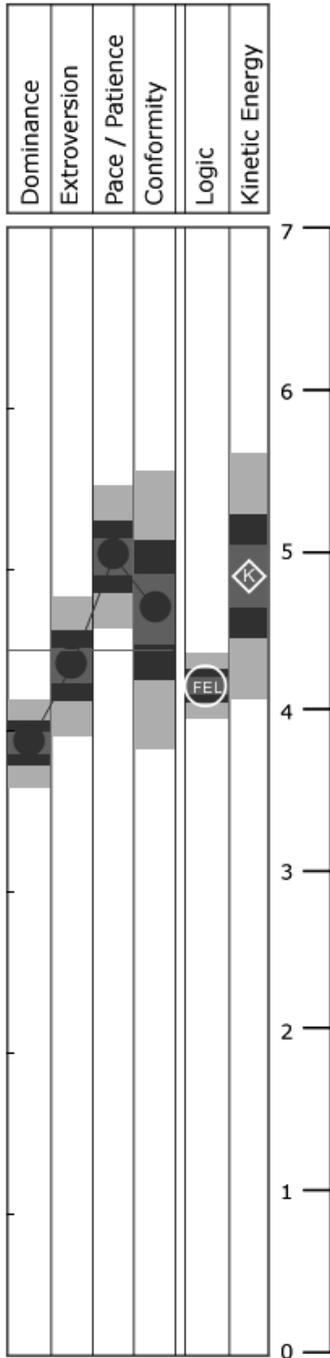
The **PACE** trait, which is predominant, can be described as being in harmony with your environment, patient, steady, warm and cooperative.

The **EXTROVERSION** trait describes a participative, poised, friendly, sincere, congenial and genuine person who can enjoy communicating with others when necessary, but also enjoys private time.

The **CONFORMITY** trait describes a careful, orderly and open-minded person, with a respect for structure. Can either delegate the details or go ahead and complete the project with accuracy and care.

The **DOMINANCE** trait suggests a supportive, collaborative, modest and gentle disposition. Often places a good deal of importance on security and prefer to work with leadership that has a strong sense of direction and purpose.

Job Model Basic

THE POSITION NEEDS THESE UNIQUE TRAIT PAIRS:
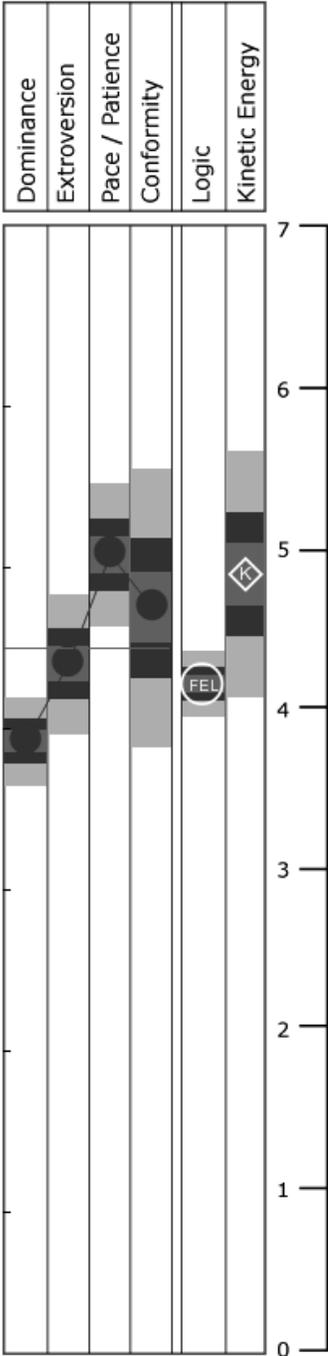
PERSUASIVE/SELLER

Sells ideas and uses persuasion when accomplishing things through people (Extroversion over Dominance).

DEPENDABLE/PRODUCTIVE

A cooperative disposition. Moves with justifiable pace. Emphasis on steady production flow (High Pace over High Conformity).

CAUTIOUS/REQUIRES PROOF

A cautious show me attitude. Takes role of devil's advocate to avoid wrong actions (High Conformity over Low Extroversion).

Job Model Basic

| Dominance | Extroversion | Pace / Patience | Conformity | Logic | Kinetic Energy |
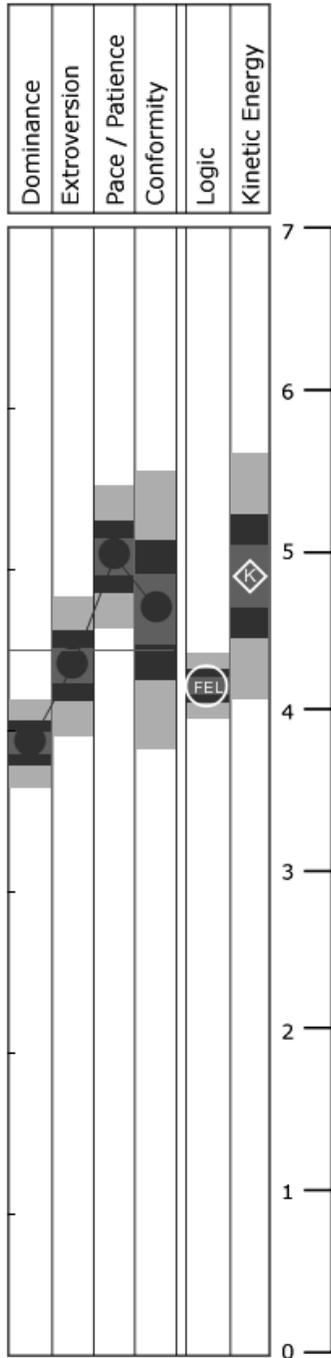
LOGIC

This person will most NATURALLY base decisions on:

FEELING

An initial, automatic conclusion based on an inner sense.

Able to make accurate decisions based on innate intuition and trust in a sense of recognized patterns to follow.

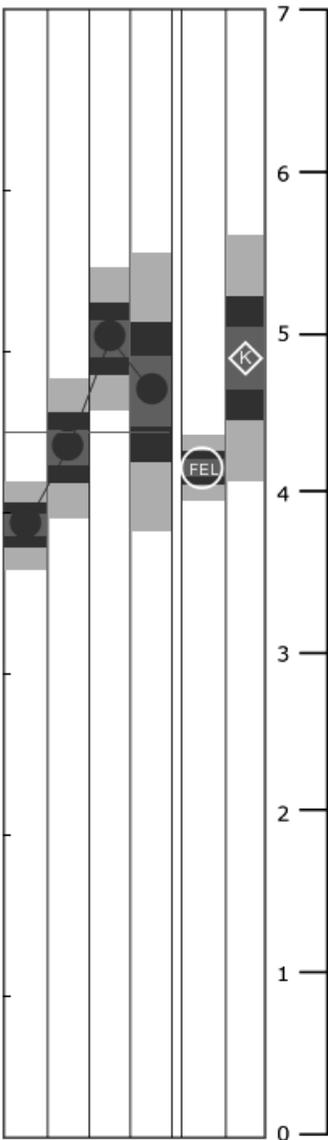Have a sense of what decision to make when in situations involving decisions about new projects and people issues where few hard facts are available.

Feeling style makes valid decisions based on the continual mental recording of information through observations, experiences, reading and listening.

Job Model Basic

ENERGY STYLES

How individuals approach tasks or accomplish goals. There are three energy styles that people use.

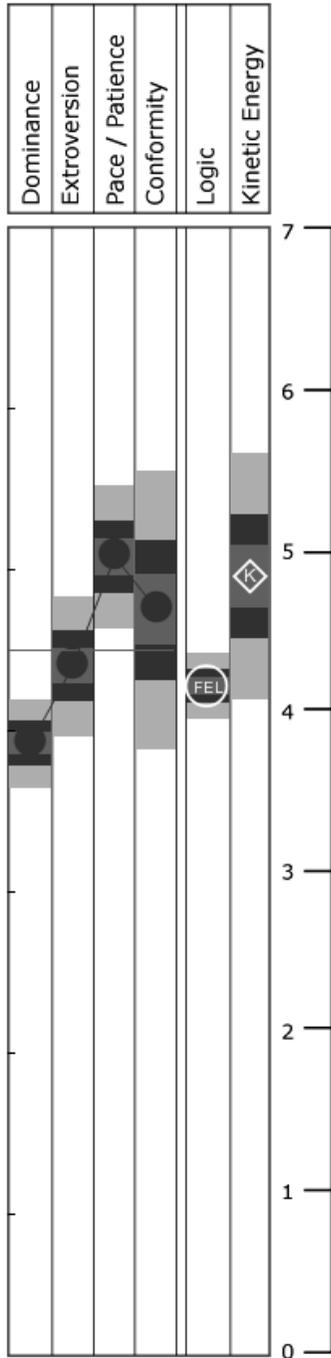**This person's NATURAL or primary style for accomplishing goals is through:**

ALLEGIANCE

A follow through, supportive style. Dedicated to completing a predetermined project. Sense of connection to a common purpose.

Job Model Basic

Dominance	Extroversion	Pace / Patience	Conformity	Logic	Kinetic Energy

KINETIC ENERGY LEVEL

**The KINETIC ENERGY LEVEL for the job needs to be in the:**

ACHIEVER ZONE (5)

Significant energy is available to successfully accomplish all tasks and goals. May perceive that there is not enough time in the day, or that priorities of life (job, mate peers, etc.) are unable to utilize the energy that may be available.

Job Model Basic

Dominance	Extroversion	Pace / Patience	Conformity	Logic	Kinetic Energy

MANAGEMENT/LEADERSHIP STYLE
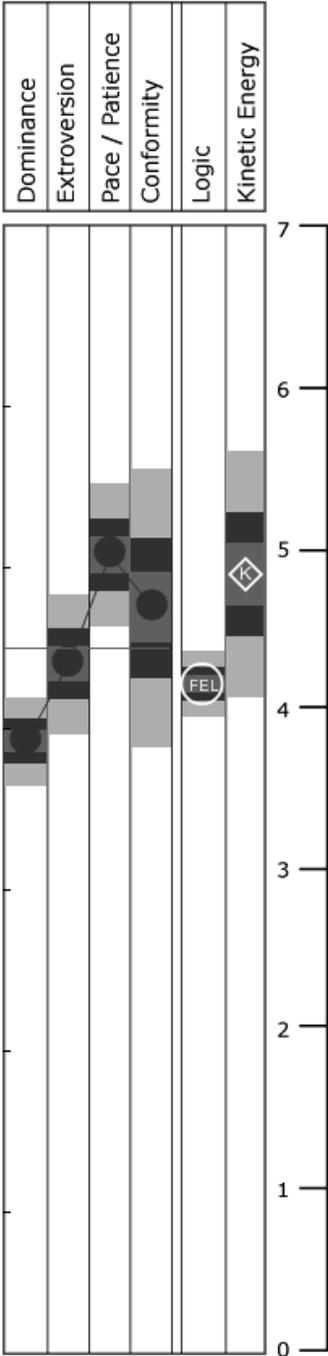
CARETAKER/PERSISTENT

Tend to accept pace and tasks set by others, adjust as needed, then push ahead. Provide stabilizing effect through constant observation and consistent behavior. Prefer to obtain positions by earning them.

COMMUNICATION STYLE

CASUAL/CAREFUL

Tend to be warm, friendly and willing to listen. When in charge of people, will use a mild persuasive style. Prefer to have harmonious and non-chaotic surroundings with time to get comfortable in a new environment.
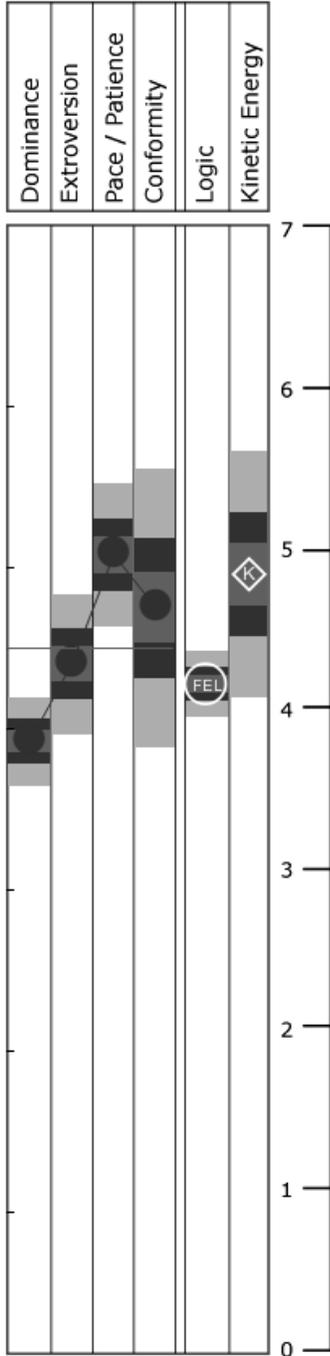
BACK-UP STYLE

The immediate supervisor should be aware of the possibility of this behavior occurring.

AVOID CONFLICT

When all else fails, may avoid conflict and give in so as to not make a scene, but have a get you later attitude. May not actually do this, but will at least feel like it.

Job Model Basic

NEGATIVE ENVIRONMENTS

Unjustified or erratic pressure, confrontation can be detrimental to this individual.

HOW TO ADVERTISE

When seeking a person with this profile, use the terms and phrases below to attract the largest percentage of job-matching applicants.

_____

___ Cooperation
___ Stability
___ Harmony
___ Security
___ Praise
___ Structure
___ Predictable Environment
___ Time to Adjust to Change
___ Appropriate Benefits
___ Forewarning of Changes
___ Happiness
___ Limited Emotional Exposure
___ Respect
___ Time to Think
___ Freedom to Think Creatively
___ Protection
___ Direction
___ Strong Leadership
___ Peace
___ Standard Operating Systems
___ Justifiable Changes
___ Conservative/Sound Actions
___ Accuracy/Exact Instructions
___ Privacy

_____

Job Model Basic

Dominance	Extroversion	Pace / Patience	Conformity	Logic	Kinetic Energy

MANAGEMENT INSIGHT
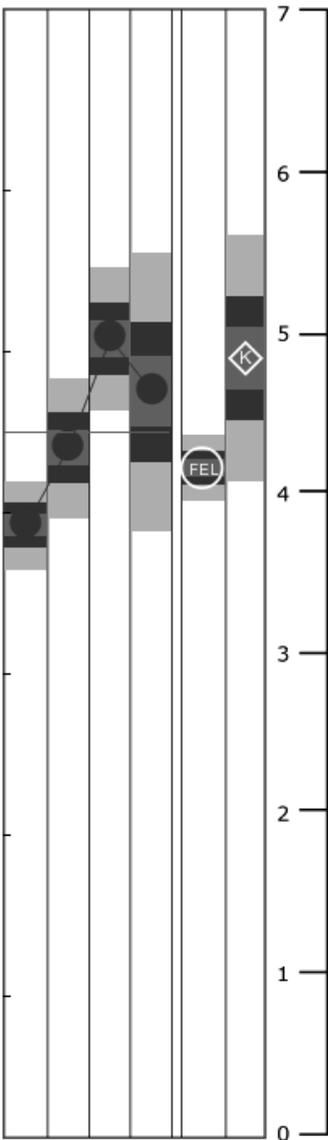
The ProScan report descriptions have emphasized the basic, natural characteristics, strengths, and positive qualities of the individual. It is important that a manager recognize these strengths and use them to develop the individual to their fullest potential.

The highest trait has a significant influence on a person's actions and ways of doing things. However, there is a possibility that this high trait can also become negative when MISUSED.

Be prepared to recognize these unproductive behaviors:
    Extreme behaviors in stressful environments/situations. (See BACK-UP STYLE)
    Negative use of strength. (Aspects of a trait used in damaging ways)
    Actions based on a faulty value system. (Dishonest, unethical, irresponsible ways)

It is helpful for managers to learn how to minimize unacceptable responses and actions through effective communication. **Unless the person with a high trait of PACE has learned to avoid reacting to situation in unproductive ways, <u>the following responses might be observed at times of pressure:</u>**

Defer to authority for direction and protection.

Find strength and comfort in numbers and organized groups.

Wait for external pressures to climb organizationally or socially.

Desire a strong person to provide consistency, stability and frequent assurance.

Cautious starters with minimum outward emotion.

Insist on knowing expectations before a project is begun.

Expect routine and predictable environments; therefore, exhibit reluctance to change.

Count on being treated fairly by everyone.

Strong need for a casual, informal environment and resist what they consider to be pretentious surroundings.

Avoid confrontation and might 'go along to get along.'
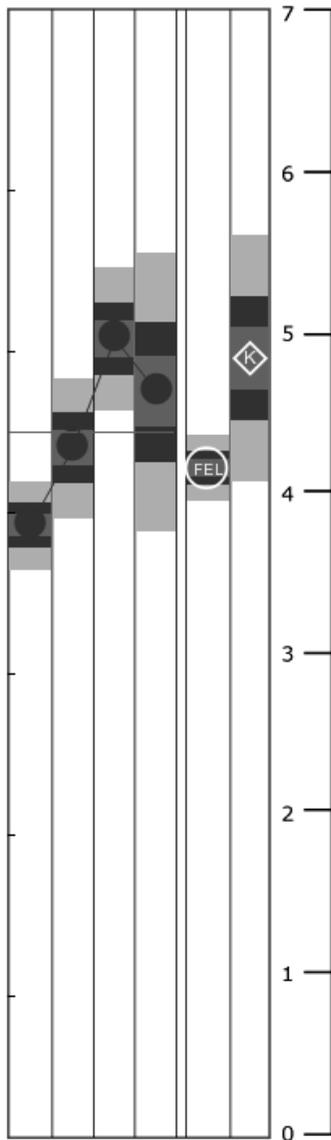
Find it difficult to assert rights.

Remember the particulars of injustices and often bring them up later.

PDPworks
Professional DynaMetric Programs

Job Model Basic

Dominance	Extroversion	Pace / Patience	Conformity	Logic	Kinetic Energy

A separate consideration for this individual is a probable willingness to let others take the lead, letting them make the majority, if not all, of the decisions. Desires a non-confrontational, peaceful coexistence.

IN CONCLUSION: If you need assistance with this Job Model, please contact your PDP Representative. Refer to the last page of this report for contact information.

Curriculum Vitae

Kurt Kraiger, Ph.D.   **December, 1992**

Education

Institution	Date	Degree	Major
University of Cincinnati	1975-1979	B.A.	Psychology
The Ohio State University	1979-1982	M.A.	Psychology
The Ohio State University	1982-1983	Ph.D.	Psychology

Professional Experience

1992 – Present   Director, Center for Applied Psychology, University of Colorado at Denver

1992 – Present   Senior Research Associate, International Learning Systems, Golden, CO

1991 – Present   Associate Professor of Psychology, University of Colorado at Denver

1983 – 1991   Assistant Professor of Psychology, University of Colorado at Denver

1989 – 1990   Visiting Assistant Professor of Organizational Behavior, University of California – Berkeley

1989 – 1990   Senior Consultant, Human Resources Solutions, Orinda CA

1981 – 1983   Teaching Assistant, Department of Psychology, The Ohio State University

1980 – 1983   Personnel Analyst, City of Columbus, OH

Professional Service

Editor, The Industrial-Organizational Psychologist (1992)

Editor, Training Research Journal (1992)

Associate Editor, The Industrial-Organizational Psychologist (1990 – 1992)

Associate Editor, Careers Division Newsletter, Academy of Management (1989 – 1990)

Reviewer (1985 – 1992):

    Journal of Applied Psychology

Personnel Psychology

Organizational Behavior & Human Decision Processes

Motivation and Emotion

Basic and Applied Social Psychology

International Journal of Applied Psychology

Division 14 Program Committee, American Psychological Association (1988 – 1989)

Division 14 Program Committee, Society for I/O Psychology (1987 – 1991)

Division 14 Program Committee, Planning Sub-Committee, Society for I/O Psychology (1988, 1991)

Division 14 Training and Education Committee, Society for I/O Psychology (1991 – 1992)

Professional Organizations

Academy of Management

American Psychological Society

Society for Industrial and Organizational Psychology