



Personality Assessment For a New Millennium

IPMAAC - Chicago

Robert Hogan, Ph.D.

Joyce Hogan, Ph.D.

Hogan Assessment Systems



Goals of Workshop

- ◆ To review the history, strengths, and shortcomings of the assessment tradition
- ◆ To define personality
- ◆ To describe personality-based job analysis
- ◆ To review some validity data

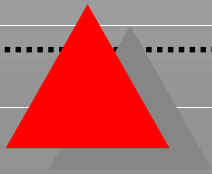
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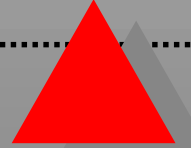
Goals of Workshop (con't)

- ◆ To review three prototypical assessment devices
 - ◆ Measures of the “bright side”
 - ◆ Measures of the “dark side”
 - ◆ Measures of the “inside”
- ◆ To review some applications



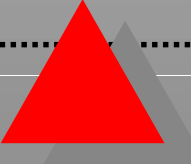


Key Events in the History of Personality Assessment

- ◆ **1930's** Simoneit develops the modern assessment center for the German Army.
 - ◆ **1930's** Murray establishes the first U.S. Assessment center at Harvard
 - ◆ **1938** Explorations in Personality published.
 - ◆ **1942** War Office selection boards established in England.
 - ◆ **1943** Murray established assessment centers for OSS (CIA).
 - ◆ **1948** Institute of Personality Assessment created at U.C. Berkeley.
 - ◆ **1954** H.G. Gough publishes the California Psychological Inventory (CPI).
 - ◆ **1958** Response set controversy erupts.
 - ◆ **1960's** Four highly visible assessment projects fail publicly.
 - ◆ **1962** Tupes & Christal introduce the Five-Factor Model (FFM).
 - ◆ **1965** Guion & Gottier conclude no validity for personality assessment.
 - ◆ **1990's** Series of meta-analyses, organized by the FFM, conclude personality assessment is valid.
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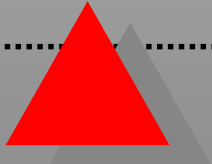


Big-Five Taxonomy

- ◆ *Emotional Stability* - remaining calm under pressure or heavy work loads
 - ◆ *Surgency* - needing social interaction; seeming leaderlike, competitive, approachable
 - ◆ *Agreeableness* - seeming perceptive, tactful, friendly
 - ◆ *Conscientiousness* - seeing planful, conforming, dependable
 - ◆ *Intellect/Openness to Experience* - seeming bright, creative; resource for ideas and problem solving
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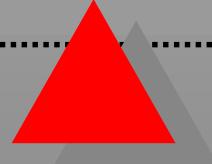


Lessons Learned from Assessment Center Tradition

- ◆ Psychopathology is unrelated to high level performance
 - ◆ Personality measurement can predict high-level performance.
 - ◆ All the valid variance from 2½ day assessment center can be captured with 1 hour of paper & pencil testing.
 - ◆ Assessment centers are used to study elite samples; can also be applied to everyday life.
 - ◆ The core of an assessment center is a good measure of normal personality (e.g., the CPI).
 - ◆ Personality theory and assessment were separated at birth.
 - ◆ The foregoing lessons are often ignored.
- 



CPI to HPI

- ◆ The CPI was the first good measure of normal personality.
 - ◆ CPI is not designed to measure traits; designed: (1) to predict effective real world performance, and (2) to predict how someone will be described by others.
 - ◆ The CPI's emphasis on validity is unique and absolutely essential.
 - ◆ The CPI can be reconfigured along the lines of the FFM.
 - ◆ The HPI is an effort to maintain the measurement goals of the CPI, based on the structure of the FFM.
- 



Links Between

Dimensions of the FFM

- ◆ Emotional Stability
- ◆ Surgency
- ◆ Agreeableness
- ◆ Conscientiousness
- ◆ Openness

Dimensions of the HPI

- ◆ Adjustment
- ◆ Ambition
- ◆ Sociability
- ◆ Likeability
- ◆ Prudence
- ◆ Intellectance
- ◆ School Success

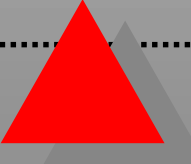
Note: The FFM is based on factor analyses of observer ratings. Self-ratings are always more complex.





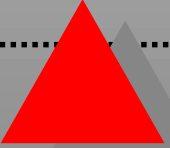
Goals of Assessment

Assessment can be used in one of three ways.

1. **To screen out potential problems**--by using off the shelf measures of reliability, service orientation, or stress tolerance without any major validation research.
 2. **To screen in the best possible candidates** in terms of their match with the requirements of the job; this normally entails significant validation research.
 3. **To give people feedback on their strengths and shortcomings** as a, for example, manager, salesperson, etc. This doesn't entail any job specific validation research, although valid construct measures are needed.
- 



Capturing Personality in Job Analysis

- ◆ Traditional job analysis methods
 - ◆ What are personal characteristics?
 - ◆ Omissions from traditional job analysis
- 

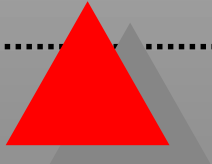


Main Points

- ◆ Expand the job analysis lexicon to include personal characteristics
 - ◆ Identify the personal characteristics employers value
 - ◆ Explore method for capturing personal characteristics in job analysis
 - ◆ Performance Improvement Characteristics (PIC)
- Continued . . .



Main Points (con't)

- Can PIC:
 - ▼ Differentiate between jobs?
 - ▼ Produce valid profile of top performers?
 - ▼ Consistencies and subtleties
 - ▼ Be used to profile unborn jobs?
- 



Personality Reports from Subject Matter Experts

Ability Statement

Personality Dimension

Ability to work as part of a team

Adjustment
Sociability
Prudence

Ability to start and complete work without close supervision

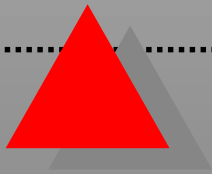
Ambition


Ability to maintain self-control, even if provoked

Adjustment
Ambition

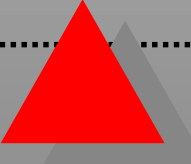
Ability to attend to details without getting careless

Prudence



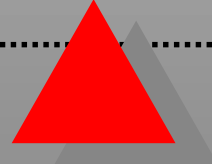


Job Analysis for Capturing Personal Characteristics

- ◆ Performance Improvement Characteristics (PIC)
 - ◆ Big-Five Translation
 - ▼ *Emotional Stability* = Adjustment
 - ▼ *Surgency* = Ambition and Sociability
 - ▼ *Agreeableness* = Likeability
 - ▼ *Conscientiousness* = Prudence
 - ▼ *Intellect/Openness* = Intellectance and School Success
- 



Performance Improvement Characteristics

- ◆ Identifies:
 - ▼ personal characteristics required for a job
 - ▼ degree to which the characteristics improve performance
 - ◆ SMEs complete 48 characteristics rating form
 - ◆ Internal Consistency - range from .76 (Adjustment) to .87 (Likeability); average .81
 - ◆ Test-Retest - vary from .60 (School Success) to .84 (Intellectance); average .72
- 



PERFORMANCE IMPROVEMENT CHARACTERISTIC

INSTRUCTIONS

Personal characteristics affect job performance as a *long distance truck driver*. Below is a list of characteristics used frequently to describe behavior. Please provide a rating of the extent to which each characteristic improves performance as a *truck driver*. Use the scale below to make your ratings.

**Does Not
Improve
Performance**
0

**Minimally
Improves
Performance**
1

**Moderately
Improves
Performance**
2

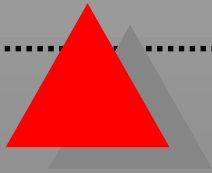
**Substantially
Improves
Performance**
3


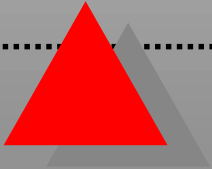
Example Item

- . Is not easily irritated by others
- . Takes initiative and gets projects moving
- . Seems to need and enjoy social interaction
- . Understands other's moods
- . Rarely deviates from standard procedures
- . Is imaginative and open-minded
- . Likes to learn new things, and enjoys education and training

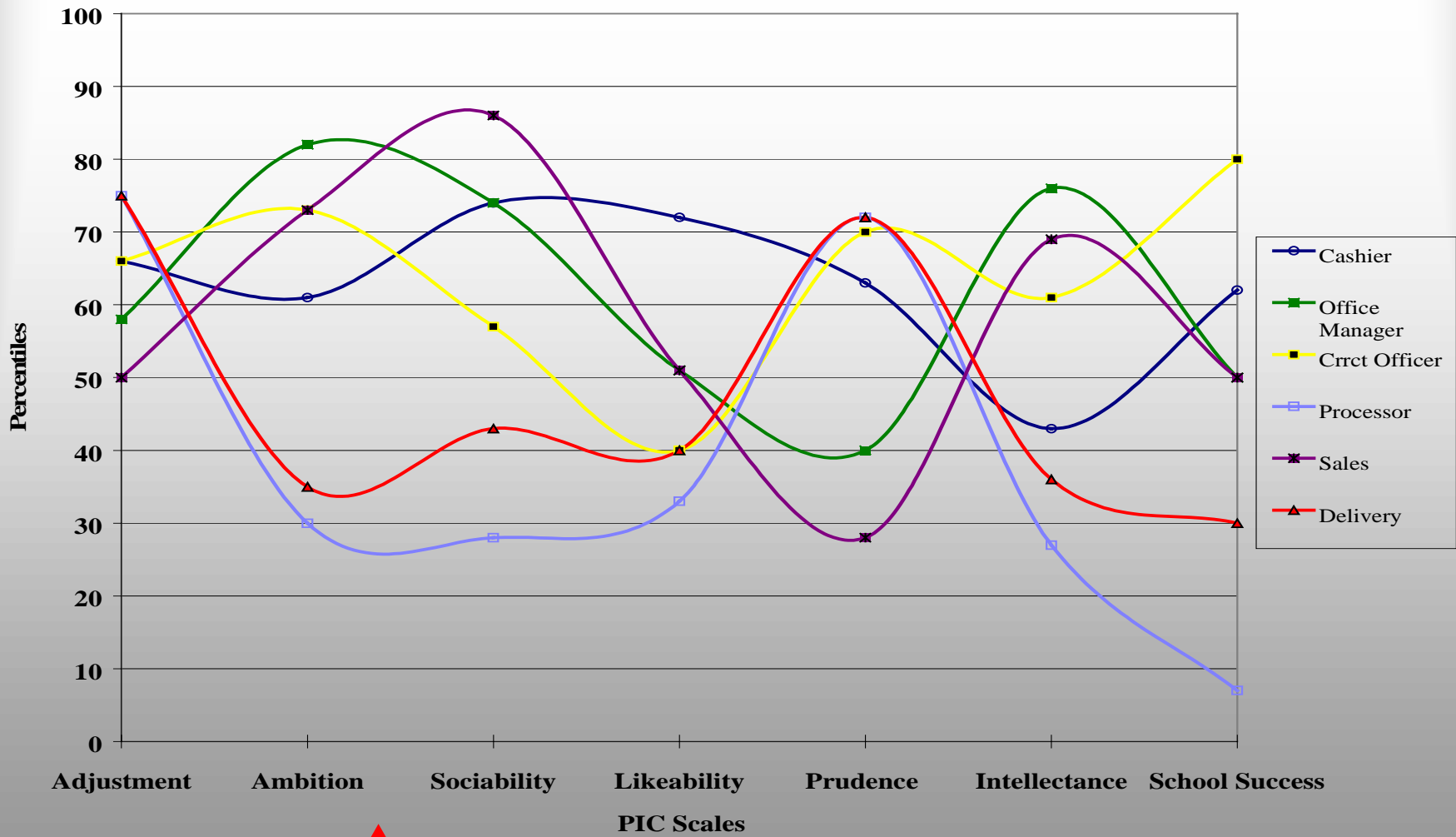
HPI Dimension

Adjustment
Ambition
Sociability
Likeability
Prudence
Intellectance
School Success

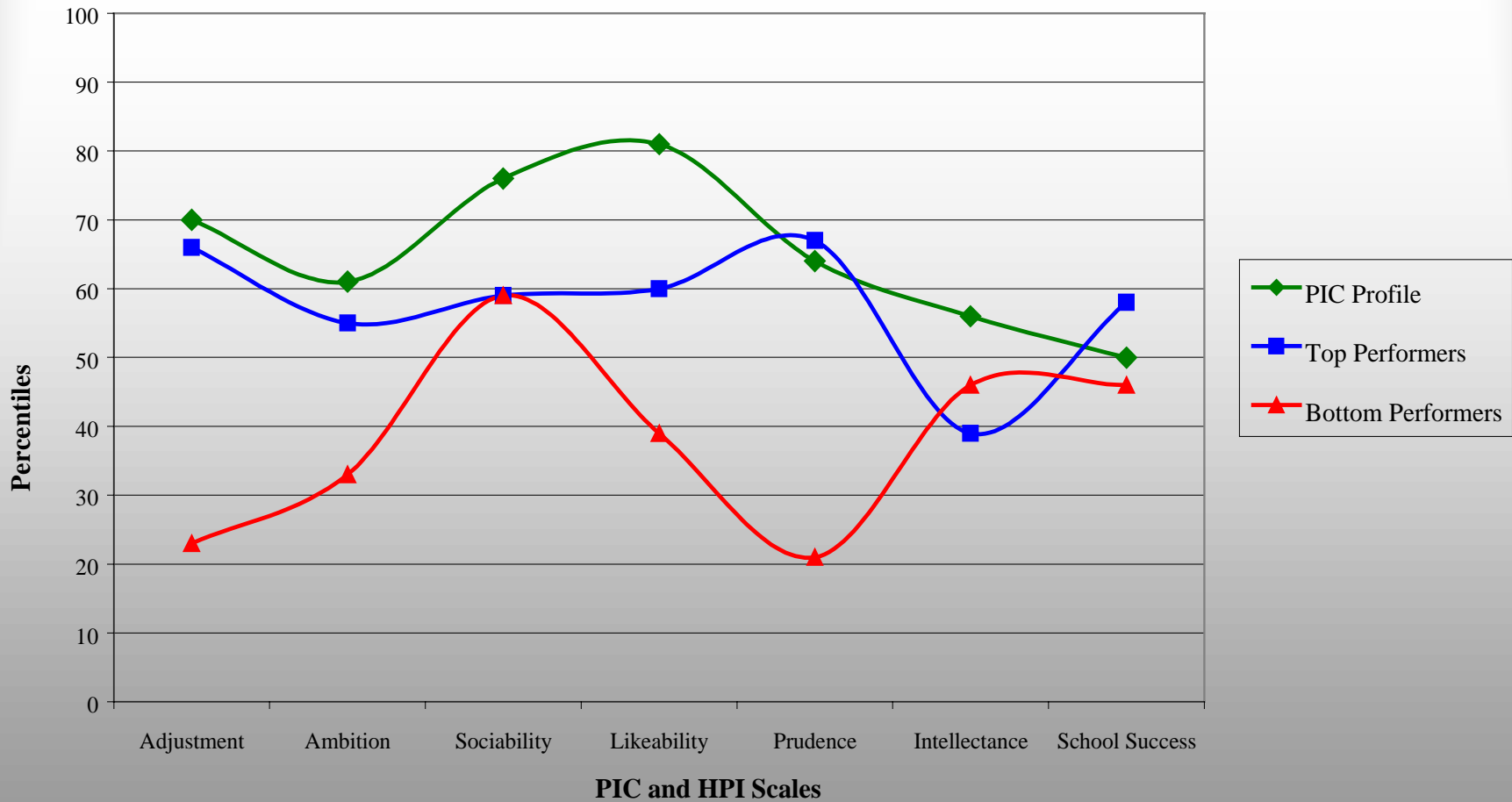


- 
- ◆ Does the PIC Differentiate Between Jobs?
 - ◆ Does the PIC Produce Valid Profiles of Top Performers?
 - ◆ Consistencies and Subtleties
 - ◆ Can the PIC Profile Unborn Jobs?
- 

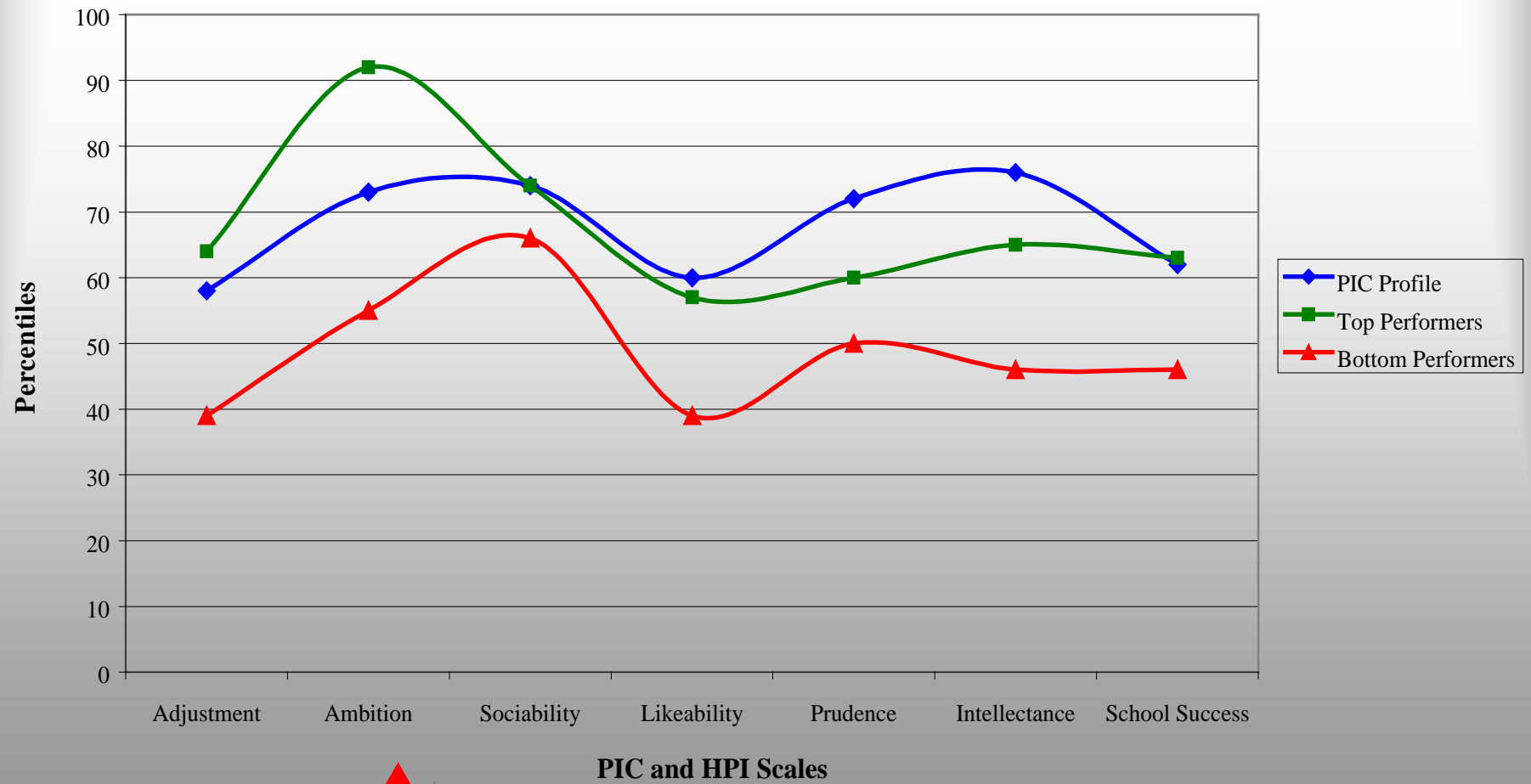
PIC Profile Comparisons



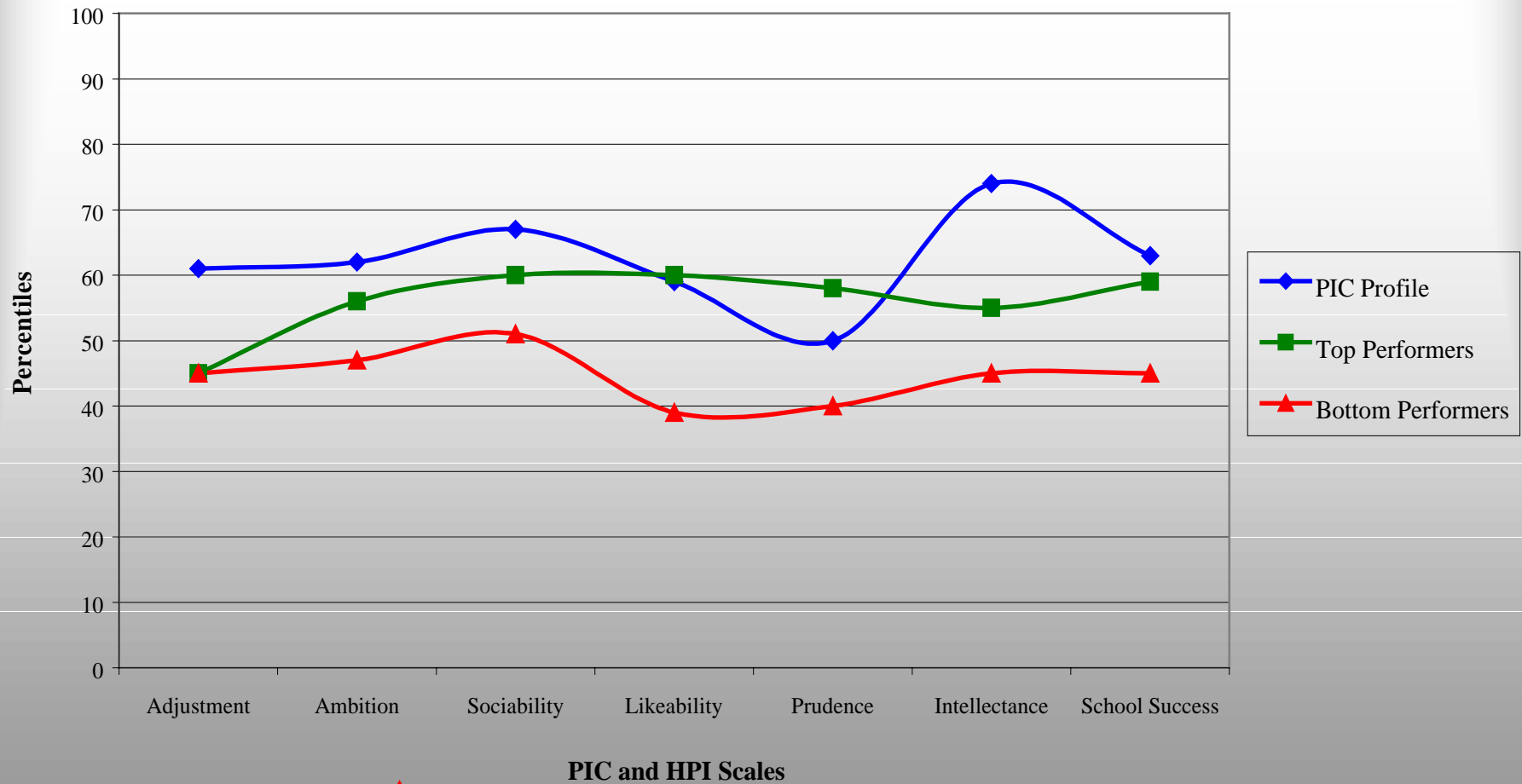
Cashier Profiles for the PIC and HPI Profiles for Top and Bottom Performers



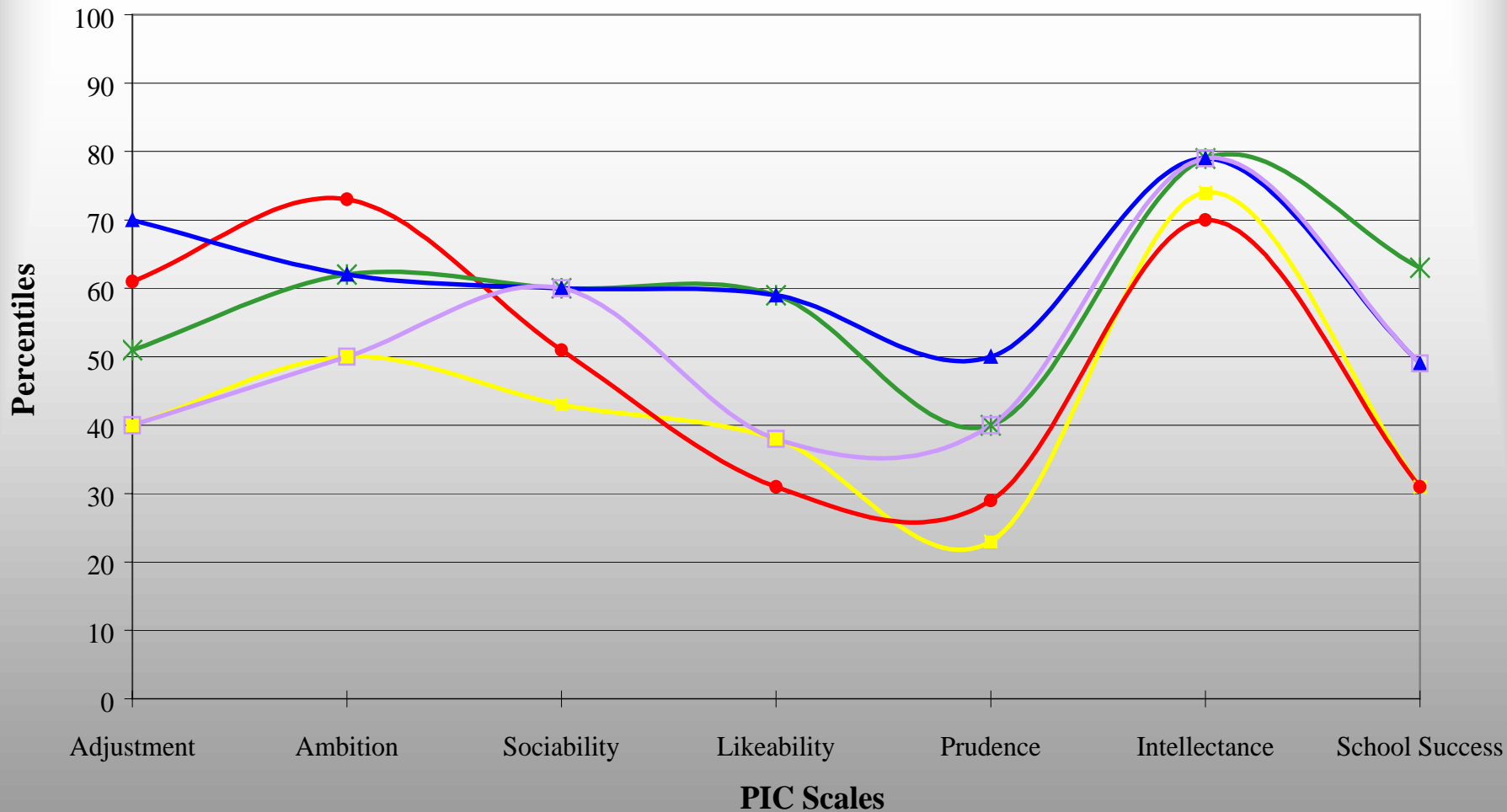
Store Manager Profiles for the PIC and HPI Profiles for Top and Bottom Performers



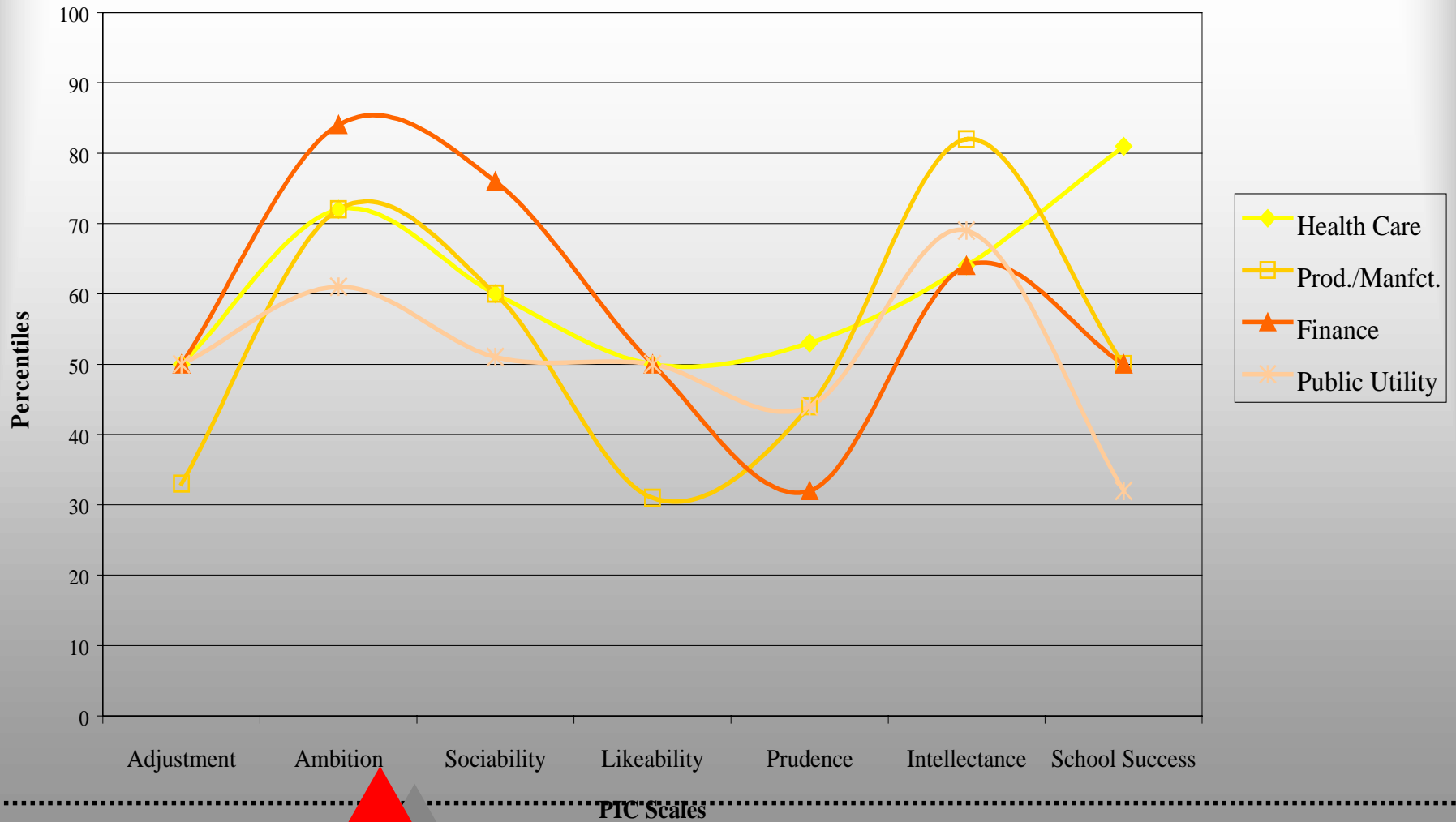
International Relocation Consultants Profiles for the PIC and HPI Profiles for Top and Bottom Performers



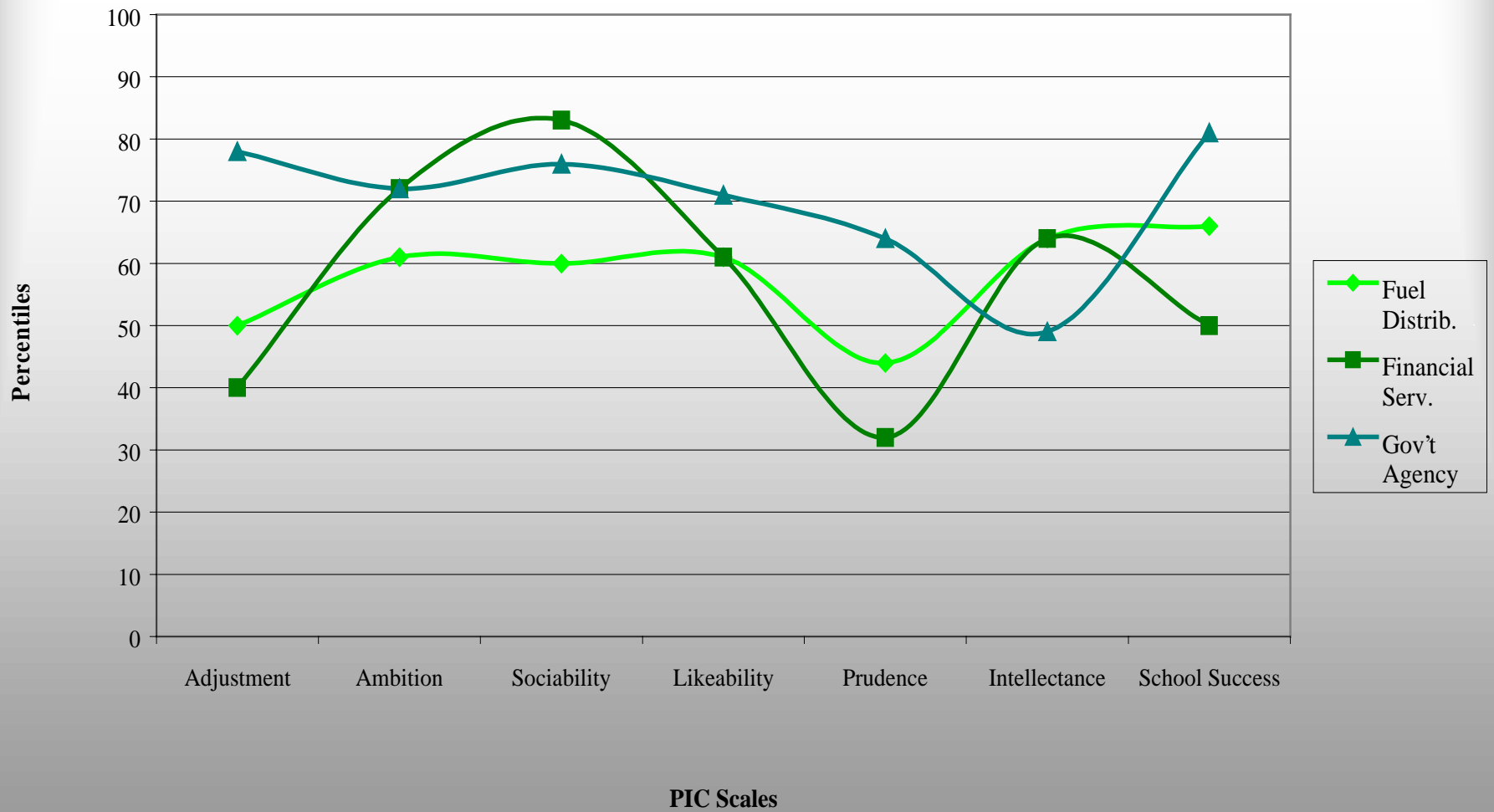
PIC Profiles for Supervisors in Different Locations



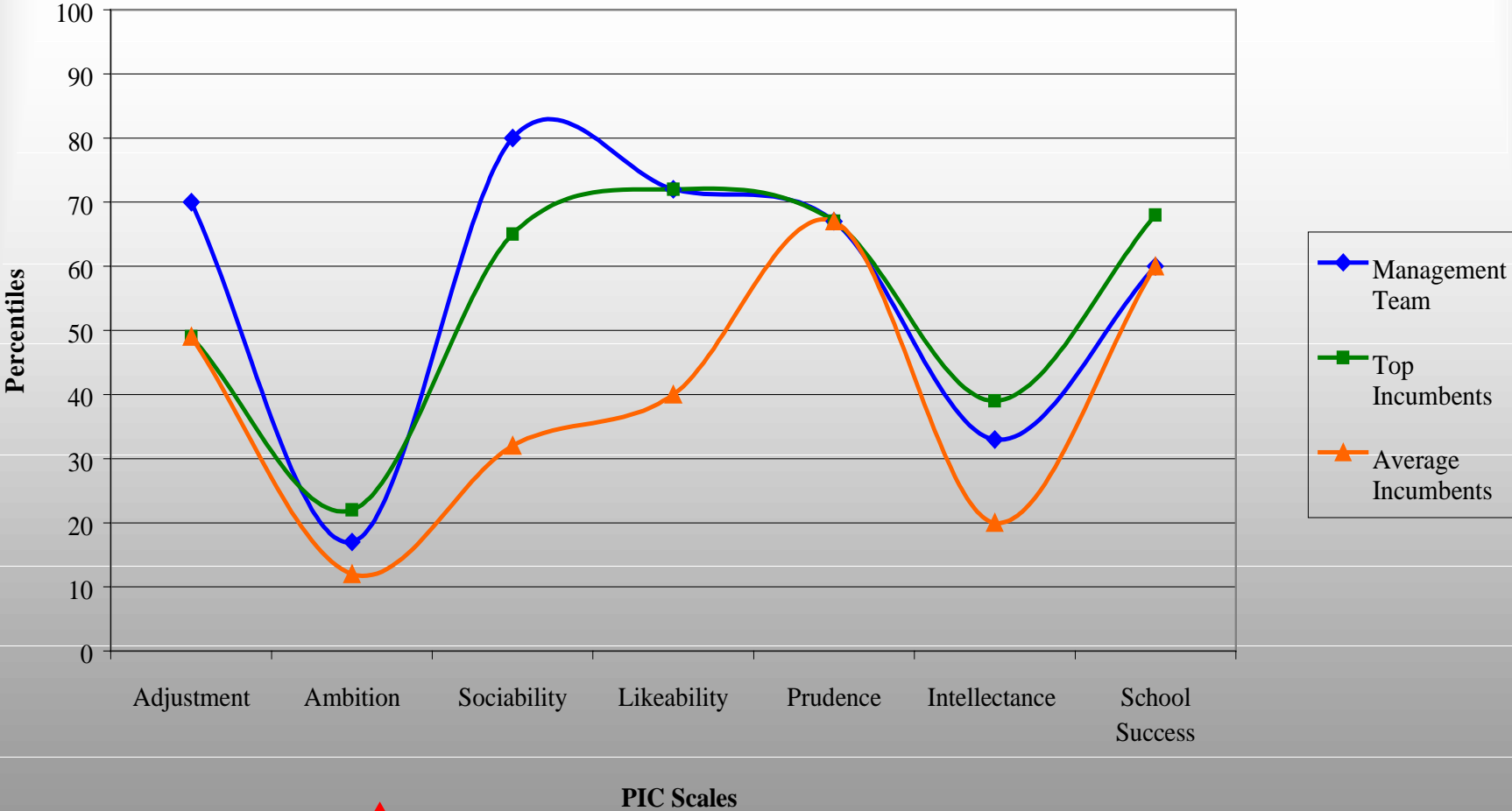
PIC Composite Profiles for Managers



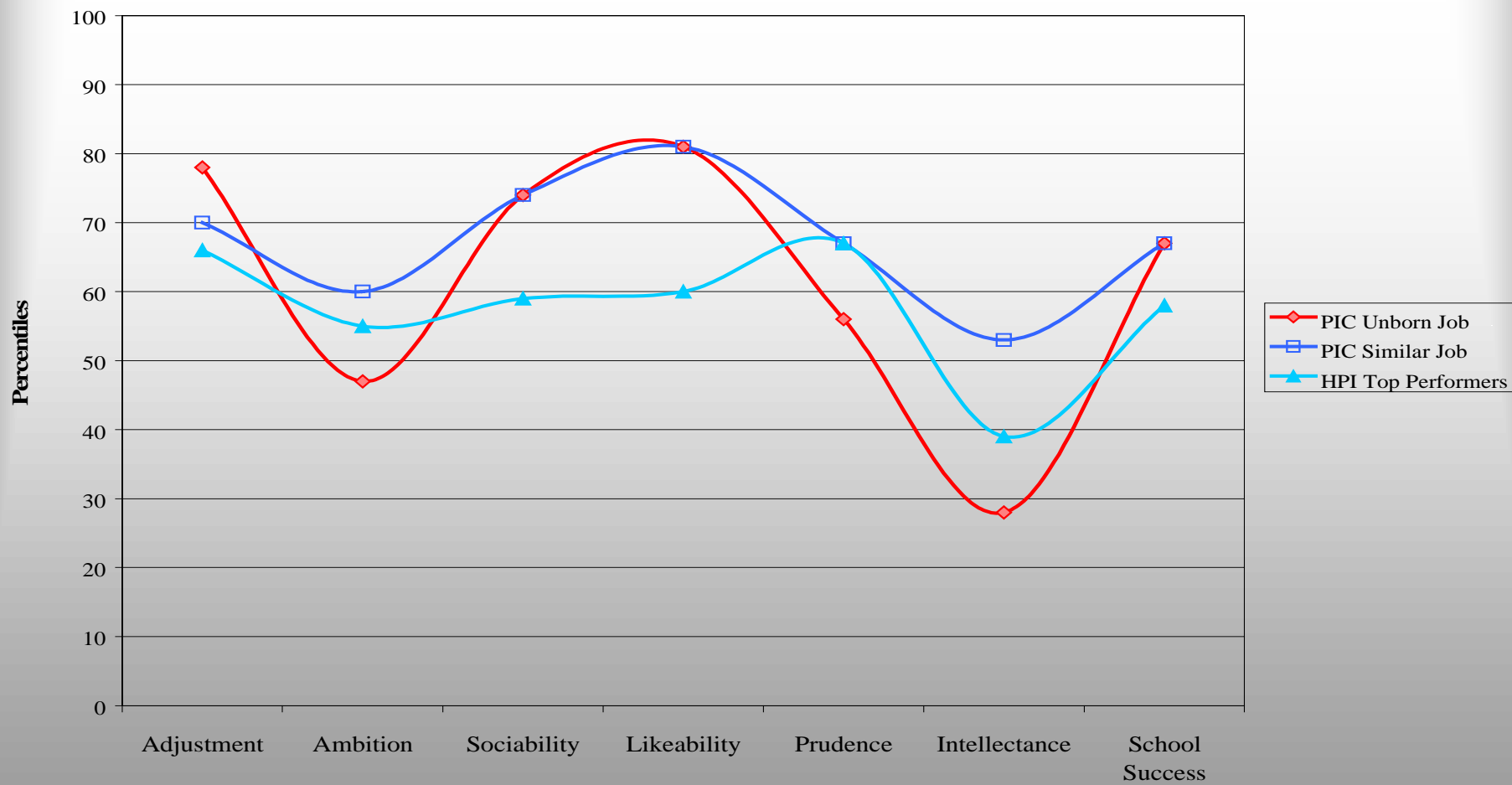
Composite PIC Profiles for CSR



Performance Improvement Characteristics Casino Dealer Composite Profiles



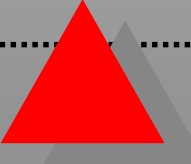
PIC Profiles for Unborn and Similar Jobs and HPI Profiles for Top Performers



PIC and HPI Scales



What Have We Learned?

- ◆ Traditional job analytic methods offer little help to assess personality-based characteristics.
 - ◆ Employers value and can identify personal characteristics.
 - ◆ PIC is promising measure that can be used in job analysis to capture personality-based job requirements.
 - ◆ PIC is useful to estimate personality-based requirements for changing or unborn jobs.
- 



Performance Construct Linkages of Five Factor Model

Emotional Stability
(Adjustment)

Supervisory Ratings

Attendance

Reported Stress

Turnover

Surgency
(Ambition/Sociability)

Leadership

Ascendance

Supervisor Rank

Initiative

Continued ...





Performance Construct Linkages of Five Factor Model (con't)

Agreeableness
(Likeability)

Job Satisfaction
Quality of Social Interaction
Team Player

Conscientiousness
(Prudence)

Honesty
Organizational Citizenship
Safety

Openness
(Intellectance/School Success)

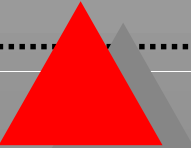
Training/Academic Performance
Achievement Orientation
Innovation





Validation Studies for Adjustment

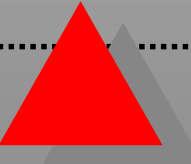
Source	Sample	Criteria	r
Hogan, Hogan, & Brinkmeyer (1993)	53 tank truck drivers	Absences	-.23
		Injuries/Medical claims	-.23
Hogan, Brinkmeyer, & Hogan (1994)	61 first-line supervisors	Staff ratings of being quick to anger & abusive	-.31
		Staff ratings of getting upset about unmet goals	-.25
		Staff ratings of acting recklessly	-.26
Landy, Jacobs, & Associates (1995)	135 entry-level patrol officers	Supervisor ratings of attitude	.24
Brinkmeyer & Hogan (1995)	59 police communications operators	Ratio of leave time to tenure	-.42
Connolly (1996)	130 managers	Bosses ratings of coping with stress	.34
Piotrowski (1996)	252 customer service representatives	Supervisor ratings of positive attitude	.27
		Supervisor ratings of stress tolerance	.29
Ryan & Ployhart (1996)	152 police officers	Supervisor ratings of stress tolerance	.56 Ψ





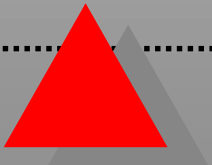
Validation Studies for Prudence

Source	Sample	Criteria	r
Hogan & Hogan (1993)	163 truck drivers	Accident rates	-.55
Brinkmeyer & Hogan (1995)	59 police communications operators	Supervisor ratings of team playing	.53
		Supervisor ratings of org'l commitment	.57
Brinkmeyer & Hogan (1996)	87 delivery contractors	Consumer ratings of condition of merchandise	.49
		Damage claims ratio	-.38
		Timeliness	.28
Piotrowski (1996)	252 customer service representatives	Supervisor ratings of follows through on commitments	.21
		Good attendance record	.21
		Supervisor ratings of punctuality in reporting to work	.22
Hogan & Stovall (1996)	85 customer service representatives	Supervisor ratings of following policy and procedures	.22





Validity for Job Performance

- ◆ HPI-based studies
 - ◆ Meta-analysis for conscientiousness
 - ◆ Meta-analysis for service-orientation
 - ◆ Meta-analysis for managerial potential
 - ◆ Incremental validity above general mental ability
- 



Hogan Personality Inventory

Assessing the Bright Side



Performance Implications of the HPI Dimensions

◆ **ADJUSTMENT**

- ▼ Low scorers are prone to stress, absenteeism, illness, and medical costs.
- ▼ High scorers are calm, self-accepting, and confident.
- ▼ IMPORTANT FOR REALISTIC JOBS

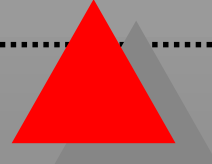
◆ **AMBITION**

- ▼ Low scorers won't take initiative.
- ▼ High scorers have the potential for leadership.
- ▼ IMPORTANT FOR ENTERPRISING JOBS

◆ **SOCIABILITY**

- ▼ Low scorers prefer to work by themselves.
- ▼ High scorers meet strangers well.
- ▼ IMPORTANT FOR SOCIAL JOBS

Continued . . .





Performance Implications (con't)

◆ **LIKEABILITY**

- ▼ Low scorers are independent and willing to criticize others.
- ▼ High scorers are cooperative team players.
- ▼ **IMPORTANT FOR SOCIAL JOBS**

◆ **PRUDENCE**

- ▼ Low scorers are impulsive, careless about rules, ignore safety procedures, and are poor organizational citizens.
- ▼ High scorers are planful, hard working, conscientious, and good organizational citizens.
- ▼ **IMPORTANT FOR REALISTIC AND CONVENTIONAL JOBS**

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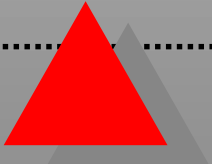


Performance Implications (con't)

◆ **INTELLECTANCE**

- ▼ Low scorers tolerate boredom and attend to details.
- ▼ High scorers are good problem solvers.
- ▼ **IMPORTANT FOR INVESTIGATIVE AND ARTISTIC JOBS**

◆ **SCHOOL SUCCESS**

- ▼ Low scorers have little desire to learn new material.
 - ▼ High scorers stay up to date on technical aspects of work.
 - ▼ **IMPORTANT FOR MOST JOBS**
- 

Validities for HPI Reliability Scale

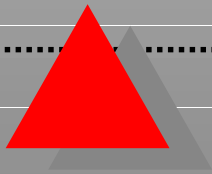
Source	Sample	Criteria	r
Hogan, Hogan, & Briggs	56 truck drivers	# commendations received	.51**
Hogan, Peterson, Hogan, & Jones (1982)	110 line-haul truck drivers	# claims filed for equipment failure	-.25**
Hogan, Arneson, Hogan, & Jones (1986)	178 habilitation therapists	# injuries sustained	-.17*
Montgomery, Butler, & McPhail (1987)	122 nuclear power plt wrkr.	Supervisor ratings (SR) punctuality	.23**
Hogan, Jacobson, & Hogan (1987)	76 serv. opr. disp.	# absences above allowable	-.49**
Salas, Hogan, Driskell, & Hoskins (1988)	135 Navy electronic stdts.	Course completion time	.16*
Muchinsky (1987)	102 cust. serv. .rep.	SR of teamwork	.24*
Muchinsky (1987)	145 telemarketers	Lead generation	.34*
Woolley (1990)	131 male students	Counterproductivity at work	-.33*
	158 female students	Counterproductivity at work	-.33*
Hogan & Hogan (1993)	163 truck drivers	Low accident rates	.48**
Hogan & Gerhold (1994)	24 certified nurses aides	SR overall performance	.52*
Hayes, Roehm, & Castellano (1994)	130 machine operators	SR effectiveness	.65**
Hogan, Brinkmeyer, & Kidwell (1994)	30 tank truck drivers	SR overall performance	.61*
Nolan, Johnson, & Pincus (1994)	320 adults	Rated severity of alcoholism	-.62**
Hogan, Hogan, & Brinkmeyer (1994)	255 truck drivers	SR overall performance	.43**
Hogan & Gerhold (1995b)	90 convn. store mgrs.	SR overall performance	.27**
Klippel (1995)	20 serv oper. coords.	Work attendance	.51*




Impact of Valid Personality- Based Selection System

1. Insurance Claims Examiners

	Average Training Score	Percent Claims Processed		
		3 Weeks	6 Weeks	9 Weeks
Non-Tested	672	40%	46%	54%
Tested	684	66%	83%	97%





Impact of Valid Personality- Based Selection System (con't)

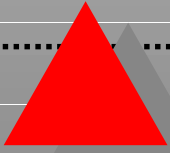
2. State Hospital Workers - Insurance Commission

	Claims Filed	Average Cost/Claim	Number of Incidents	Total
High Scorers	.8	\$710	59	\$41,890
Low Scorers	1.5	\$1037	144	\$149,328

Savings if Used at this Site = \$107,438

Savings if Used Statewide = \$1,427,390

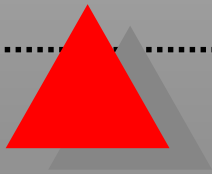
Total Savings = \$1,534,828





Actual Reports from Employers

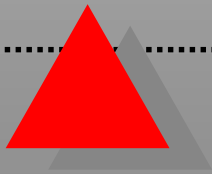
- ◆ Reduced turnover from 140% to 72% (retail)
- ◆ Increased sales per rep by 24% (financial industry; \$250,000 per rep annually)
- ◆ Accident rate reduction of 75% (truck drivers)
- ◆ Improved production from 54% to 97% (insurance claims examiners)
- ◆ Decrease in lost time injuries of 20% and the cost per claim by 57%





Shortcomings of the HPI

- ◆ The HPI is tied to the bright side of personality.
- ◆ The HPI largely reflects observer's descriptions of actors.
- ◆ The HPI tells us little about the dark side of personality.
- ◆ The HPI tells us little about what really motivates a person--IDENTITY.



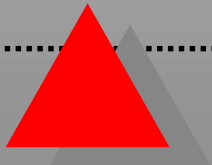


Hogan Development Survey

Assessing the Dark Side



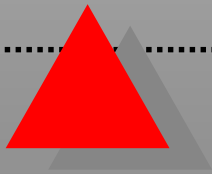
The Bright Versus Dark Side of Personality

- ◆ Bright Side - What you see in a job interview.
 - ◆ Dark Side - Dysfunctional dispositions that appear:
 - ▼ after prolonged exposure
 - ▼ during stress or heavy workloads
- 



Definitions of the Dark Side

- ◆ Freud: Repressed sex and aggression causes neuroses in everyone.
- ◆ Adler: Childhood experience makes most people defensive about something.





Taxonomy of the Dark Side

- ◆ Borderline Personality
(Emotional)
 - ◆ Paranoid Personality
(Suspicious)
 - ◆ Avoidant Personality (Self-Doubting)
 - ◆ Schizoid Personality
(Imperceptive and Obtuse)
 - ◆ Passive-Aggressive Personality (Privately Malicious)
 - ◆ Narcissistic Personality
(Pompous and Conceited)
 - ◆ Antisocial Personality
(Psychopathic)
 - ◆ Histrionic Personality (Self-Dramatizing)
 - ◆ Schizotypal Personality
(Ditsy)
 - ◆ Obsessive-Compulsive Personality (Anal)
 - ◆ Dependent Personality
(Oleaginous)
- 



Translating the Personality Disorders into the HDS

DISORDER

Borderline

Paranoid

Avoidant

Passive-Aggressive

Narcissistic

Antisocial

Histrionic

Schizotypal

Obsessive-Compulsive

Dependent

HDS SCALE

Excitable

Skeptical

Cautious

Leisurely

Bold

Mischievous

Colorful

Imaginative

Diligent

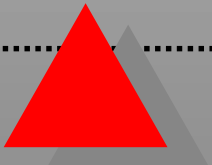
Dutiful





Factor Structure of the HDS

Scale	I	II	III
Excitable	.81		
Skeptical	.75		
Cautious	.74		
Reserved	.70		
Leisurely	.67		
Bold		.78	
Mischievous		.77	
Colorful		.72	
Imaginative		.69	
Diligent			.80
Dutiful			.68

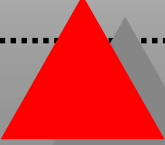
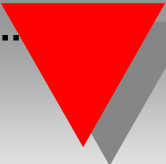


Links Between Personality Disorders and the Five-Factor Model

Cautious	————	Adjustment	————	Bold
Reserved	————	Sociability	————	Colorful
		Likeability	————	Dutiful
Mischievous	————	Prudence	————	Diligent
		Intellectance	————	Imaginative

Skeptical
Leisurely

↓
Not Covered



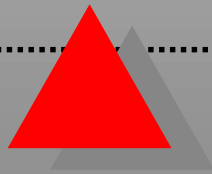
Motives, Values, Preferences Inventory

Assessing the Inside



Some Distinctions

	Bright Side	Dark Side
Actor's View	Self Concept MVPI	Fears Aversions
Observer's View	FFM HPI	DSM IV HDS





Relations Among Motivational Terms

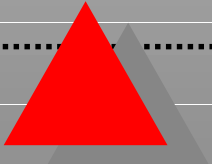
Abstraction



Needs/Motives: Causes and reasons for social interaction--biological drives and intrapsychic constructs

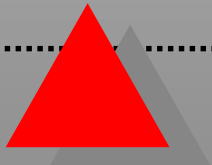
Values: Objectives sought to satisfy needs

Interests: Specific activities through which values are pursued and needs satisfied





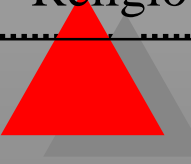
Taxonomy of Values

- ◆ Aesthetic Enjoyment
 - ◆ Affiliation
 - ◆ Altruism
 - ◆ Commercial Success
 - ◆ Hedonism
 - ◆ Power
 - ◆ Recognition
 - ◆ Scientific Understanding
 - ◆ Security
 - ◆ Tradition (Religious Values)
- 



Taxonomy of Motives

MVPI	Attitudes: Spranger	Values: Allport, Vernon Lindzey	Needs: Murray	Interests: Holland
Aesthetic	Aesthetic	Aesthetic	Sentience	Artistic
Affiliation	Social	Social	Affiliation	Social
Altruistic	Social	Social	Nurturance	Social
Commercial	Economic	Economic	Acquisition	Conventional
Hedonistic	Aesthetic		Sex, Play	
Power	Political	Political	Achvmt, Domnc	Enterprising
Recognition	Political	Political	Exhibition	
Scientific	Theoretical	Theoretical	Understanding	Investigative
Security			Succorance, Infavoidance	Conventional
Tradition	Religious	Religious		





Item Development - Aesthetic Scale

◆ Lifestyles

- ▼ I like to spend my free time reading novels and listening to classical music.

◆ Beliefs

- ▼ A dedication to art is the highest calling in life.

◆ Occupational Preferences

- ▼ I would like to be an artist or a musician.

◆ Aversions

- ▼ I dislike being with people who have no interest in the arts.

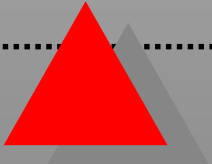
◆ Preferred Associates

- ▼ I like to be around artists and writers.
- 



Factor Structure of the MVPI

Scale	I	II	III	IV
Recognition	.78			
Power	.72			
Hedonistic	.66			
Altruistic	.45	.82		
Affiliation		.68		
Tradition		.62	.43	
Security			.77	
Commercial	.54	.61		
Aesthetic				.83
Scientific				.73

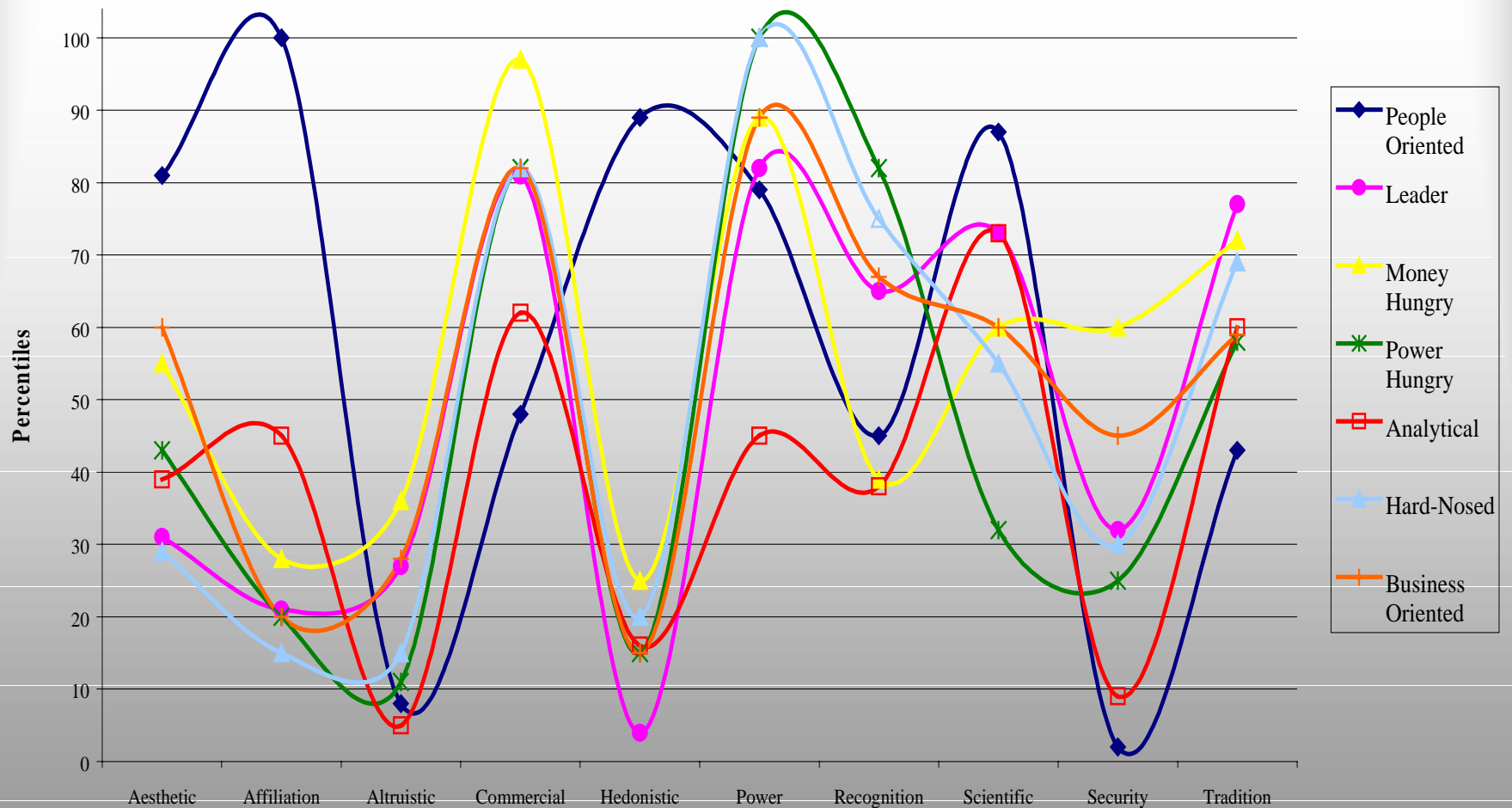




MVPI Uses

- ◆ Individualized Assessments
 - ◆ Organizational Fit
 - ◆ Organizational Development
 - ◆ Staff Development
- 

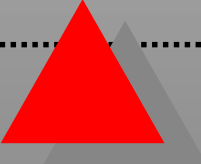
Marketing Corporate Fit



MVPI Scales



Applications

- ◆ Delinquency & Faking
 - ◆ The Liar
 - ◆ High Likeability Floater
 - ◆ Failed Technical Sales
 - ◆ Corporate Stalker
 - ◆ Team Composition
- 

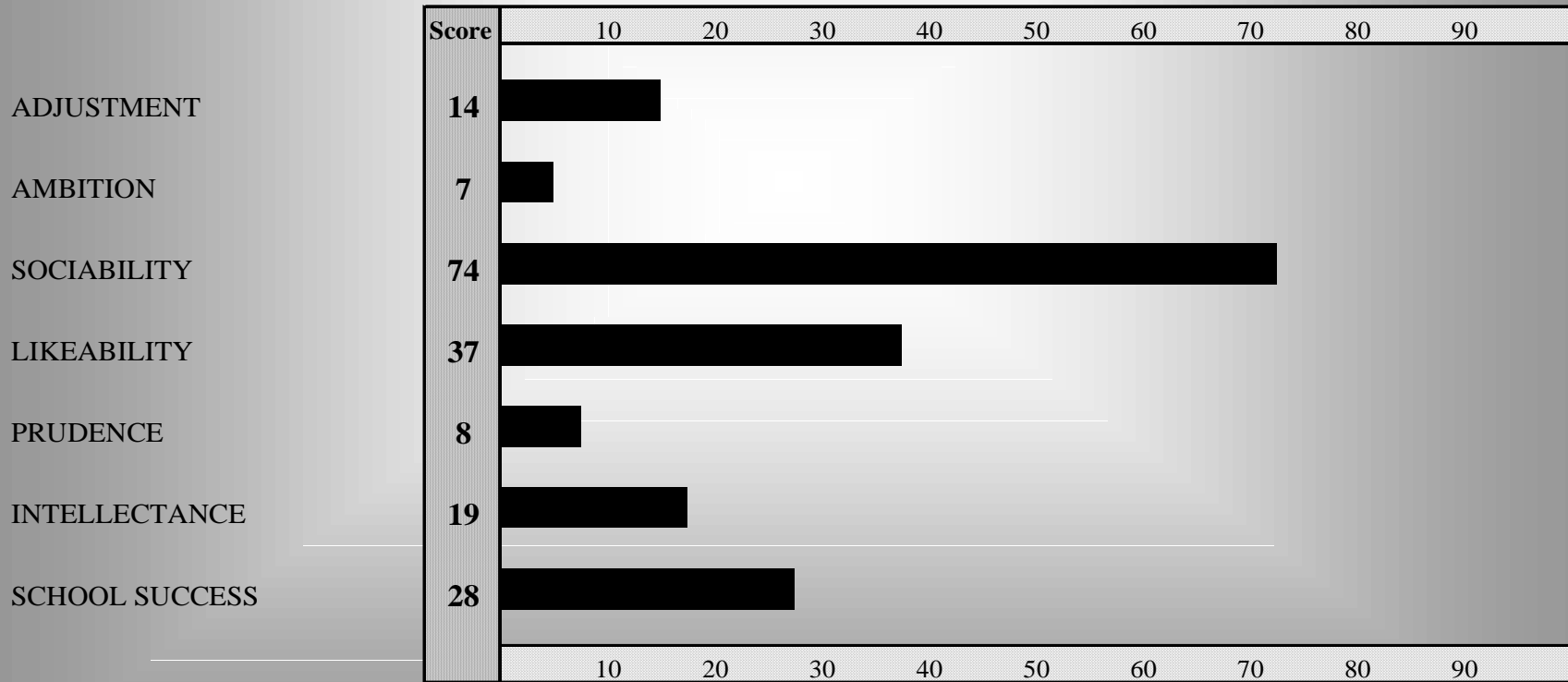
Name: Truck Fake_one

Hogan Personality Inventory

Personality Report

Scales

Percentiles



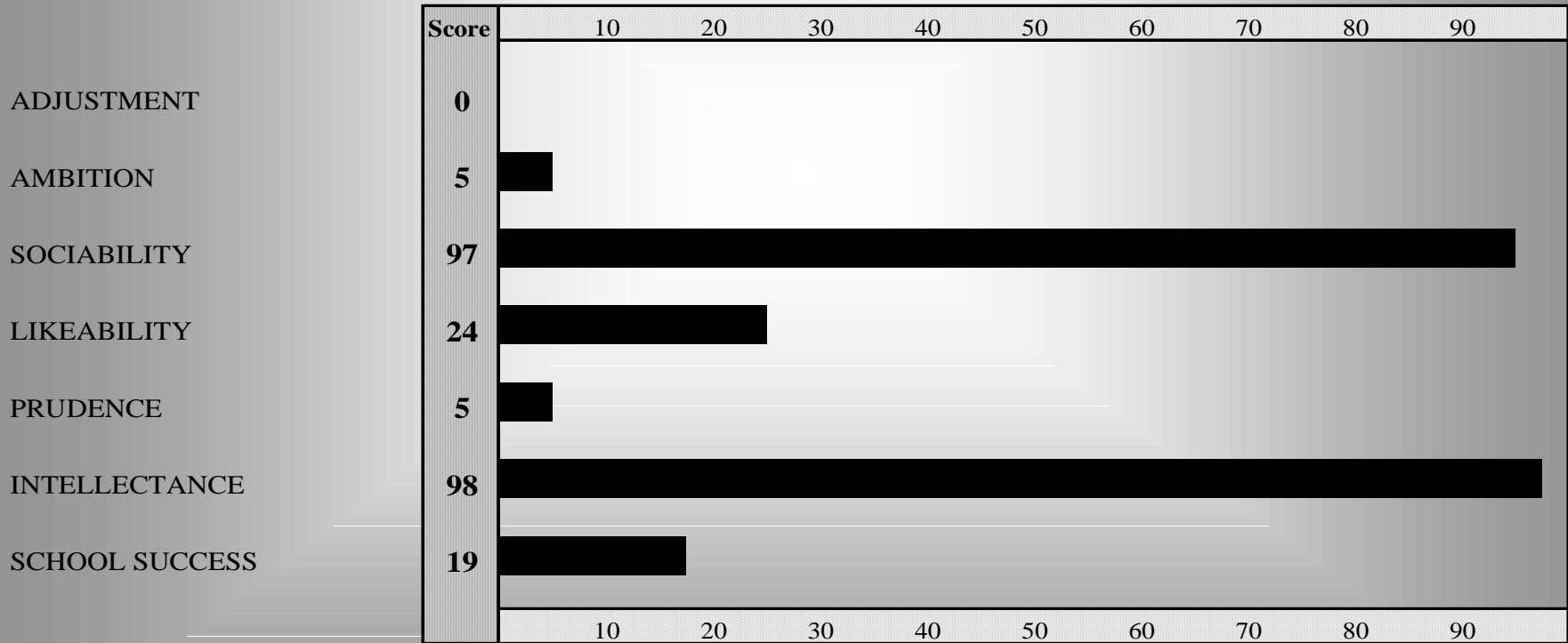
Name: Truck Fake_two

Hogan Personality Inventory

Personality Report

Scales

Percentiles



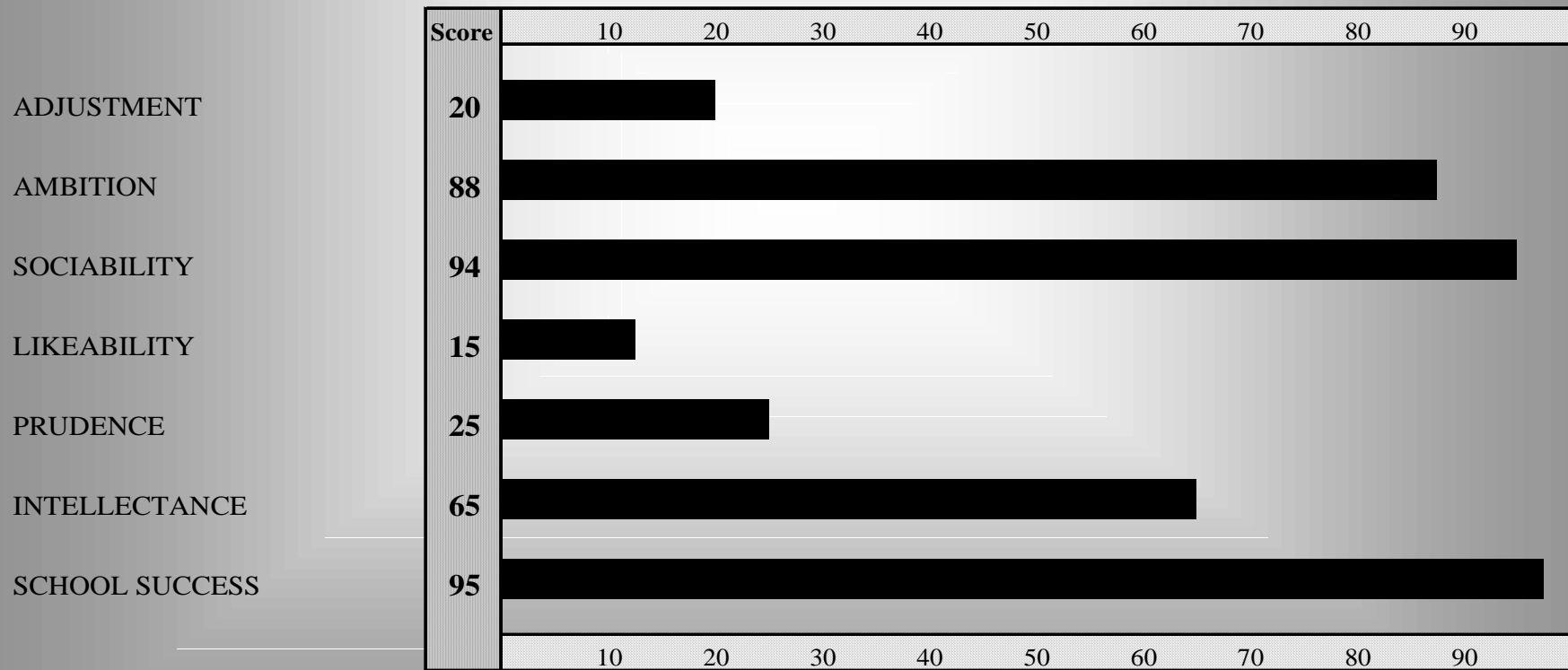
Name: The Liar

Hogan Personality Inventory

Personality Report

Scales

Percentiles



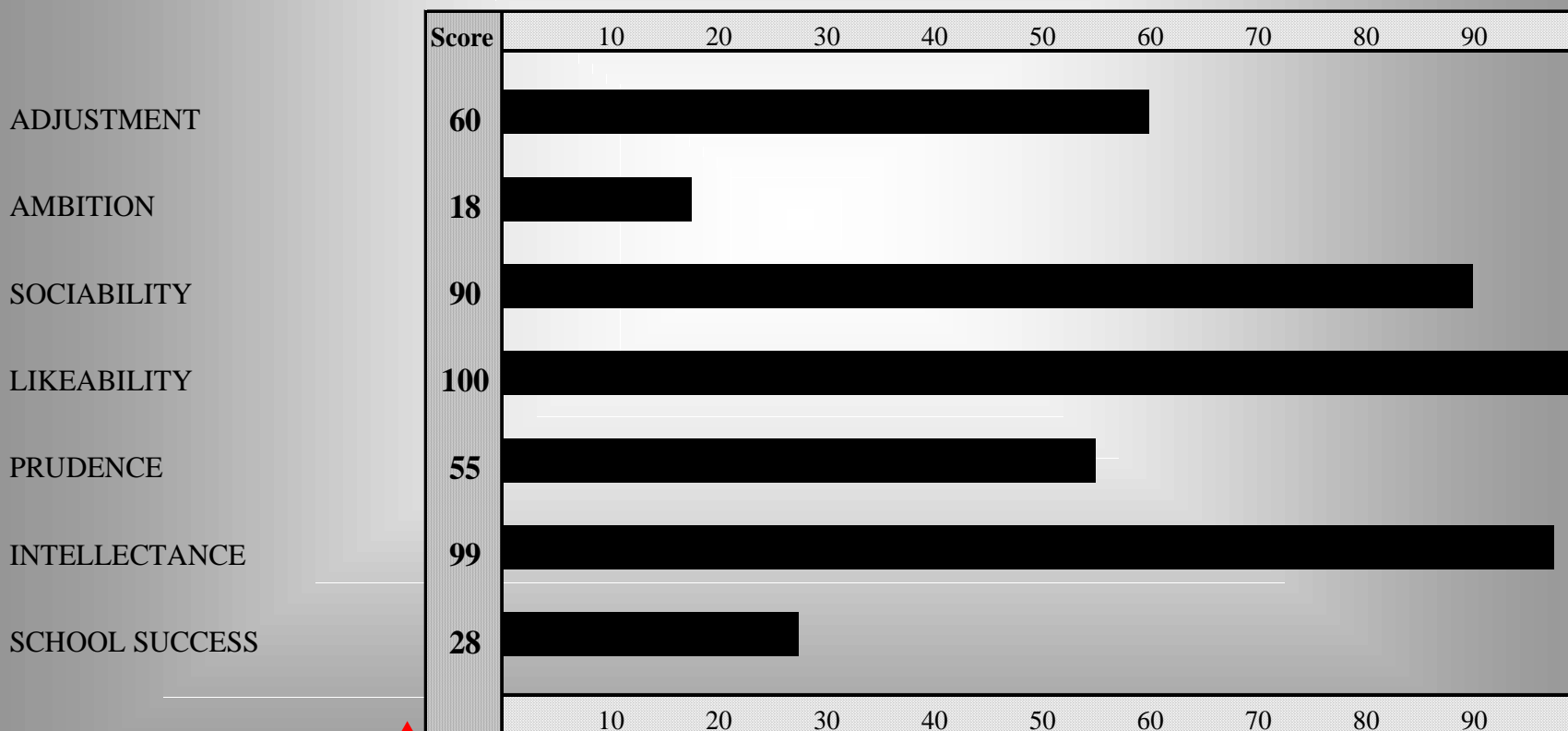
Name: High Likeability Floater

Hogan Personality Inventory

Personality Report

Scales

Percentiles



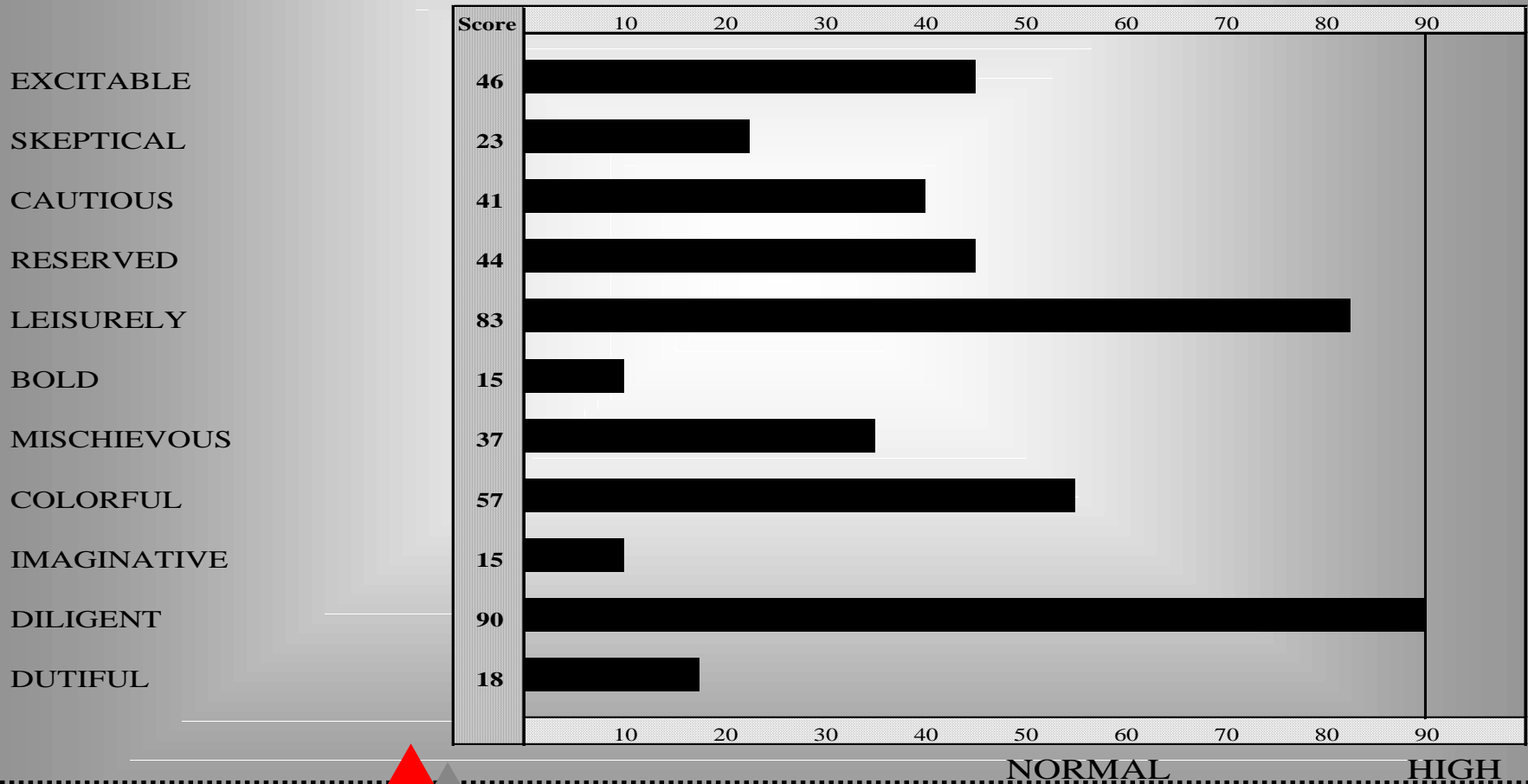
Name: High Likeability Floater

Hogan Development Survey

Personality Report

Scales

Percentiles



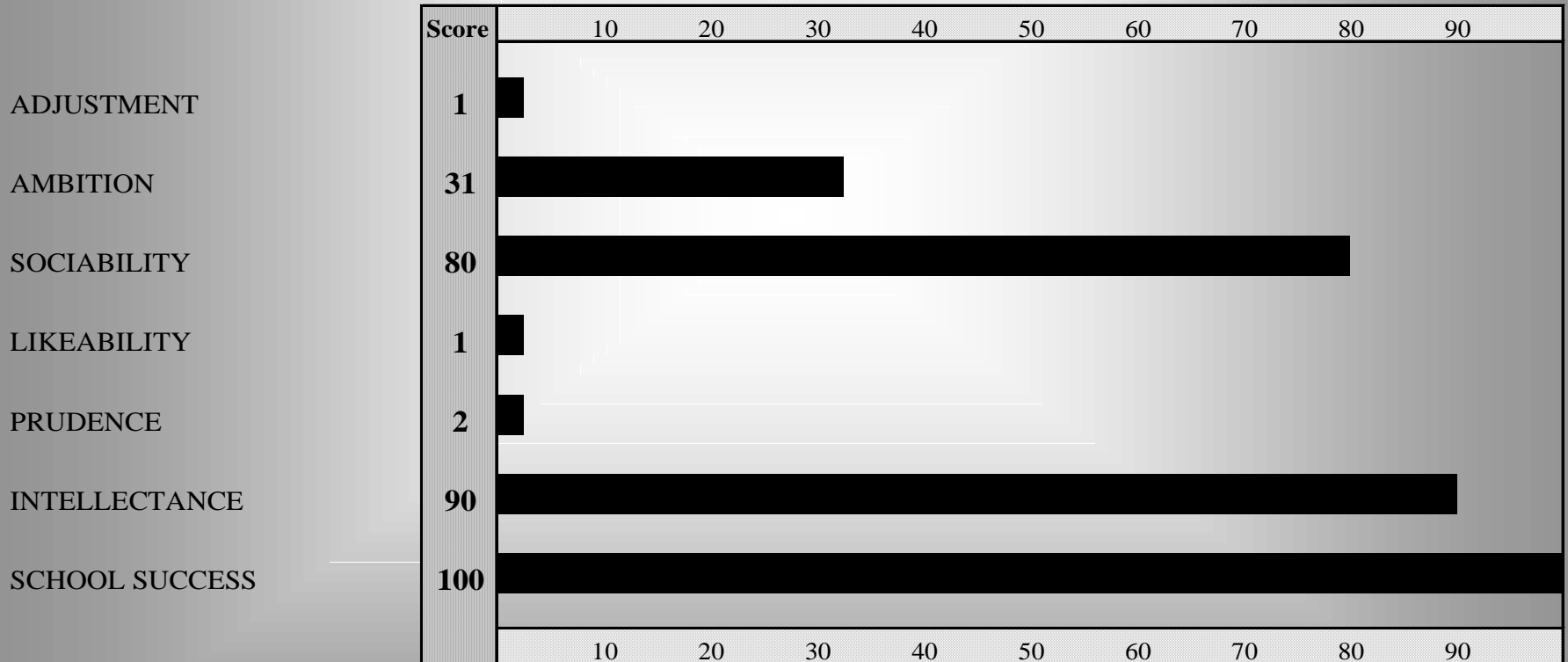
Name: Failed Technical Sales

Hogan Personality Inventory

Personality Report

Scales

Percentiles



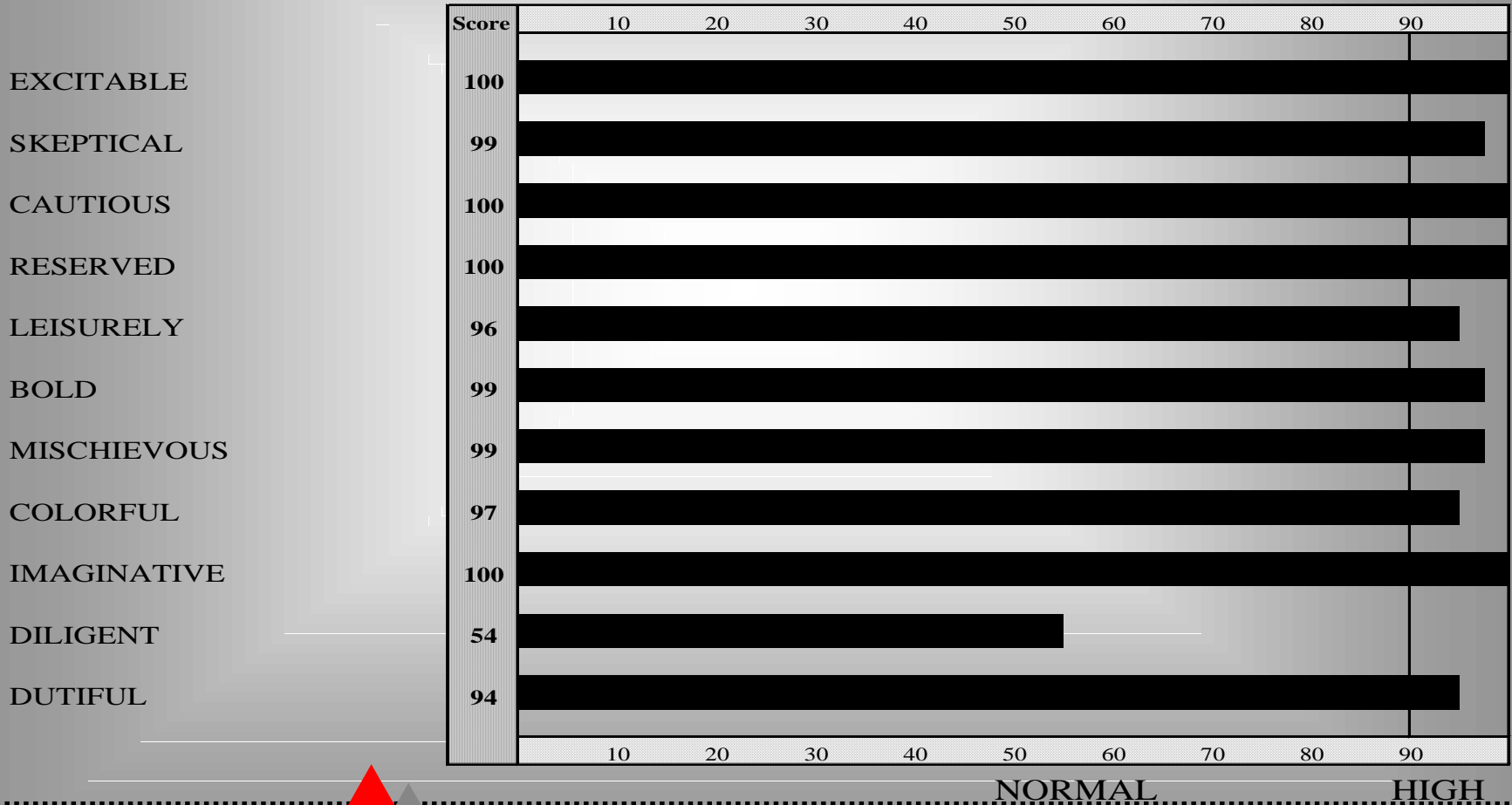
Name: Failed Technical Sales

Hogan Development Survey

Personality Report

Scales

Percentiles



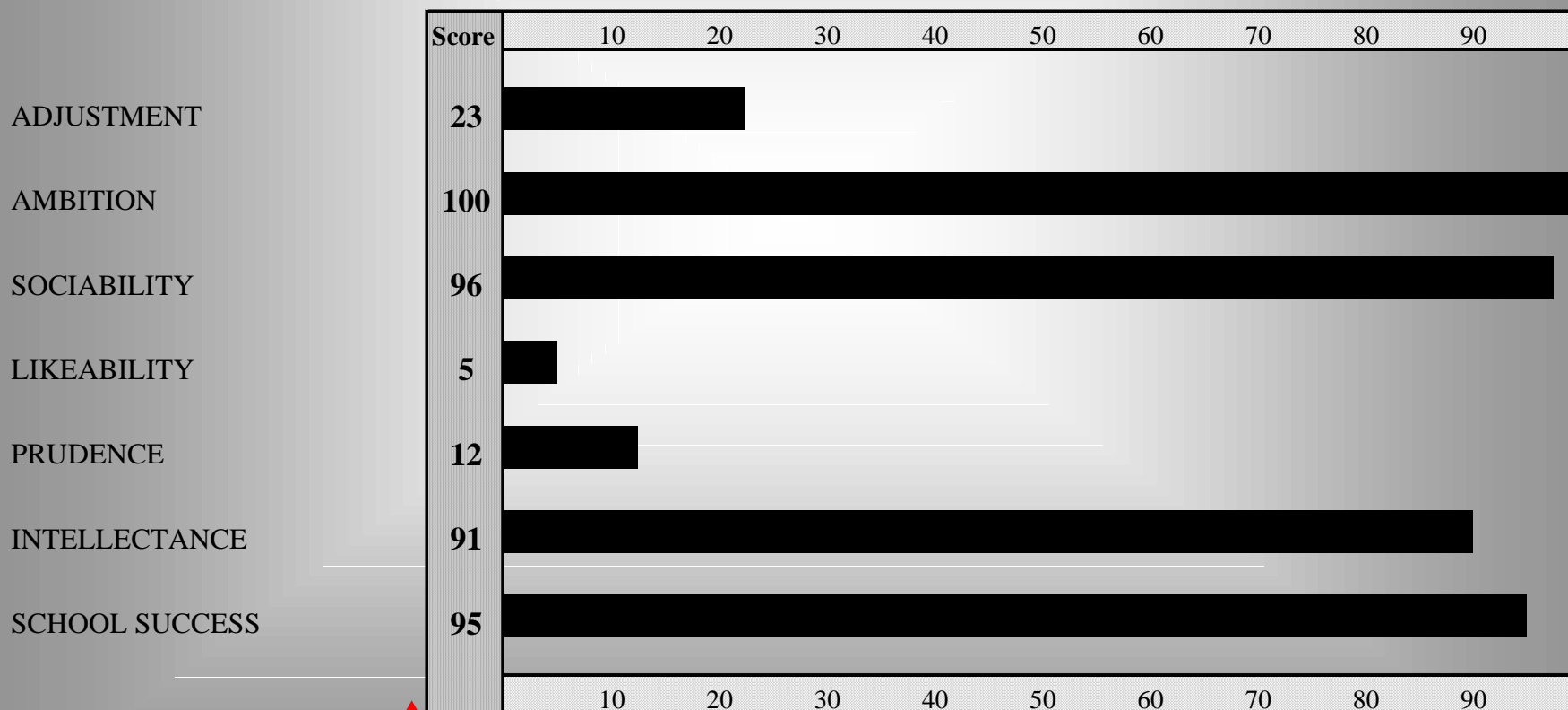
Name: Corporate Stalker

Hogan Personality Inventory

Personality Report

Scales

Percentiles



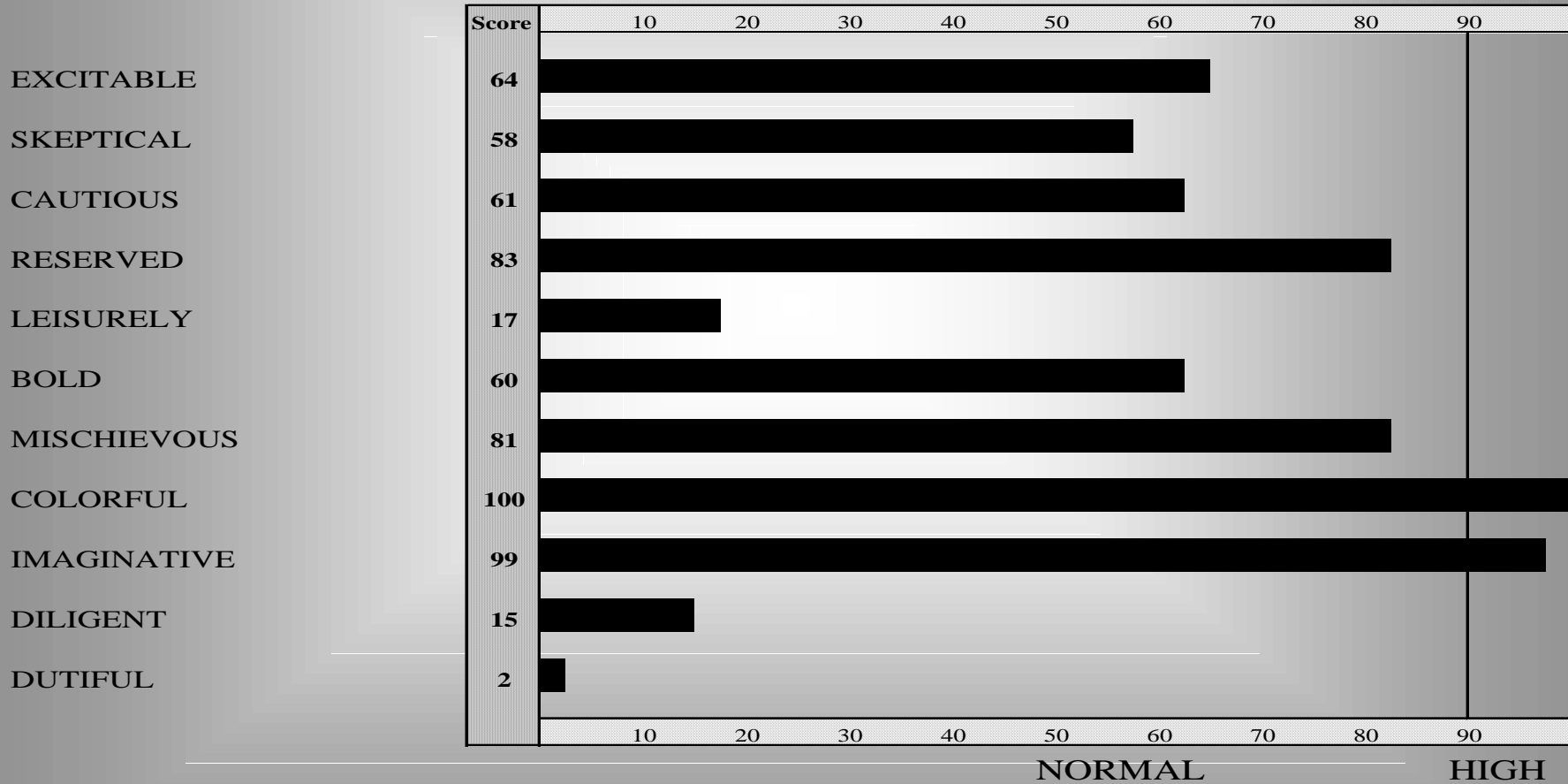
Name: Corporate Stalker

Hogan Development Survey

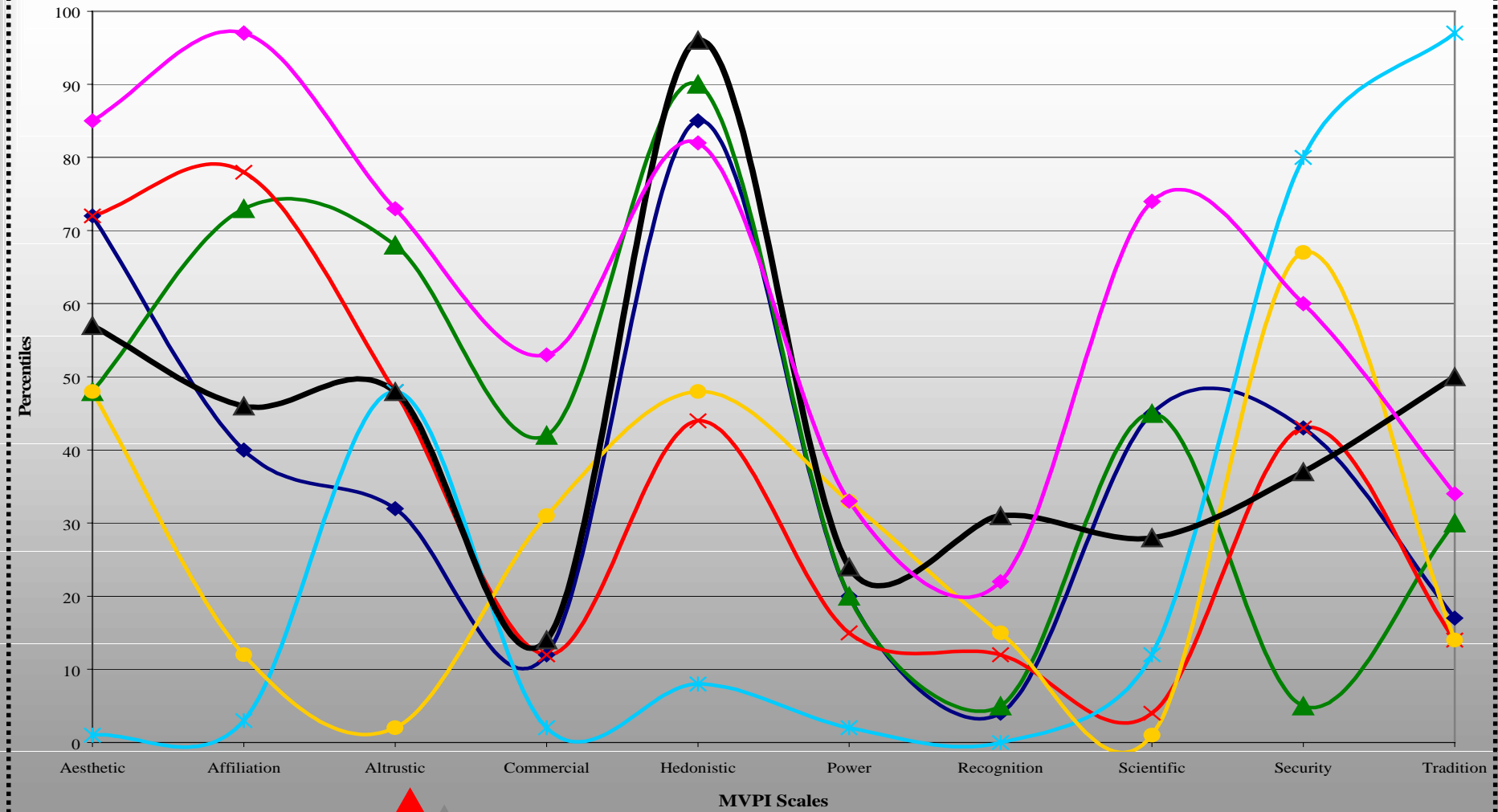
Personality Report

Scales

Percentiles

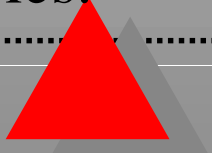


Hotel Management Team MVPI Profile Comparisons



Conclusions



- ◆ The assessment tradition made two contributions:
 - ▼ Conceptually, it focused attention on effectiveness
 - ▼ Practically, it focused attention on validity.
 - ◆ Both lessons are often forgotten today.
 - ◆ Disadvantages of the assessment tradition:
 - ▼ No justification for procedures employed
 - ▼ No conceptual foundation
 - ▼ Focus on observable behaviors; can't get at dark side or motives
 - ▼ Valid variance can be captured more efficiently with inventories.
- 

Continued . . .



Conclusions (con't)

- ◆ Our 3 inventories concern dimensions that are crucial for getting along and getting ahead.
 - ▼ The HPI concerns strength and skills
 - ▼ The HDS concerns breaking points
 - ▼ The MVPI concerns drivers and fit with culture
- ◆ There are other dimensions of performance--e.g., IQ. We think it is discourteous to ask employed adults to take cognitive measures. And what are the training implications?



Continued . . .



Conclusions (con't)

- ◆ There is nothing unique about our inventories, but it is essential that the 3 domains be covered in assessment.
 - ◆ Remember validity. And remember that it has to do with 2 considerations:
 - ▼ Predicting performance
 - ▼ Giving defensible interpretations, not entertaining ones.
 - ◆ Overall goal is not to characterize qualities of elite samples, but to help real people become more effective at work, and to do so in a timely and cost effective manner.
- 