



What I've Learned: 33 Years At the Testing Game

PTC/SC

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How is this presentation like a wedding?

- ◆ Somethings are old
- ◆ A few things are new
- ◆ A whole lot is borrowed
- ◆ And the background is all blue
(well mostly)



What This Is About

- ◆ The old days (good/bad/ugly?)
- ◆ What are we measuring?
- ◆ How are we going about it?
- ◆ What's around the corner?
- ◆ What do we need to be concerned about?



Pre-Plato Historical Perspective

First reported merit-based selection?

≈ 2,616 years ago (605 B.C.)

Appointing Authority Goals:

Encourage captives to support the local government by giving them civil-service jobs.

As reported in Daniel 1:3-20 NIV

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Job Classification: Court Official I

MQ's / Selection Criteria (2 ½ Millennia Ago)

- ◆ Healthy
- ◆ Handsome
- ◆ Smart
- ◆ Wise
- ◆ Educated
- ◆ Fit to serve in the palace

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Updated Selection Criteria

- ◆ Able to perform the essential functions of the job, with or without reasonable accommodation. (*Healthy*)
- ◆ Presents a positive organizational image. (*Handsome*)
- ◆ Able to learn and apply organizational policies and procedures. (*Smart*)
- ◆ Able to decide between complex alternative courses of action. (*Wise*)
- ◆ Possesses requisite EOD knowledge and skills. (*Educated*)
- ◆ Able to interact effectively with co-workers and the public. (*Fit to serve in the palace*)

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So What Was the Selection Process?

- ◆ Using targeted recruitment, a large group was selected for the probationary period.
- ◆ Each “probie” was given three years training in linguistics and protocol.
- ◆ The personnel director certified the entire group (**broad banding**) to the appointing authority, who conducted structured interviews to select four to become permanent employees.



Was the selection system effective?

“From then on, whenever the king asked for advice, he found their wisdom was ten times better than that of any of his other advisors and magicians.”

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Originally, the new hires went by:
**Daniel, Hananiah, Mishael and
Azariah**



Ashpenaz, the Personnel Director,
renamed them so they'd fit in better at
work, and become better organizational
citizens.



Their new, Babylonian names were:

- **Belteshazzar**
- **Shadrach**
- **Meshach &
Abednego**

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Epilog:

Because he was such a valuable employee, not only wise and smart, but also able to tell the meaning of dreams and visions, Belteshazzar was allowed to go by his original name, Daniel, when he wanted... Some of you may recall that he had his share of problems.



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Daniel 1:3-20 NIV
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The Dynamic Tensions

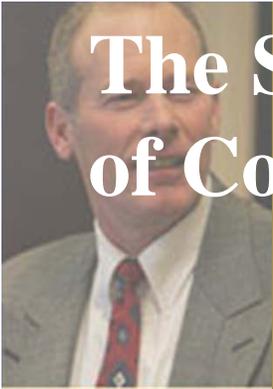
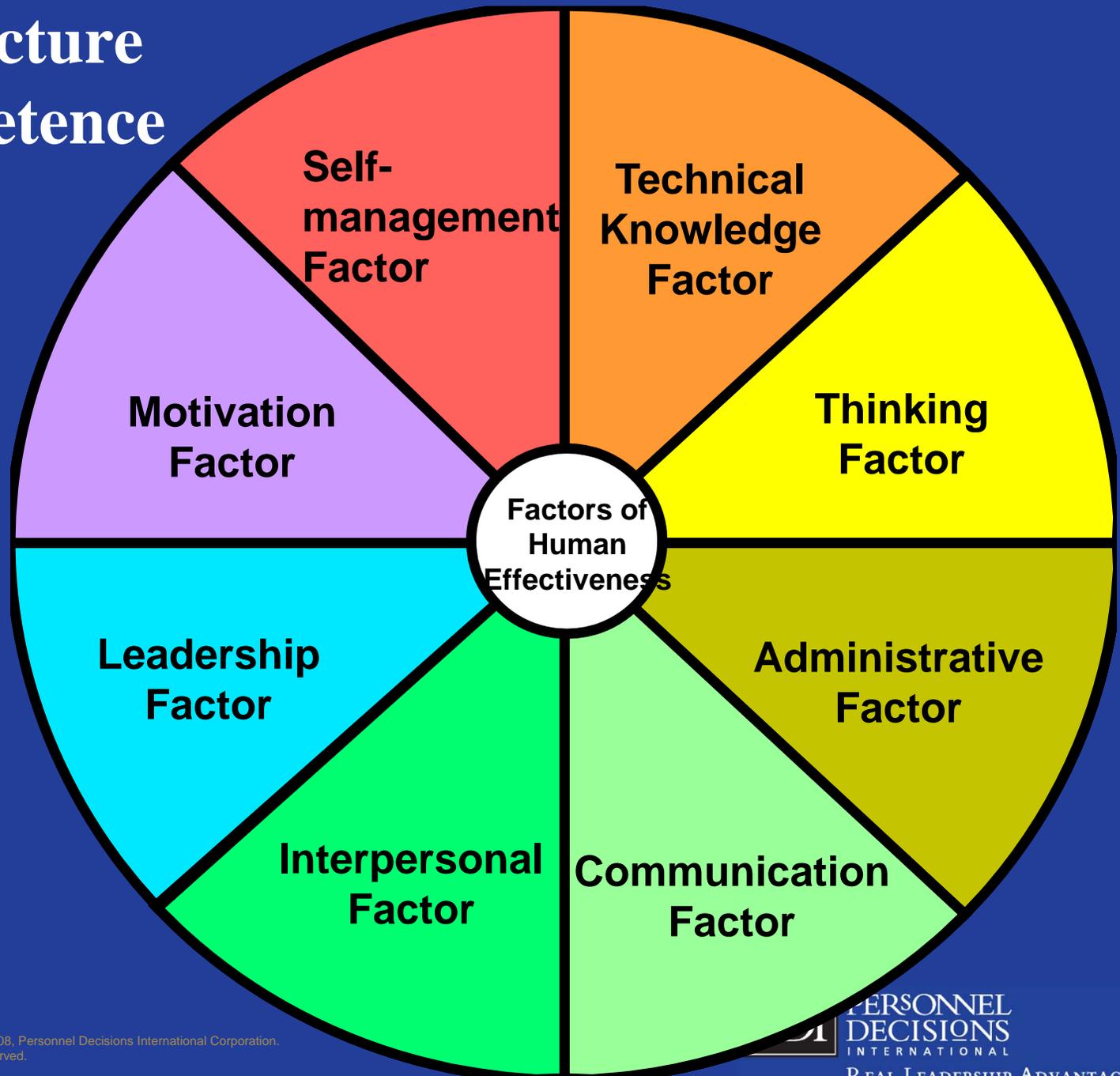
- ◆ Speed vs. Thoroughness
- ◆ Cost vs. Accuracy
- ◆ Validity vs. Candidate Acceptance
- ◆ Expectations vs. Innovation
- ◆ Objectivity vs. Importance
- ◆ Rigor vs. Face Validity
- ◆ Reducing Adverse Impact vs. Rigor



The Job Analysis Fallacies

- ◆ What's important is what people do on the job
 - The missing question
- ◆ We can, or are willing, to really measure what's needed to do the job
 - What proportion of total job needs do we measure?
- ◆ What we end up measuring is what's important
 - The knowledge fallacy
 - WYGOIWYPI
- ◆ Objective trumps subjective

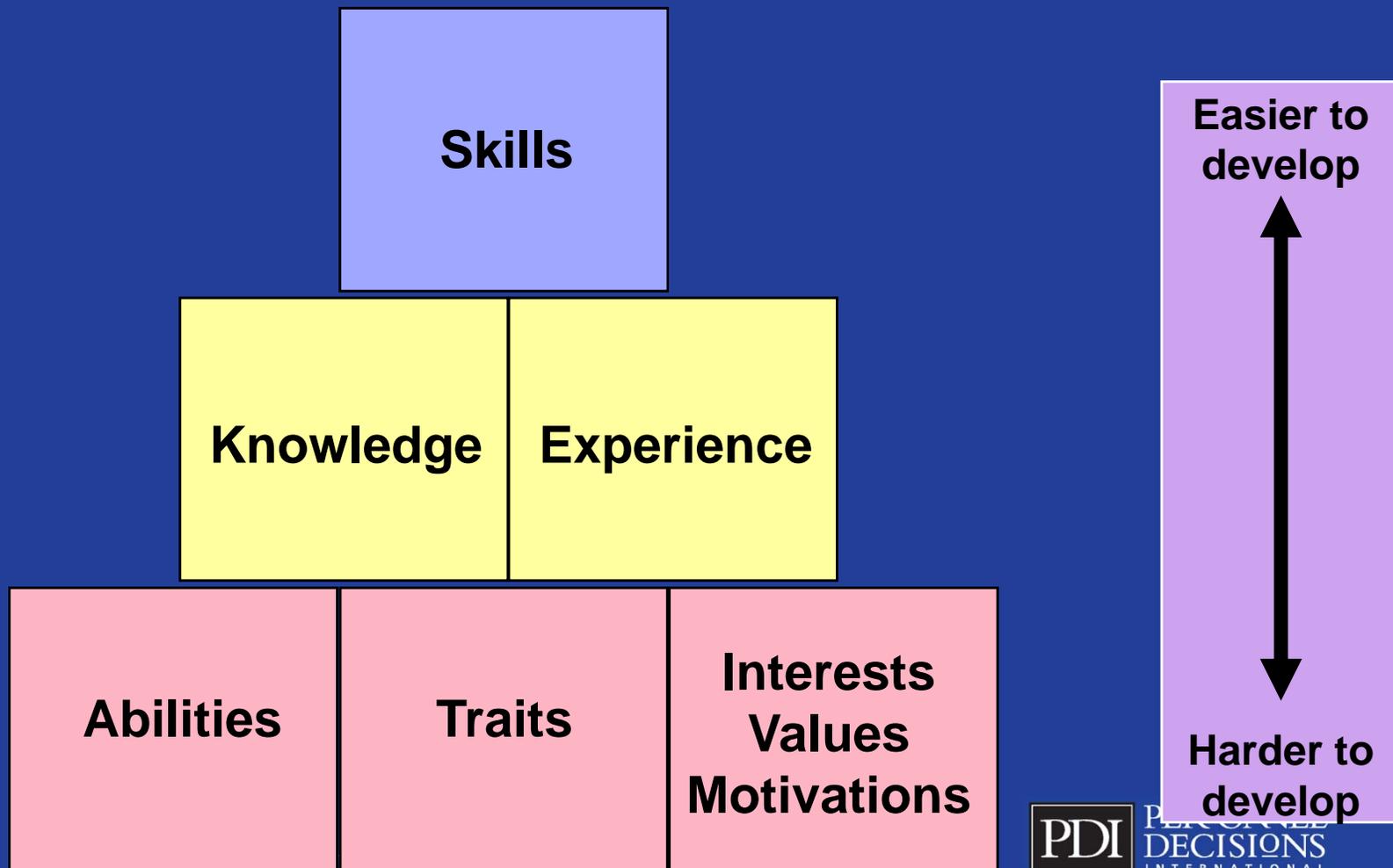
The Structure of Competence



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The Psychology You Never Learned



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The Legal Environment

- ◆ The positives
 - Attention
 - Resources
 - Care
 - Diversity
 - Innovation

- ◆ The negatives
 - Emphasis on defensibility vs. validity
 - Over-worry about face validity
 - Sacrifice of validity for social goals

Stimulus (Demand)

Response

- ◆ Written
- ◆ Oral
- ◆ Visual
- ◆ Combined

- ◆ Choose response
- ◆ Open ended verbal (written or oral)
- ◆ Behavioral

Our Tools

- ◆ Self-Report
- ◆ Written instruments
- ◆ Simulations
- ◆ Other people



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Our Testing Platforms

- ◆ Paper & Pencil
- ◆ Computer (stand-alone or internet)
- ◆ Mechanical
- ◆ Live Interaction

Self-Report Options

- ◆ Resumes/Applications/T&Es
- ◆ Automation options
- ◆ Behavioral interviewing
- ◆ Hypotheticals
- ◆ Gauntlets and gangs





T&E Methodologies

- ◆ Point Method
- ◆ Group Method
- ◆ KSA Method
- ◆ Task Method
- ◆ Behavioral Consistency Method
- ◆ Holistic Method

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T&E Validities (corrected meta-analysis)

- ◆ Point Method - .11 to .15
- ◆ Group Method – no data
- ◆ KSA Method - .20
- ◆ Task Method - .15 to .28
- ◆ Behavioral Consistency Method - .45 to .49
- ◆ Holistic Method – no data

Schneider-1994

Testing

- ◆ Cognitive
 - Job knowledge
 - Situational judgement
 - General ability

- Non-cognitive
- Personality
 - Conscientiousness
- Interests

The Controversies

- ◆ The power of “G”
- ◆ The role of personality
- ◆ The role of content validation
- ◆ The meaning of criterion validity

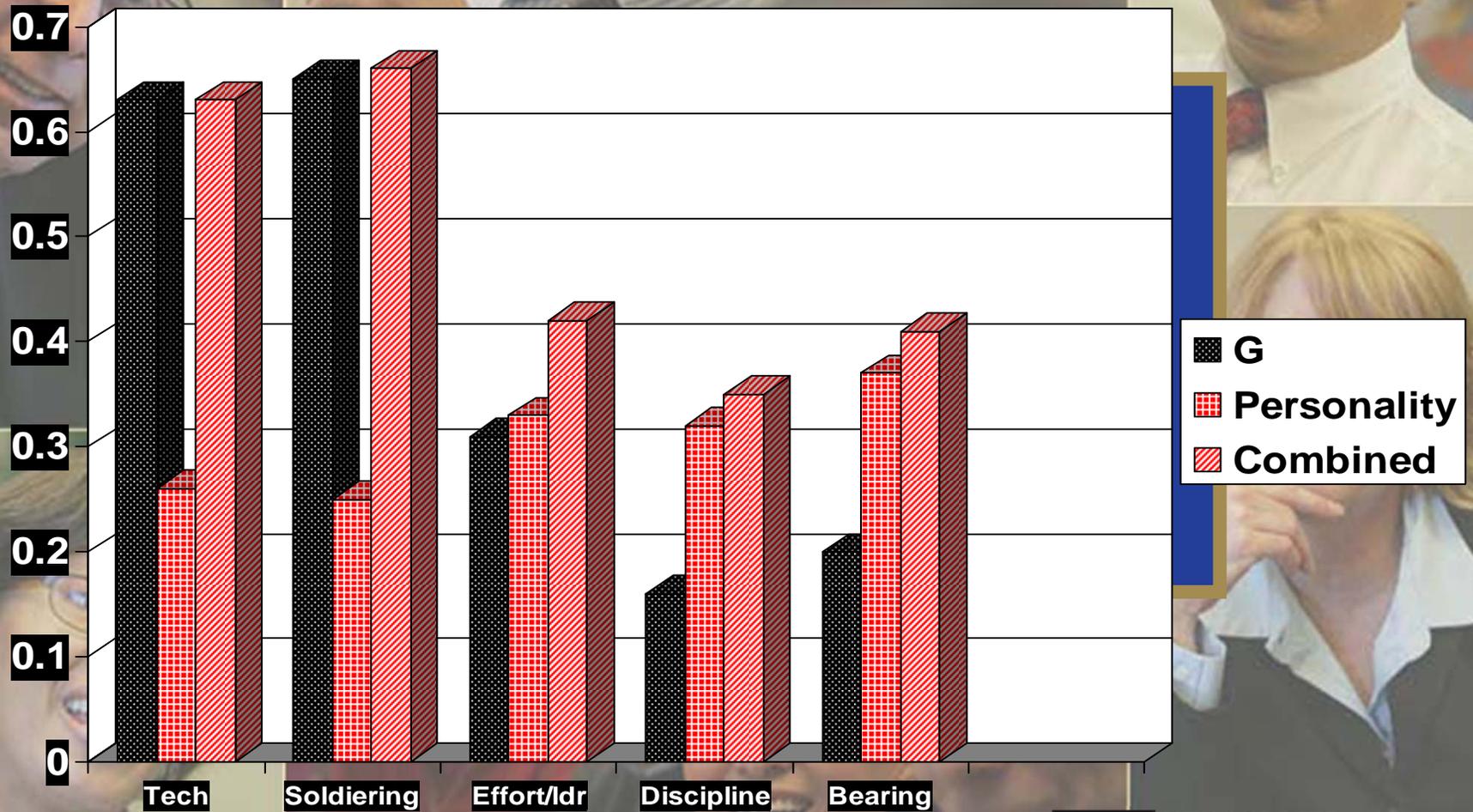




Objective

Subjective

G and Personality: Project A results



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PDI Management Level difference Study

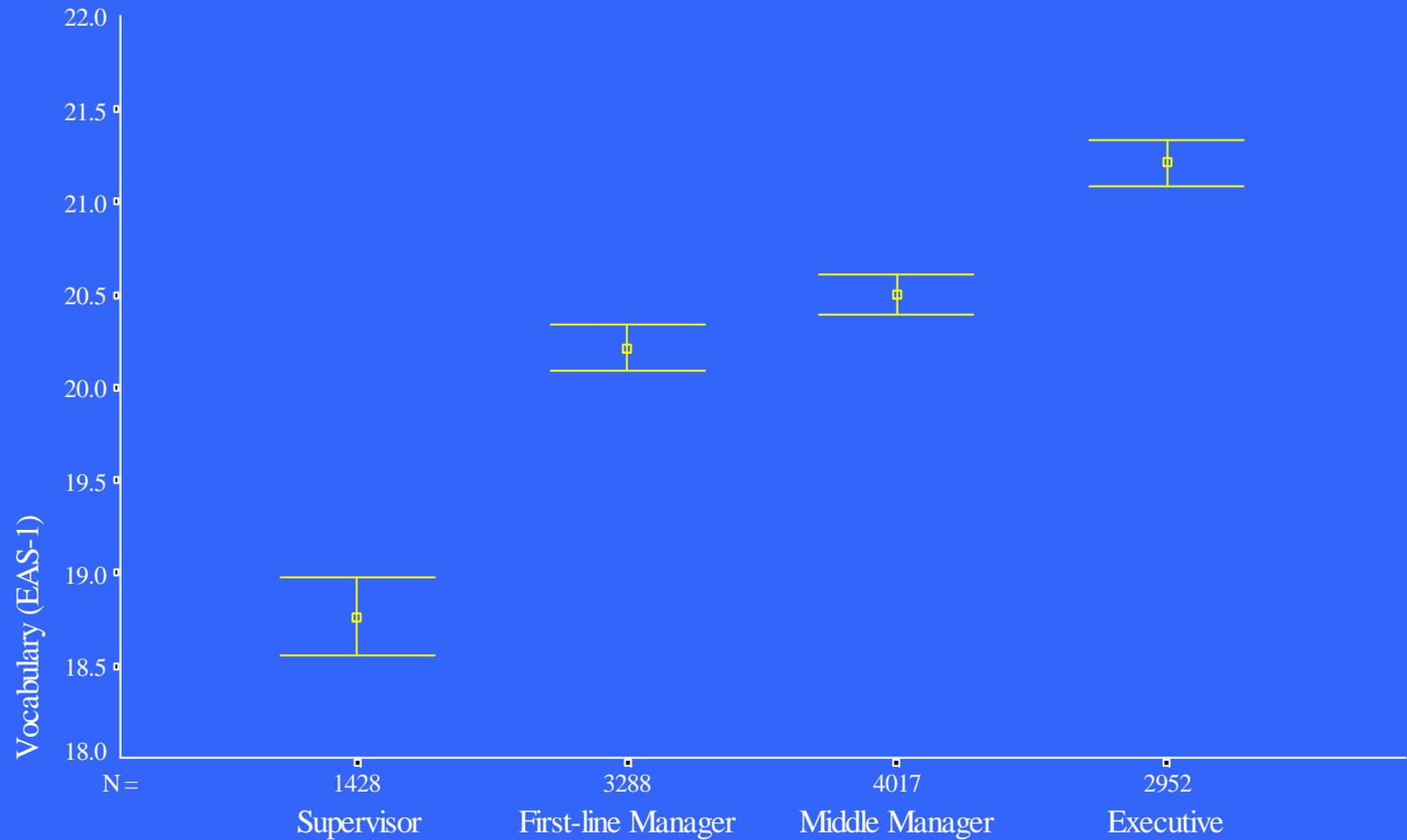
Critical Assumptions

- ◆ Mental abilities remain relatively stable over an adult's productive lifetime
- ◆ Personality attributes, likewise, are highly reliable
- ◆ Most top executives got there by progressing through levels of management – from supervisor through layers of management to the executive suite

Management Differences Study N = 13, 737

- ◆ 1497 Supervisors
- ◆ 3741 First-level Managers
- ◆ 4756 Mid-level Managers
- ◆ 3743 Executives

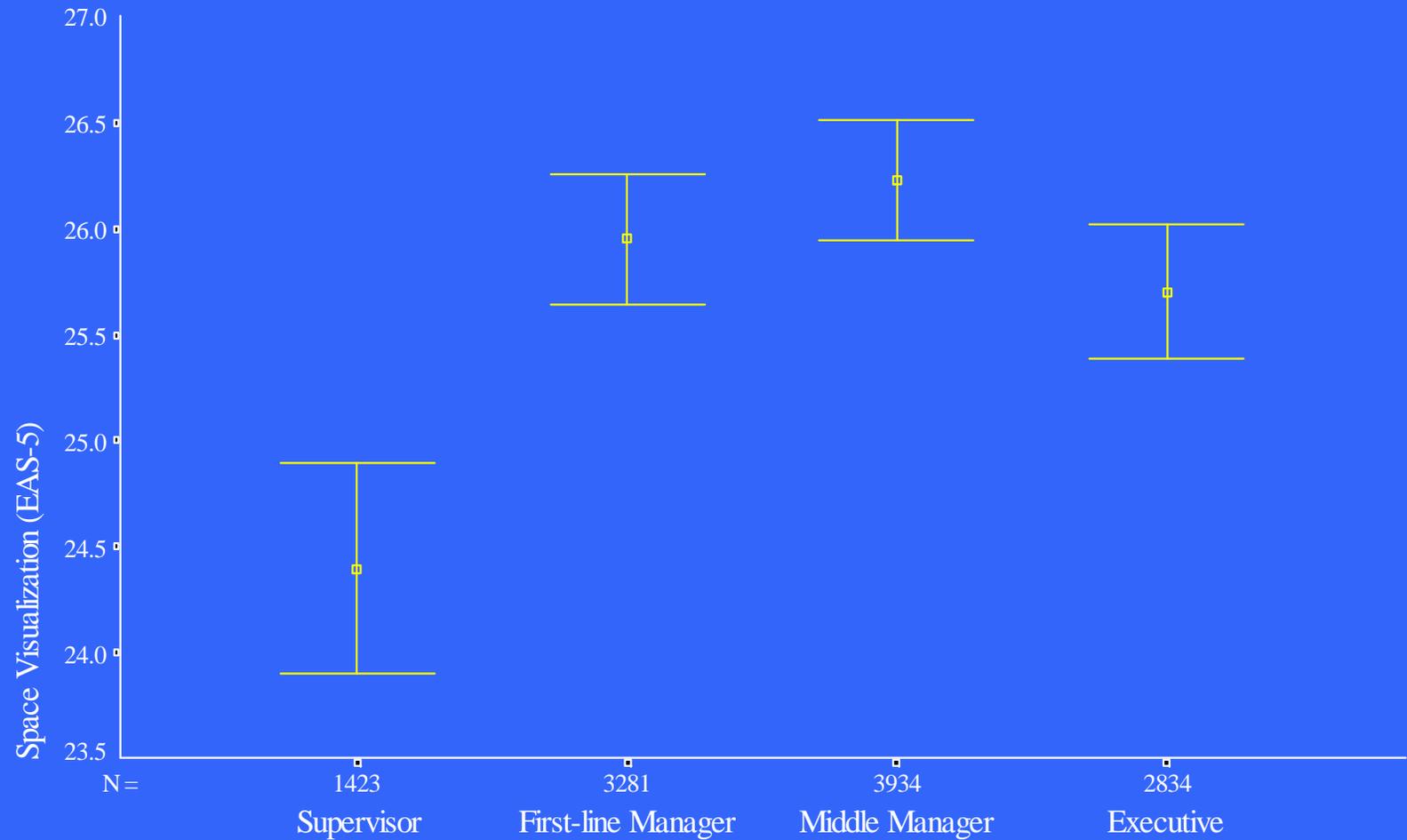
Vocabulary x Managerial Level



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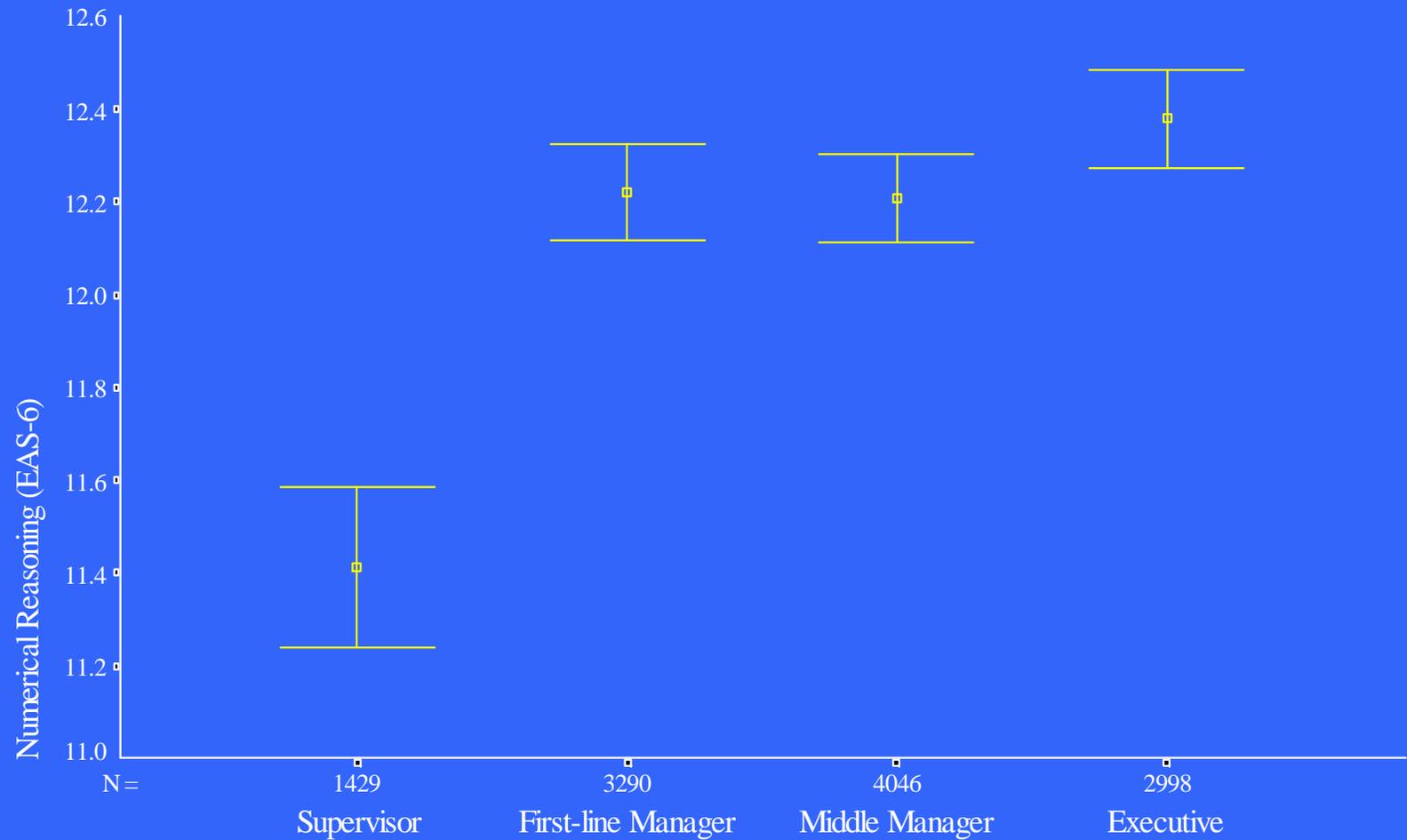
Space Visualization x Managerial Level



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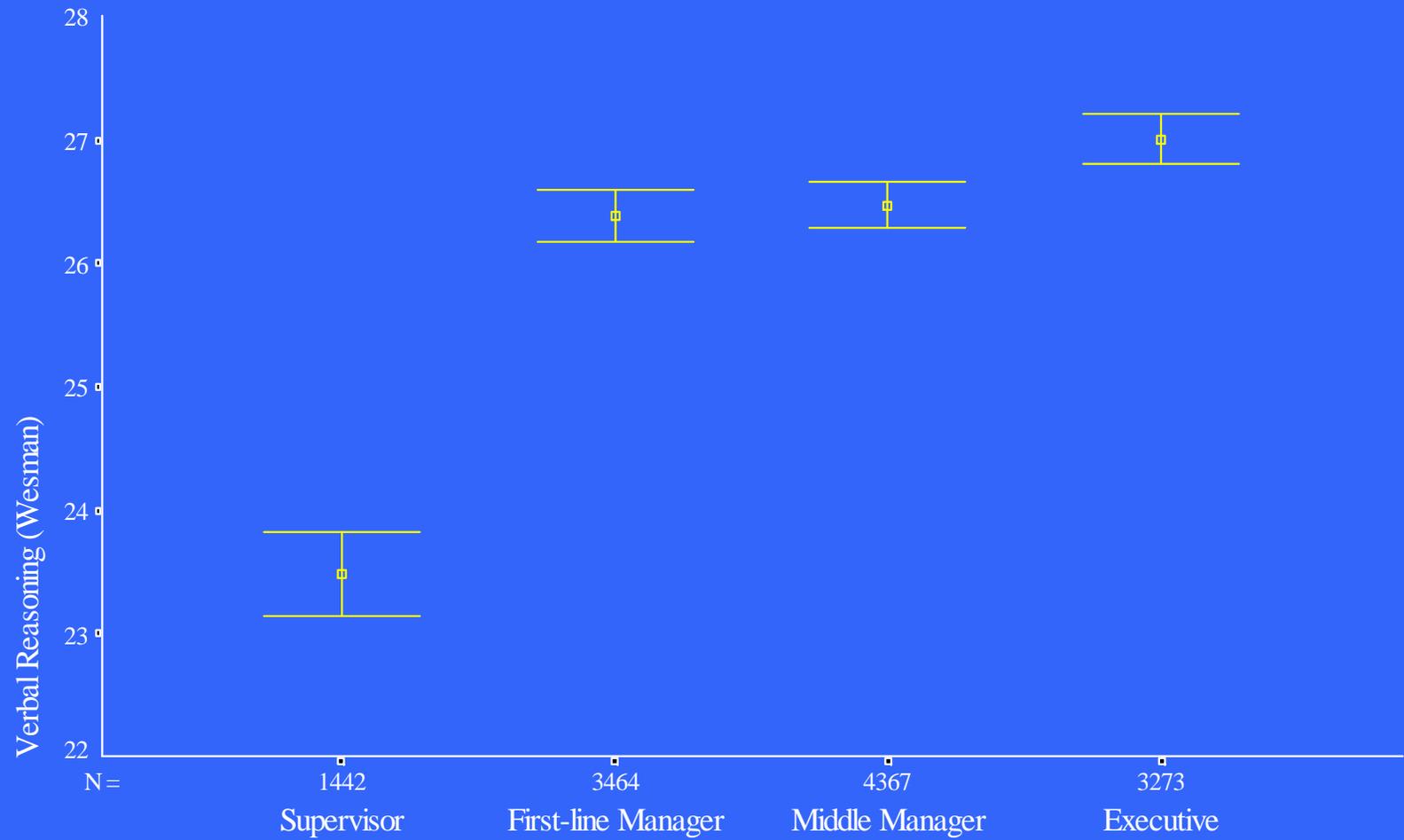
Numerical Reasoning x Managerial Level



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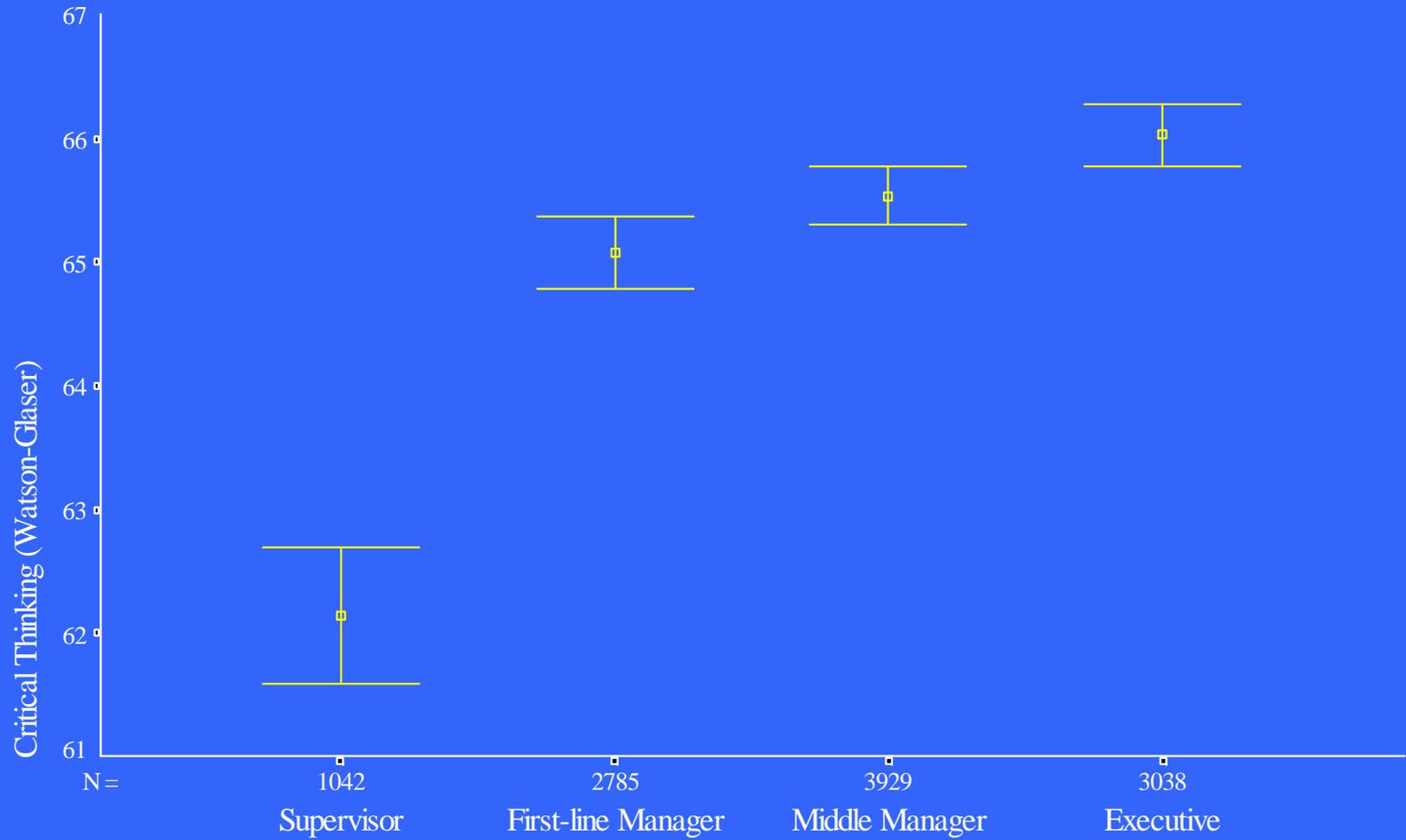
Verbal Reasoning x Managerial Level



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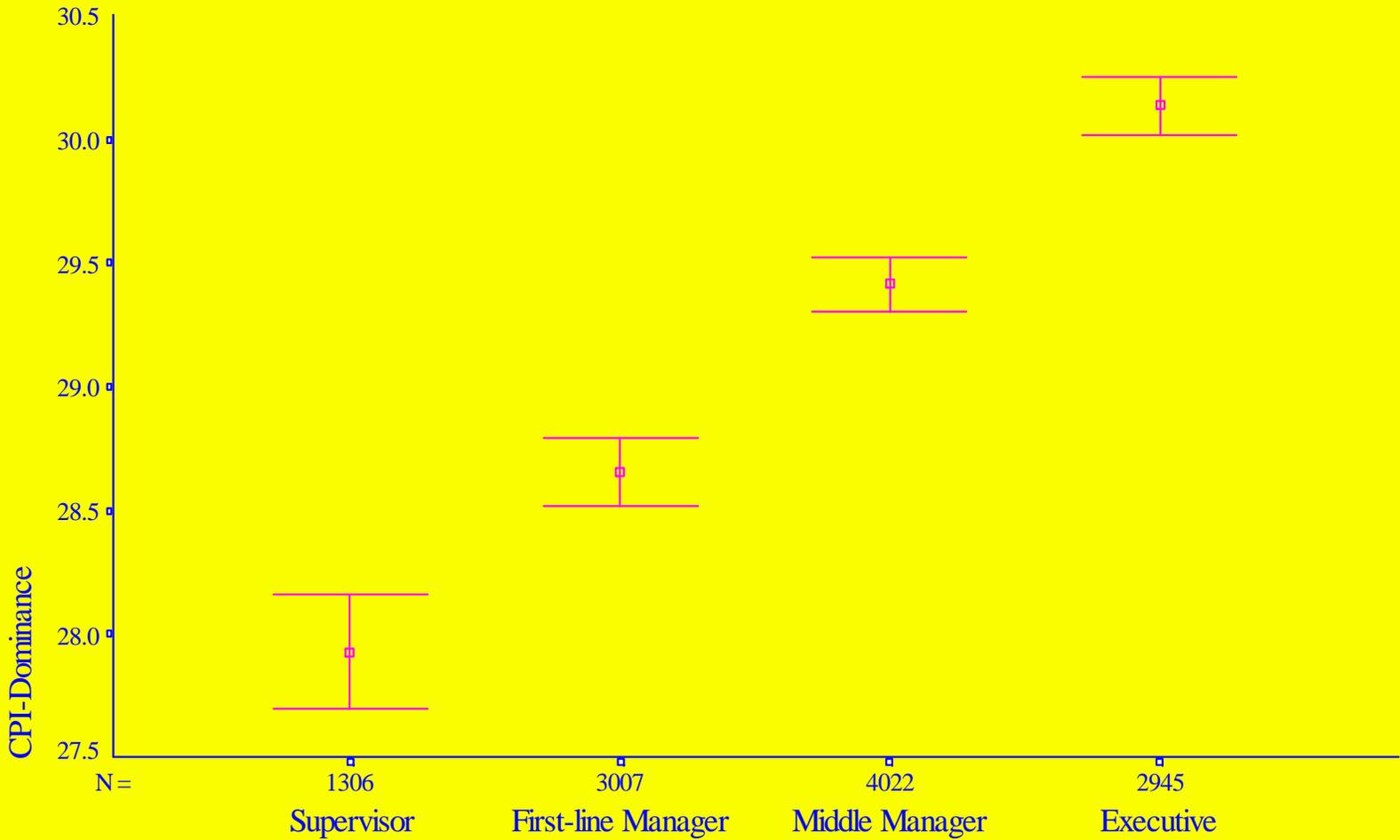
Critical Thinking x Managerial Level



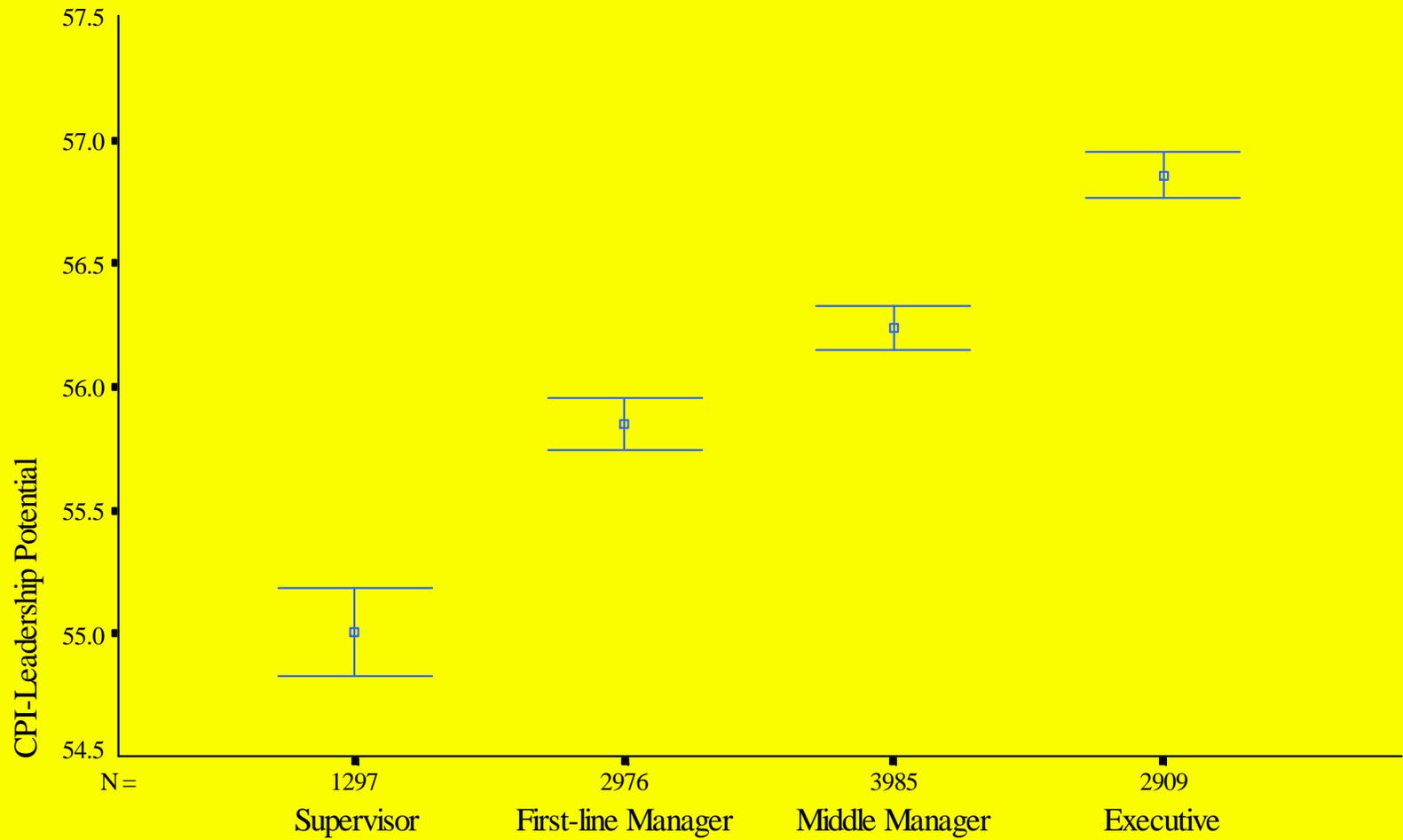
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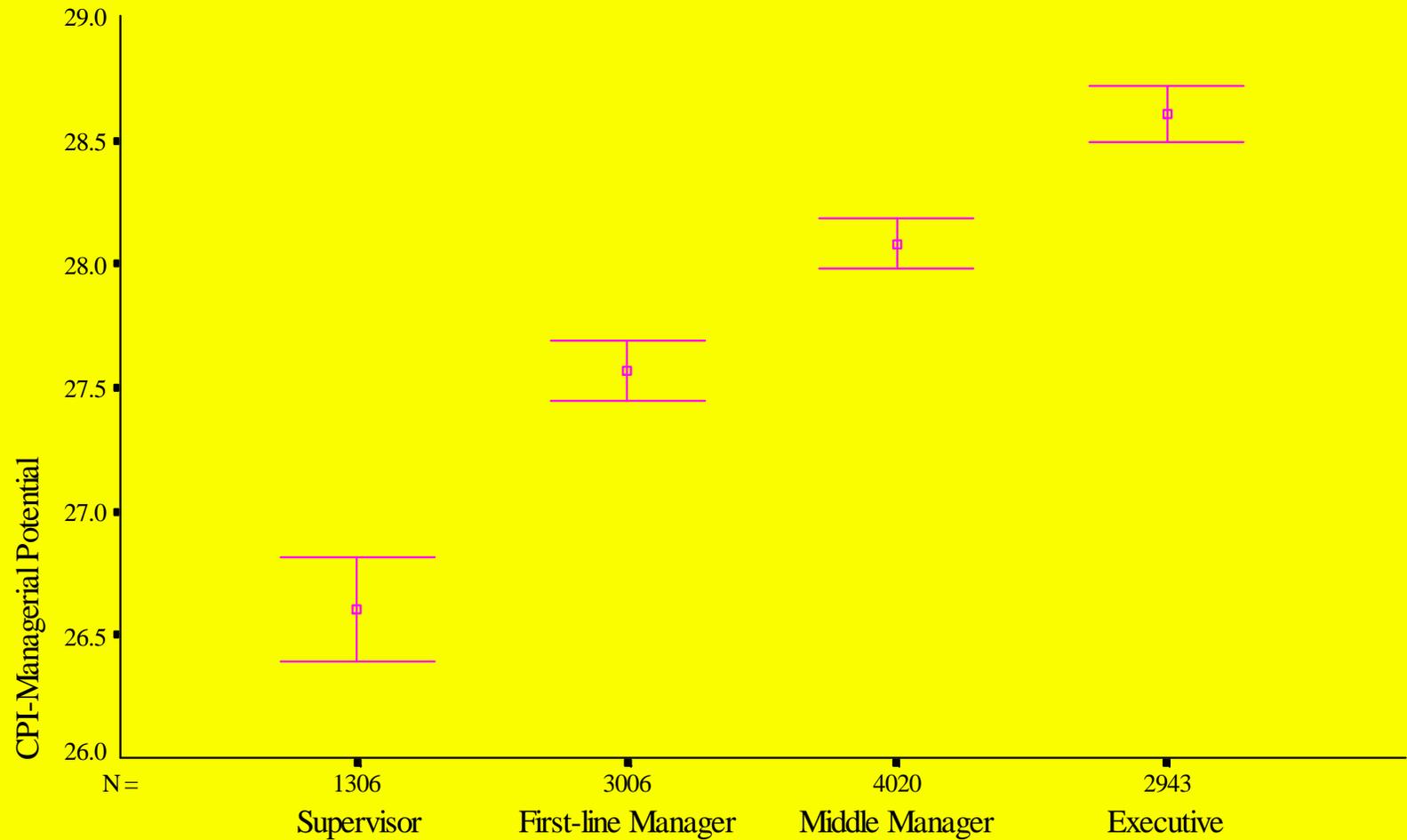
CPI Dominance x Management Level



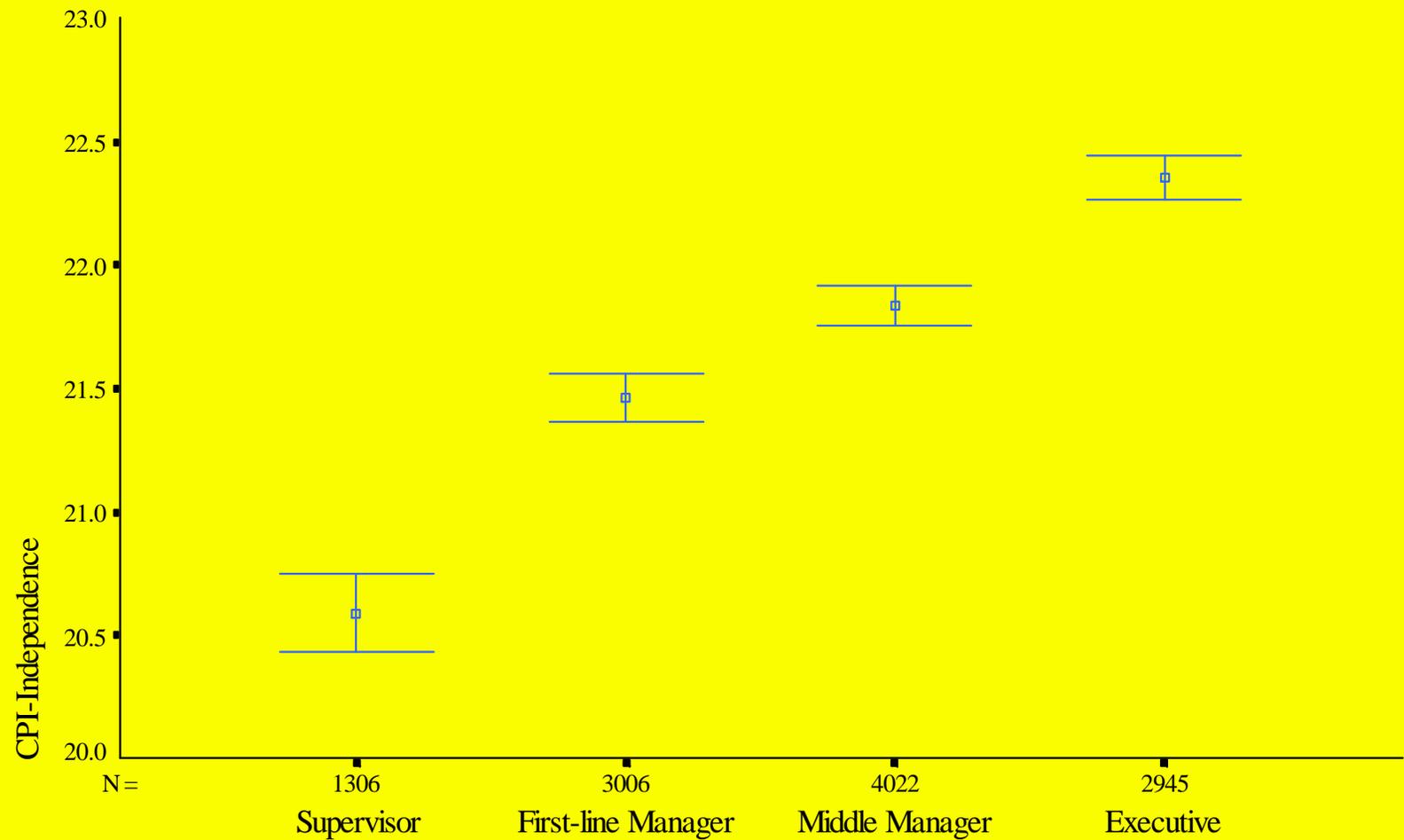
CPI Leadership x Managerial Level



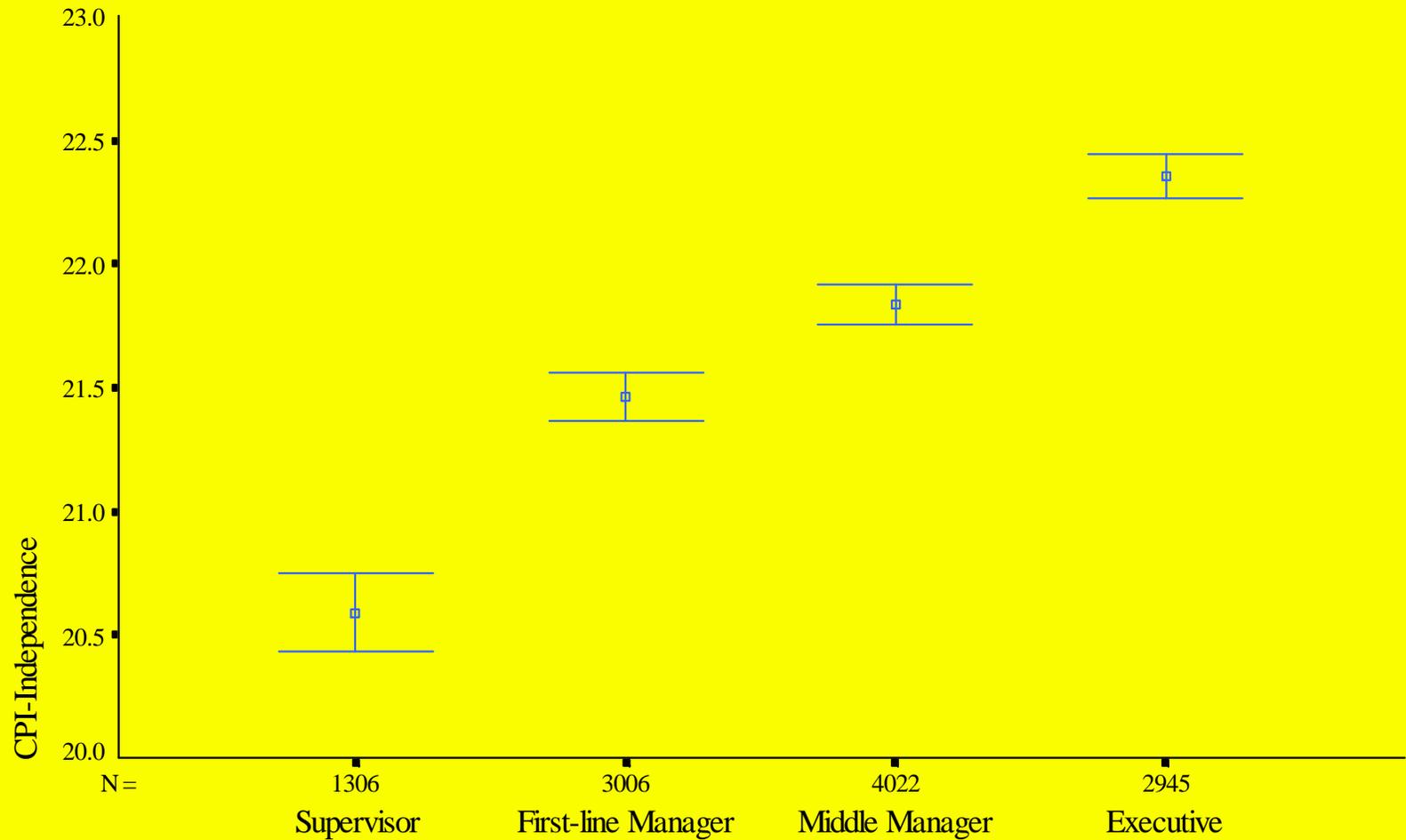
CPI Mgmt. Potential by Managerial Level



CPI Independence x Managerial Level



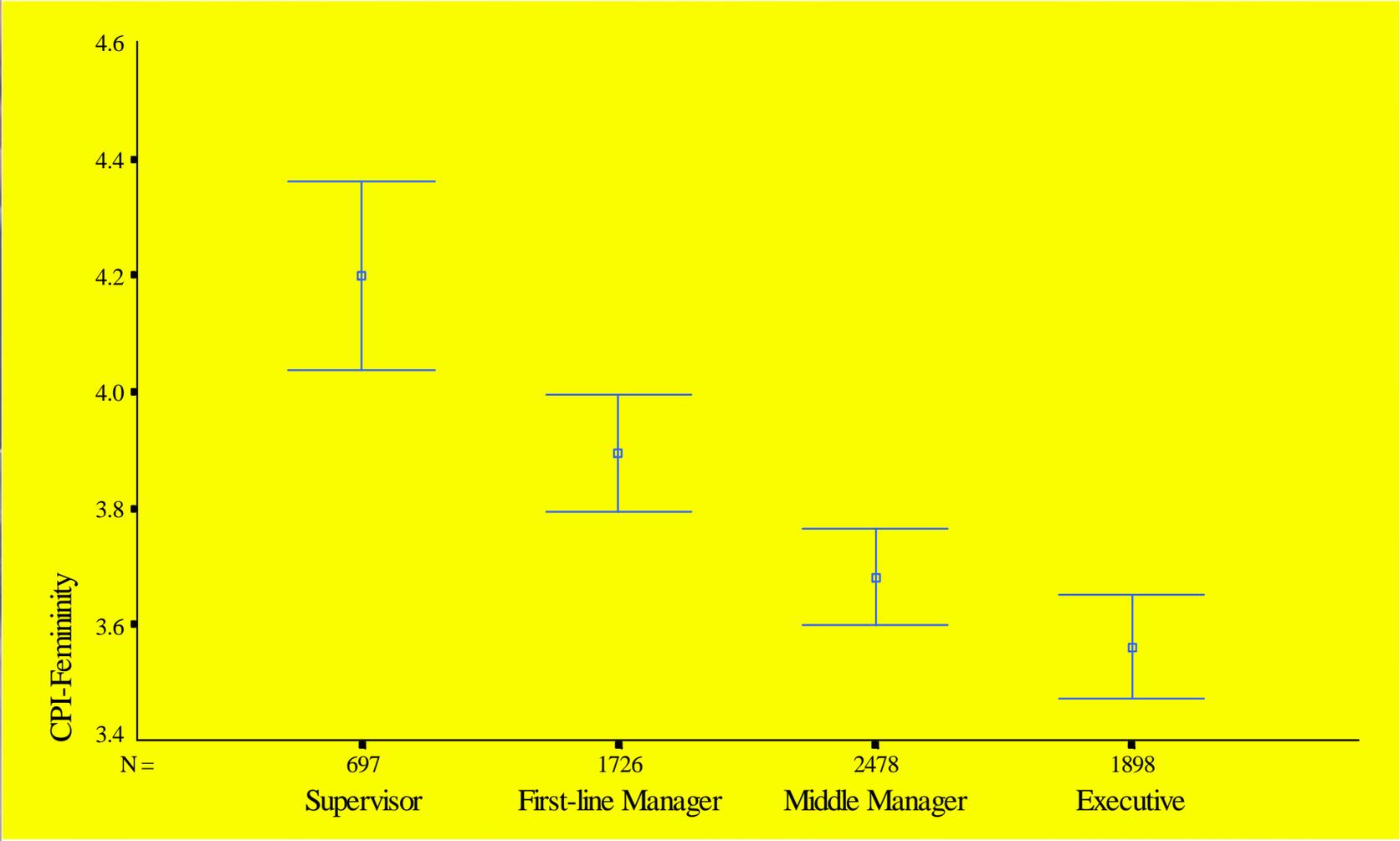
CPI Independence x Managerial Level



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CPI Femininity x Managerial Level



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Differentiation Between Execs. and Supervisors (Effect Size)

- ◆ Independence (.67)
- ◆ Leadership potential (.66)
- ◆ Vocabulary (.66)
- ◆ Dominance (.62)
- ◆ Managerial potential (.59)
- ◆ Femininity (.31)
- ◆ Verbal reasoning (.57)
- ◆ Critical thinking (.51)
- ◆ Numerical reasoning (.31)
- ◆ Verbal logic (.23)

Differences Between Execs. and Mid-managers (Effect Sizes)

- ◆ Leadership potential (.25)
- ◆ Dominance (.23)
- ◆ Independence (.21)
- ◆ Management potential (.17)
- ◆ Femininity (.06)
- ◆ Vocabulary (.19)
- ◆ Verbal Reasoning (.10)
- ◆ Critical thinking (.07)
- ◆ Numerical reasoning (.06)
- ◆ Verbal logic (.03)

Nathan's Bottom Line

- ◆ If one accepts the assumption that mean scores of incumbents represent the required level of ability for a job, these data suggest that personality requirements increase as job level increases and, for cognitive ability, job requirements differ depending upon the specific ability tested.

Kuncel, N.R.

Personnel Decisions International

Paper presented at 1997 SIOP

Harry's Bottom Line(s)

Since neither personality nor cognitive ability vary greatly during one's productive lifetime:

- ◆ Variability in personality is more predictive than cognitive ability differences of whether someone will end up in higher levels of management
- ◆ There appears to be a “floor” for cognitive abilities, but personality needs increase by level
- ◆ Dominance rocks!

Simulations

- ◆ Technology
- ◆ Creativity
- ◆ Face validity
- ◆ Under utilized
- ◆ The convergent/divergent controversy
- ◆ The myth of cross-exercise dimensional validity

Unproctored Internet testing Pros/Cons

- ◆ Standardization
- ◆ Convenience
- ◆ Turnaround
- ◆ Recruitment net
- ◆ Improved test security (CAT)
- ◆ Valid screening
- ◆ Image?
- ◆ Cost?
- ◆ Cheating
- ◆ Item security
- ◆ Validity
- ◆ Legal challenge

Cheating and the Stakes

- ◆ Countries with higher stakes on exam scores report more cheating
- ◆ Cheating rates are higher for honor students and those with high GPAs

Cheating: Prevalence

- ◆ 95% high school students cheated in school
- ◆ 65% cheated on tests/50% plagiarized
- ◆ 1/3 teens with cell phones used them on tests
- ◆ 3% of parents believed their teens cheat
- ◆ Survey of 100 schools – 64% cheated on tests
- ◆ Business graduate students – 56% cheated
- ◆ Other graduate students – 47% cheated
- ◆ Cambodia – 2008 widespread paying teachers for test answers

Unproctored/Proctored Test Performance

Proctored (Time 2)

Hi

Lo

Hi
Unproctored
(Time 1)
Lo

Smart?	<ul style="list-style-type: none"> •Cheater? •Sick/distracted/anxious at Time2 •Lucky •Regression to the mean
<ul style="list-style-type: none"> •Quick learner? •Practice effect •Sick, etc. at Time 1 •Lucky (at Time 2) •compromised test security 	Not so smart?

How Do They Do It?

- ◆ Mobile phones and iPods
- ◆ Braindumps
- ◆ Organized cheating
- ◆ Wireless earpeieces and radio transmitters
- ◆ Traditional methods

How They've Tried To Stop It

- ◆ The “Honor System”
- ◆ Banning/controlling electronic devices
- ◆ Photo/government ID
- ◆ Fingerprinting/palm-vein scanning
- ◆ Commercial security systems
- ◆ Cheat-resistant laptops
- ◆ Lawsuits
- ◆ CAT
- ◆ Statistical analysis

Cheating and Personality Testing

- ◆ Hard to separate cheating from cluelessness
- ◆ Nonsense items
- ◆ Unlikely virtues
- ◆ Response Distortion Index (RDI)

Other People

- ◆ References
- ◆ Promotability index



Constraints to Improvements in Selection

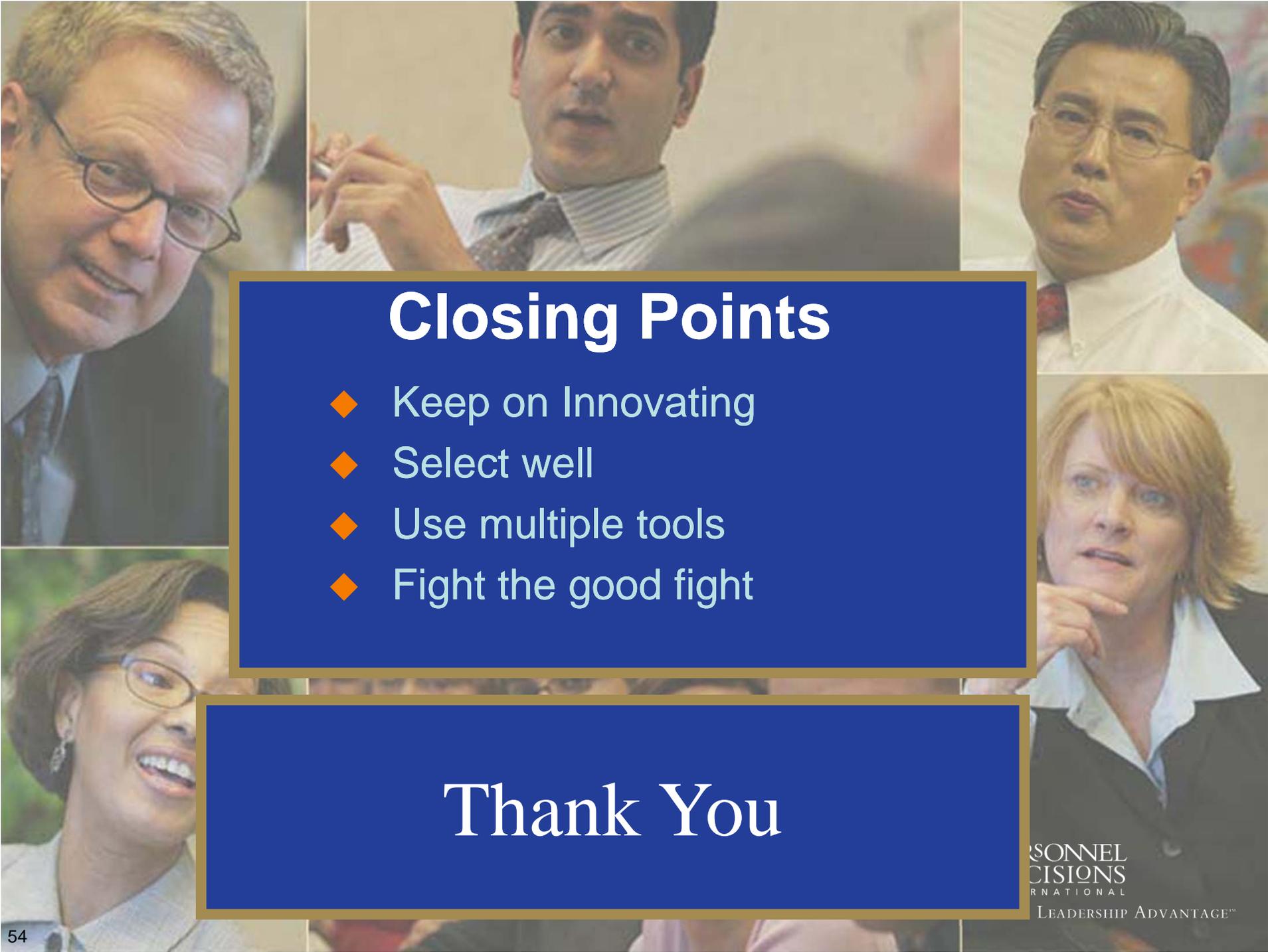
- ◆ Lack of resources
- ◆ Size of candidate pool
- ◆ Lack of planning
- ◆ Emphasis on defensibility
- ◆ “Tradition” & system requirements
- ◆ Appeals procedures
- ◆ Learned helplessness



New Applications

- ◆ Improved recruiting
- ◆ Employee development
- ◆ Performance management
- ◆ Pay for Performance
- ◆ Succession planning

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Closing Points

- ◆ Keep on Innovating
- ◆ Select well
- ◆ Use multiple tools
- ◆ Fight the good fight

Thank You

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