

Differences in the Workplace: Causes, Costs, Contributions, and Consequences

Presented by

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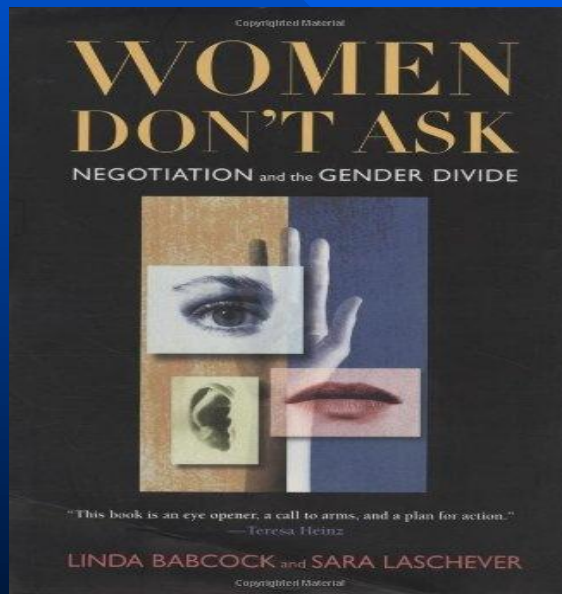
IDEAS Break
Louisiana Tech COES
and

Louisiana Tech ADVANCE PAID Program

Women Don't Ask: Negotiation and the Gender Divide

Authors

Linda Babcock and Sara Laschever



THE DIFFERENCE

How the Power of Diversity Creates Better Groups,
Firms, Schools and Societies

Author

Scott E. Page

Director,
Center for the Study
of Complex Systems,
Univ. of Michigan



Similarities and Differences

- Different but related theses
- Research based
- Written by economists

In The DIFFERENCE Page claims:

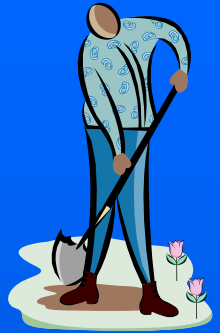
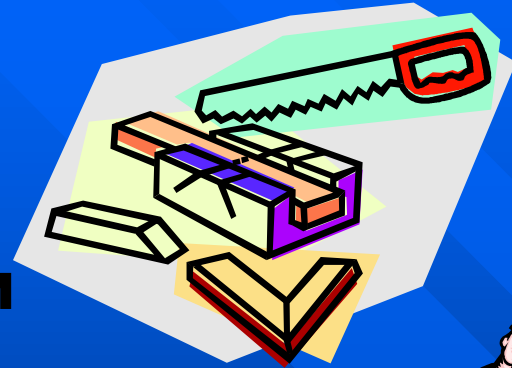
- ❑ Diversity trumps ability.
- ❑ Collective ability equals individual ability plus diversity.

Uses **mathematical models and logic** to support his claims.

Structure of presentation

- Why he started looking at diversity
- What he means by cognitive diversity
- Why diversity improves problem solving and prediction
- Some ideas about how we can leverage diversity

A Teaching Strategy



Why the math?

- Bringing math to metaphors allows the building of a science



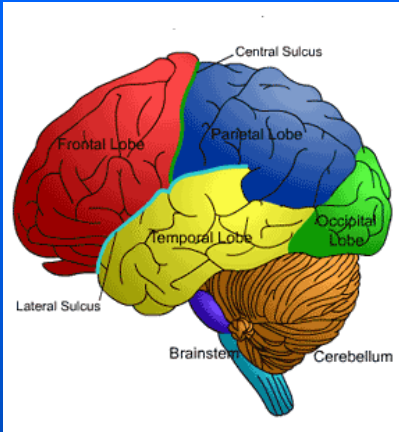
- Logic allows the identification of conditions under which diversity is beneficial.

Two steps:

Step 1: Define how we differ.

Step 2: Identify why diversity improves problem solving and prediction

Cognitive vs Identity Diversity



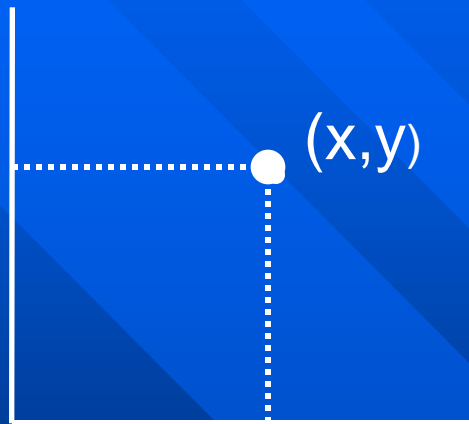
- ☐ Perspectives
- ☐ Heuristics
- ☐ Interpretations
- ☐ Predictions

- ☐ Gender
- ☐ Age
- ☐ Ethnicity
- ☐ Cultural
- ☐ Disability

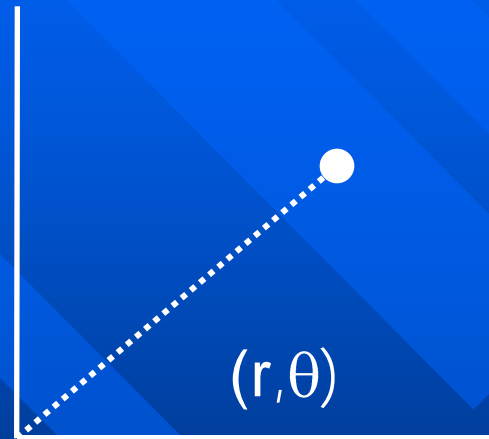
Perspectives

A perspective is a representation of possible solutions.

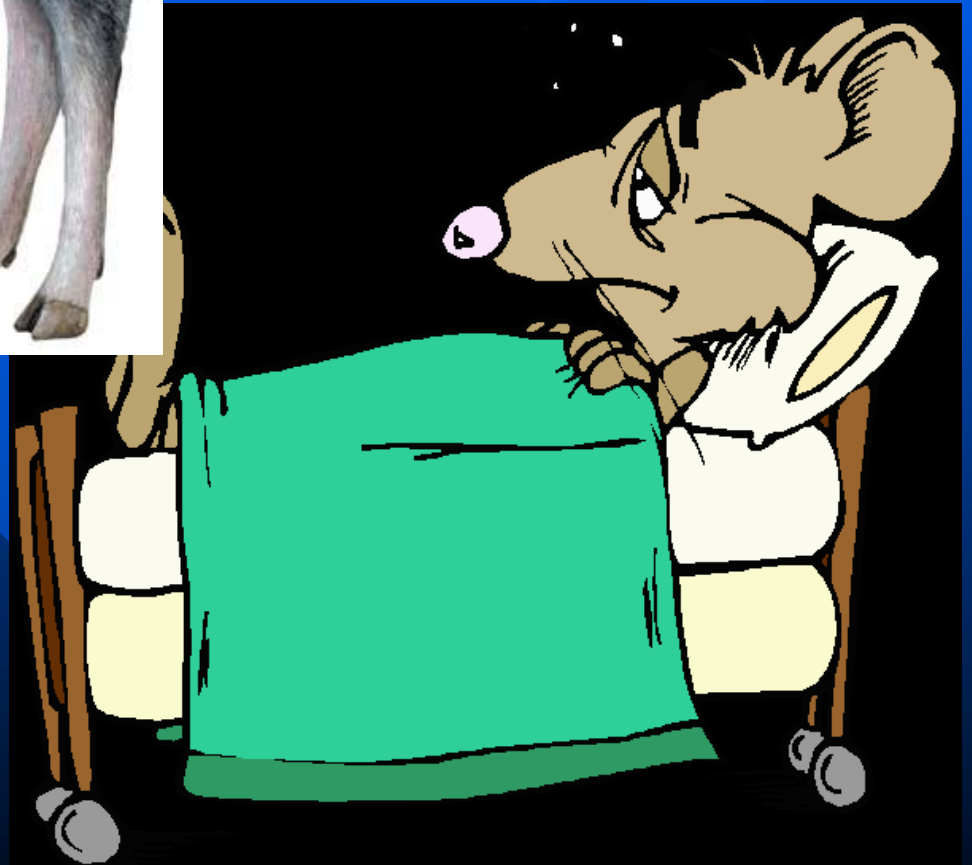
Diverse Perspectives



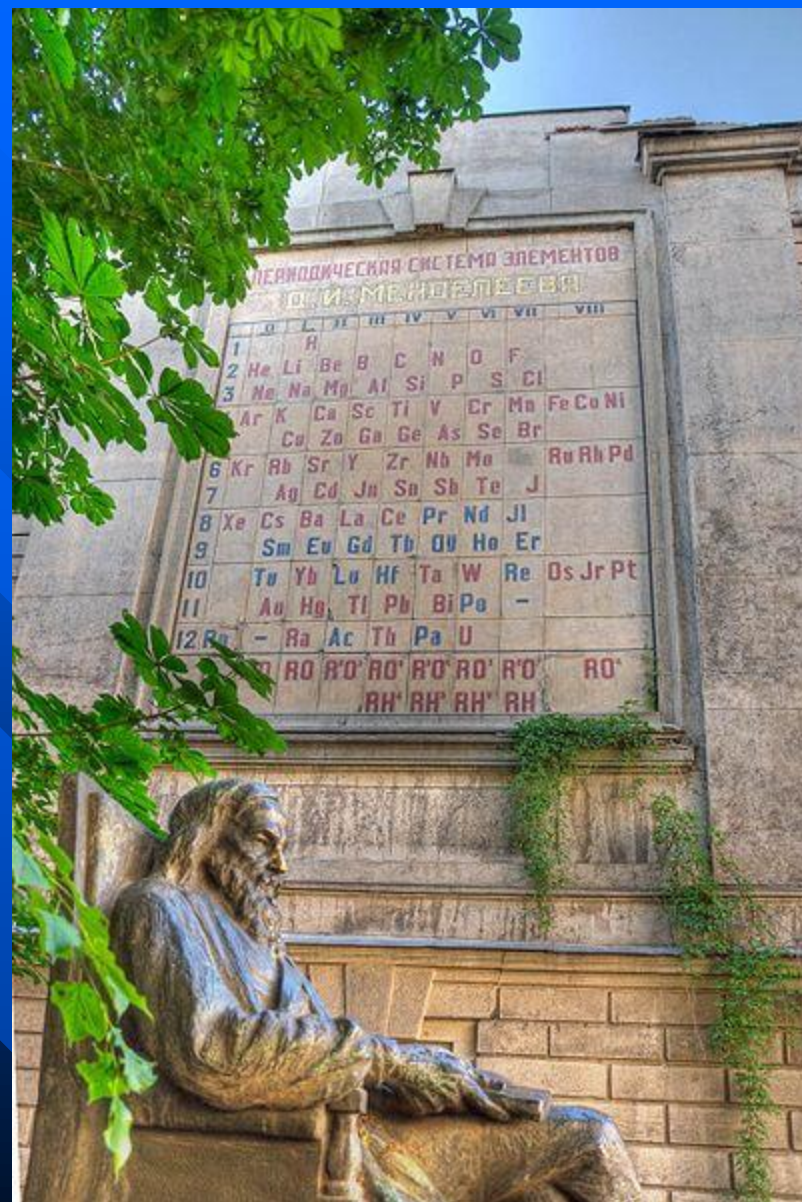
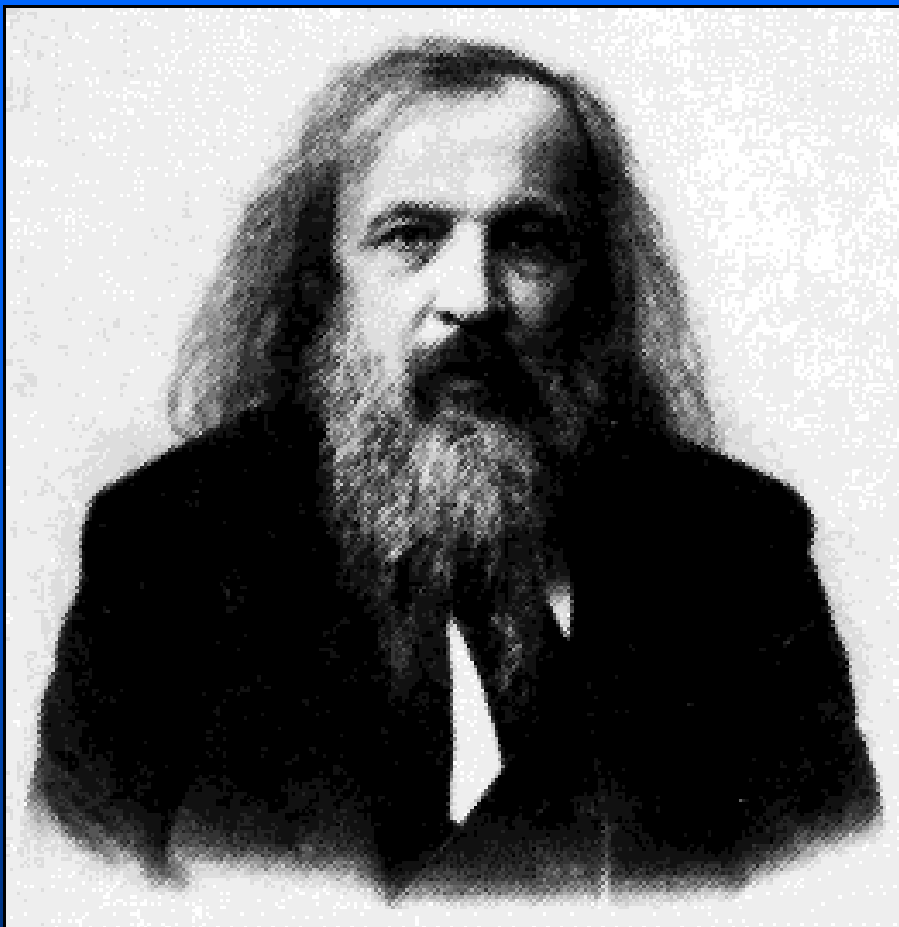
Cartesian



Polar







Sum to 15

Set Up: 9 cards placed face up

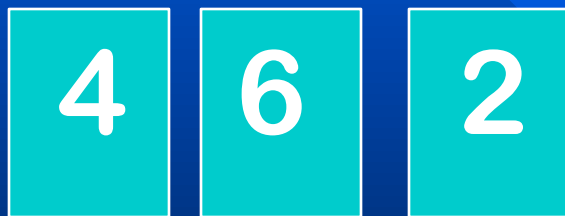
Play: Players take turn drawing one card at a time

Object: To hold exactly three cards that add up to 15



Page

de Marchii



The Magic Square

4	9	2
3	5	7
8	1	6

P	X	P
	D	X
D		P

Tic Tac Toe

Savant Existence Theory

For any problem there exists a perspective that makes it easy.



Heuristics

Tricks and techniques we
use to try to solve problems.

“Do the opposite!”

George Costanza

IQ Test Questions

1 2 3 5 8 13

1 4 9 16 25 36

1 2 6 42 1086

Superadditivity

1 heuristic + 1 heuristic = 3 heuristics

Cognitive diversity actually produces new heuristics. A major benefit!

Interpretations

Allow us to create meaningful, structured categories that allow us to make sense of the world.

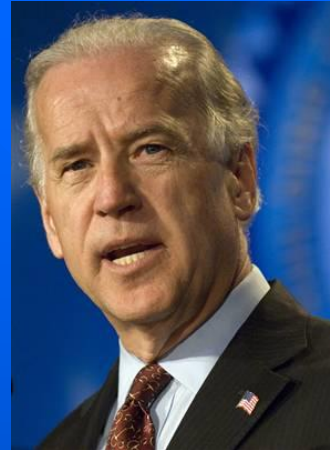


“Lump to live”



Examples:

Biden is a liberal.
Soccer moms
NASCAR dads
Price Earnings Ratios
Autism



Pile Sorts

Broccoli
Fresh salmon
Spam
Canned beets

Arugula
Canned posole
Ahi tuna
Sea Bass

Carrots
Fennel
Niman pork
Canned salmon

Veggies

Broccoli
Arugula
Carrots
Fennel

Fish & Meat

Fresh salmon
Ahi tuna
Niman pork
Sea bass

Canned Stuff

Canned beets
Canned posole
Canned salmon
Spam

Veggies

Broccoli
Canned beets
Carrots

Fish & Meats

Fresh salmon
Niman pork
Spam
Canned salmon

Weird

Arugula
Fennel
Sea bass
Canned posole
Ahi tuna

**Different categories mean people
will predict things differently.**

Predictive models

an interpretation together with a prediction for each set or category created by the interpretation.

Red cars go fast!
Orrie Page,
age 3



Individuals \neq IQ scores or SAT scores



Cognitive diversity occurs because we all have different tools in our toolboxes.

Why does “diversity trump ability?”

ASSUMPTIONS

- ☐ Problem must be “difficult”
- ☐ People have to be “smart”
- ☐ Groups and teams have to be relatively large and diverse

Experts tend to head for the same solution and get stuck at the same point.

Examples of Improved/distributed problem solving

- ☐ The Goldcorp competition
- ☐ The Netflix competition
- ☐ InnoCentive

Prediction

Diversity Prediction Theorem

Collective Error =

Avg. Individual Error – Predictive Diversity



Individual ability and collective diversity contribute **equally** to collective predictive ability.

Being different is just as important as being smart!

	NY	CHI	LA
NOAA	16	6	40
WEDC	10	14	46
Crowd Avg	13	10	43
Actual	18	16	39

**Average
= 111**

$$\text{NOAA } (16-18)^2 + (6-16)^2 + (40-39)^2 = 105$$

$$\text{WEDC } (10-18)^2 + (14-16)^2 + (46-39)^2 = 117$$

$$\text{Crowd } (13-18)^2 + (10-16)^2 + (43-39)^2 = 77$$

Collective Error = Avg. Individual Error – Predictive Diversity

Average Individual Error = 111

Collective Error = 77

Predictive
diversity



$$(\text{NOAA} - \text{Crowd})^2 = (16-13)^2 + (6-10)^2 + (40-43)^2 = 34$$

$$(\text{WEDC} - \text{Crowd})^2 = (10-13)^2 + (14-10)^2 + (46-43)^2 = 34$$

$$77 = 111 - 34$$

Take Home Messages

- ❑ Maximize available tools:
think “smart” AND “different”
- ❑ Format problems to leverage diversity
- ❑ Restructure organizations
- ❑ Take time to develop a common goal(s),
build trust, develop communication skills,
etc.
- ❑ Diversity and ability are equally important
for making accurate predictions

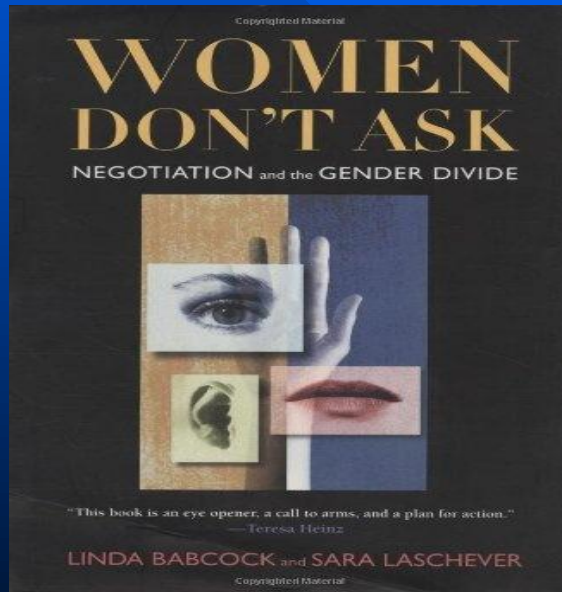
SWITCHING GEARS



Women Don't Ask: Negotiation and the Gender Divide

Authors

Linda Babcock and Sara Laschever



Three questions guide presentation:

- ❑ How do the authors know this?
- ❑ Why don't women ask?
- ❑ What does “not asking” cost?

How they know

Personal Experience



Economist,
Director PhD
Program, Hinds
College, Carnegie
Mellon & James M.
Walton Professor
of Economics

- Teach course vs TA
- Opportunity to attend public policy conference
- Promotion to full professor

Research Base



Author, focus
on women's
issues in
workplace

- Interviews with 100's of people (S)
- Surveys (L)
- Game playing (L)
- Question on exit interview Hinds College(L)

Men initiate negotiations
4X more often
than women

7%
of
women
vs **58%** of
men
negotiated
first job offer
(Hinds College,
Carnegie Mellon)

Men: negotiation = “fun”
“winning a ball game”
“a wrestling match”
Women: negotiation =
“scary” “going to the
dentist”

Women: 18 month
Buying car, home

Men: within past week
Asking colleague to
support pet project,
negotiate with wife to
pick up child

Lindsey, research chemist:

“I get so nervous in negotiating that I capitulate very quickly”

**Marcela,
nuclear engineer:**

I would never ask for a bonus. If it wasn't freely given I wouldn't ask for it. I might gripe about it at home, but that would be the end of it.

**Eleanor, lit
professor and
biographer:**

When it came down to it, I backed down because I didn't want my editor to hate me.

Why don't women ask for themselves?

- ❑ Socialization as children
- ❑ Types of acceptable behavior for adult women
- ❑ Availability of professional and personal networks

From Day 1





Girls
have
learned:

Wait to be
recognized





Boys' Chores vs Girls' Chores

- | | |
|--|---|
| <input type="checkbox"/> outside home | <input type="checkbox"/> household chores |
| <input type="checkbox"/> more independent | <input type="checkbox"/> supervised |
| <input type="checkbox"/> much more frequently work for money | <input type="checkbox"/> taking care of younger sibling |
| <input type="checkbox"/> as needed | <input type="checkbox"/> regular schedule |

**Boys learn:
Work for money!**



**Girls learn:
Work for love!**

**Women come to workplace with
much less experience in
negotiation**

AND

**A much lower comfort level with
the idea that their work has a
monetary value or what that
monetary value is**

THEN:

Find that men and other women in workplace don't like aggressive women.

□ Aggressive women are “punished”

- work is undervalued
- given mediocre referrals
- aren't nominated for committees
- described in unflattering terms
- etc.



AND

Women are often peripheral or completely isolated from many of the networks men have to help them.

- Example: tennis round robin, physicians

What this means:

- do not get informal advice and guidance
- don't know what to ask, who to ask, when to ask
- don't even know what male colleagues are asking for

SO

What does it cost and who does it cost when women don't ask?



???



Who wouldn't trade 5 minutes of discomfort/embarrassment at the first of her career for three quarters of a million dollars at the end of her career?

Person A vs Person B
(22 years old)

Yr 1 \$25,000 gap = \$5,000/yr \$30,000

Both 3% increase each year

At end of career: gap = \$18,000/yr

If Person B invested difference each
year into an account that earned as little
as 3% a year, at age 65 the account
would contain \$785,000

Person A vs Person B
(30 years old)

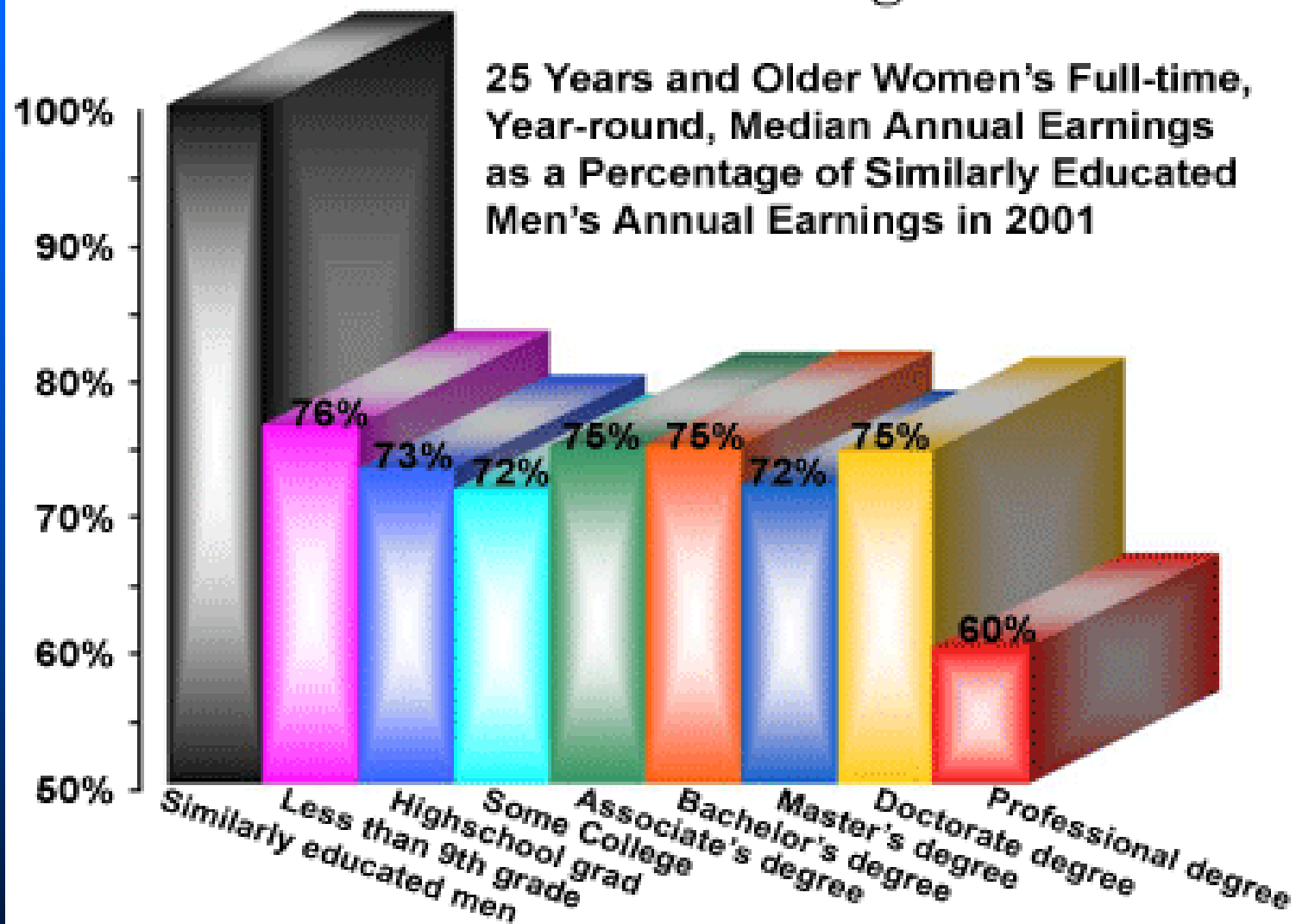
Yr 1 \$100,000 gap = \$15,000/yr \$115,000

Both 3% increase each year

At end of career: gap = \$42,000/yr

If Person B invested difference each year into an account that earned as little as 3% a year, at age 65 the account would contain \$1.5 million dollars

Earnings in Relation to Similarly Educated Men's Earnings



Closing of wage gap has stalled since 1980:

Wage gap between salaries of females vs males

1980	60%
1990	71%
2000	71%
2007	75%

\$80,000 male = \$60,000 female (75%)

**SHE works 12 months to earn what
HE earns in 9 months**

Not only money:

- ☐ space, laboratory/research assistants
- ☐ decreased teaching load
- ☐ assignment to prestige projects
- ☐ assignment to high profile teams
- ☐ assignment to important committees
- ☐ chance to collaborate with someone from whom you could learn
- ☐ access to discretionary funds
- ☐ opportunities to travel

Women tend to think:



“I’ll be recognized
for my great work.”



Women make up 50% of workforce

In major companies:

- Top 5 jobs	2.5% female
- Board of Directors	11% female
- Partners in law firms	18% female
- Tenured faculty in law schools	27% female
- General counsel, Fortune 1000	16% female

In academia:

- PhDs	46% female
- Full Professors	23% female
- College Presidents	21% female

(13% at PhD granting institutions)

The full potential of female employees is not being harnessed by industry and academia.

And at home:

- Women with families do 2/3 of all household work
 - women have less free time
 - women have higher stress levels which leads to health risks



When women do ask:

- they ask for 15 -30% less than their male colleagues ask for!



Men think:



The world is my oyster!

Women think:

**You can't get blood from a
turnip!**



Why do women set low goals?

GOAL!!!!

Goal!



When women do negotiate:

- ☐ view it as a collaborative process
- ☐ want to make sure everyone comes out of negotiation with at least part of what they want
- ☐ want to make sure relationships are maintained
- ☐ want to develop a win-win scenario

How can we address this issue?

- ☐ Raise awareness of all students
- ☐ Provide all students training in how, why, and when to negotiate
- ☐ Design assignments/projects to provide all students with opportunities to practice negotiation skills
- ☐ Support programs that provide the above

THE CONNECTION

If cognitive diversity on teams leads to enhanced problem solving and more accurate predicting, then it is essential to identify and address those issues that limit participation of individuals or groups who might enhance that diversity.