

Might *g* explain the “remarkably general” relation between social class and health?

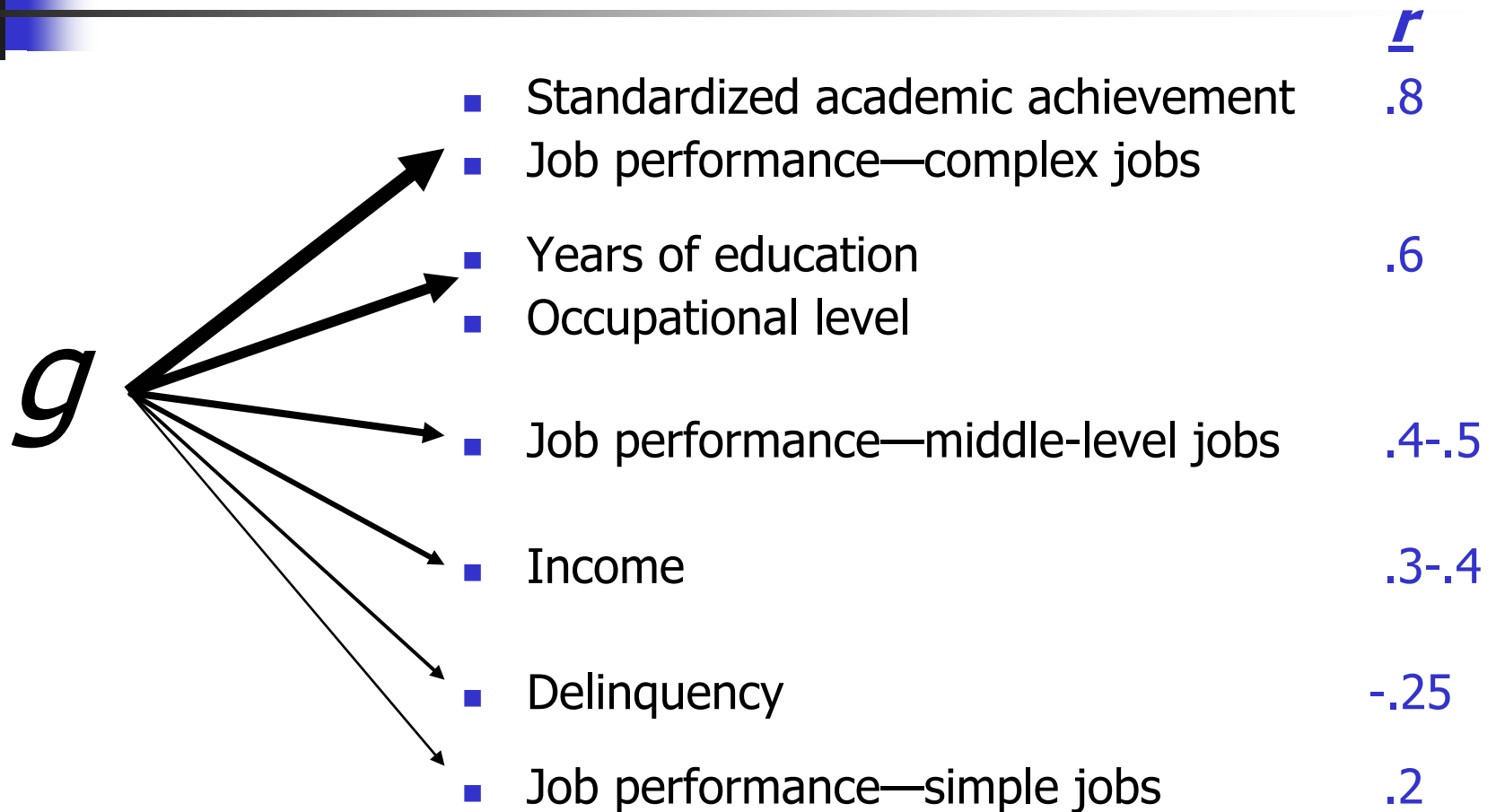
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Prepare to answer this:

- Linda sees her dentist at 1:00 today
- Here is a vial of prescription medicine she needs to take
- What does the vial tell her to do?

Correlation of g With Different Life Outcomes





Functional Literacy (NALS)

NALS Level	% pop. (white)	Simulated Everyday Tasks
5	4%	<ul style="list-style-type: none">▪ Use calculator to determine cost of carpet for a room▪ Use table of information to compare 2 credit cards
4	21%	<ul style="list-style-type: none">▪ Use eligibility pamphlet to calculate SSI benefits▪ Explain difference between 2 types of employee benefits
3	36%	<ul style="list-style-type: none">▪ Calculate miles per gallon from mileage record chart▪ Write brief letter explaining error on credit card bill
2	25%	<ul style="list-style-type: none">▪ Determine difference in price between 2 show tickets▪ Locate intersection on street map
1	14%	<ul style="list-style-type: none">▪ Total bank deposit entry▪ Locate expiration date on driver's license

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NALS Level	% pop. (white)	Simulat	
5	4%	<ul style="list-style-type: none"> Use calculator to Use table of infor 	<p>Difficulty based on "process complexity"</p> <ul style="list-style-type: none"> level of inference abstractness of info distracting information
4	25%	<ul style="list-style-type: none"> Use eligibility pan Explain difference 	
3	36%	<ul style="list-style-type: none"> Calculate miles pe Write brief letter 	
2	25%	<ul style="list-style-type: none"> Determine differe Locate intersectio 	
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IQ and Motor Vehicle Fatalities

- IQ is best predictor

Australian veterans followed to age 40	Death rate per 10,000
IQ: above 115	51.3
100-115	51.5
85-100	92.2
80- 85	146.7

2x
3x

- “People with lower IQ may have a poorer ability to assess risks and, consequently, may take more risks in their driving.”



SES-Health Gradient

- Higher social class (education, occupation, income) associated with:
 - Lower morbidity
 - Lower mortality
 - Better health behaviors
 - More health knowledge



Puzzling Generality

- Virtually all major diseases/causes of death
- All demographic groups
- All nations
- All decades



Puzzling Generality

- Virtually all major diseases/causes of death
- All demographic groups
- All nations
- All decades
- Regardless of the disease's treatability
- Even when health care free
- Even when treatments identical

Example (odds ratios): Same for all sex/race (B/W) groups

Cum. probability of onset by age 63 for persons aged 51 without the disease	Years of Education		
	8	12	16
Diabetes , Chronic obstructive pulmonary disease	2.0	1.0	0.5
Stroke , heart, hypertension	1.5	1.0	0.7
Cancer	0.7	1.0	1.4

Red=prevalence rates higher for black M and F



Behavioral Differences

- When free, lower social classes seek:
 - Less information
 - Less preventive care
 - More—but less appropriate—curative care
- Perform worse:
 - Know, understand less
 - Less healthy behavior (e.g., smoking)
 - Adhere less to treatment regimens



Puzzling Linearity

- Health is *increasingly* better at higher SES levels, even beyond point where resources are more than sufficient
- “Finely graded”



Puzzling Increases in Health Inequalities

- When health **care** made more widely available
- When health **information** made more widely available



Level of Explanation

- Mean group differences (social class)
- **Not** individual differences



Epidemiologists' Conclusion

- A mysterious “fundamental cause”
- Candidates
 - **Cannot** be material resources
 - Psychic mediators of SES?
 - Social support, connectedness, anxiety, stress
 - Sense of control, mastery, esteem, stigma
 - Capacities in coping, resistance, problem-solving
 - Inequality itself? (relative deprivation)
 - **Not** IQ!!



Social Class Differences in IQ

Education (yrs.)	IQ	Occupation	IQ
16+	115	Prof/technical	111
12-15	107	Mang/cler/sales	104
12 (HS diploma)	100	Skilled	99
9-11	96	Semiskilled	93
8	91	Unskilled	89
0-7	82		
2 SD		1.5 SD	



Is g A Plausible Candidate?

- SES-health gradient steeper when SES scale is a better surrogate for g
 - education +++
 - occupation ++
 - income +
- New IQ-health studies (e.g., Deary et al.)
- “Job” of patient like other (g -loaded) jobs



Jobs' Demands for g

- Dominant distinction among jobs:
Arvey's "Judgment and Reasoning" Factor
 - Deal with unexpected situations
 - Learn and recall job-related information
 - Reason and make judgments
 - Identify problem situations quickly
 - React swiftly to unexpected problems



Complexity of information processing (g loading)



Key Task: Chronic Illnesses

- “Slow-acting, long-term killers that can be treated but not cured”
- Self-care is as important as medical care
- Require continued need “to learn,” “reason,” and “solve problems”

Chronic illnesses are demanding, long-term “careers.”



Chronic Illnesses Require Foresight & Prevention

- Keep informed
- Live healthy lifestyle
- Get preventive checkups
- Detect signs and symptoms
- Seek timely, appropriate medical attention

All are less frequent in lower social classes



Chronic Illnesses Require Self-Regulation/Treatment

- Follow treatment regimen
 - Use medications as prescribed
 - Diet, exercise, no smoking, etc.
 - Including for diseases without outward signs (e.g., hypertension)
- Monitor daily signs and symptoms
- Adjust medication and behavior in response to signs
- Have regular check-ups

All are less frequent in lower social classes

Chronic Illnesses Require Self-Regulation to Limit Damage

Urban hospital outpatients: % diabetics <i>not</i> knowing that:	Health literacy level		
	V-low	Low	OK
Signal: Thirsty/tired/weak usually means <u>blood sugar too high</u> →	40	31	25
Action: Exercise lowers blood sugar →	60	54	35
Signal: Suddenly sweaty/shaky/hungry usually means <u>blood sugar too low</u> →	50	15	6
Action: Eat some form of sugar →	62	46	27



Your answer re Linda's pills?

What does the vial tell her to do for her appointment?

- How many pills does she take?
- When does she take them?



Literacy Researchers' Conclusion

- Non-compliance a huge problem
- Often due to failure to “learn, reason, & problem-solve”
- Can be a matter of life & death
“Ability to learn and correctly follow the treatment regimen for a heart attack will determine a trajectory toward recovery or a downward path to recurrent myocardial infarction, disability, and death.”



In Summary—

- You are your own “primary health care” provider



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- g is only one factor producing individual differences in health



In Summary—

- You are your own “primary health care” provider
- g is only one factor producing individual differences in health
- But g may be the major factor producing SES differences in health



Thank You

www.udel.edu/educ/gottfredson/reprints