

The Longevity Project: Life-long Paths to Long Life



Howard S. Friedman Sept. 19, 2013

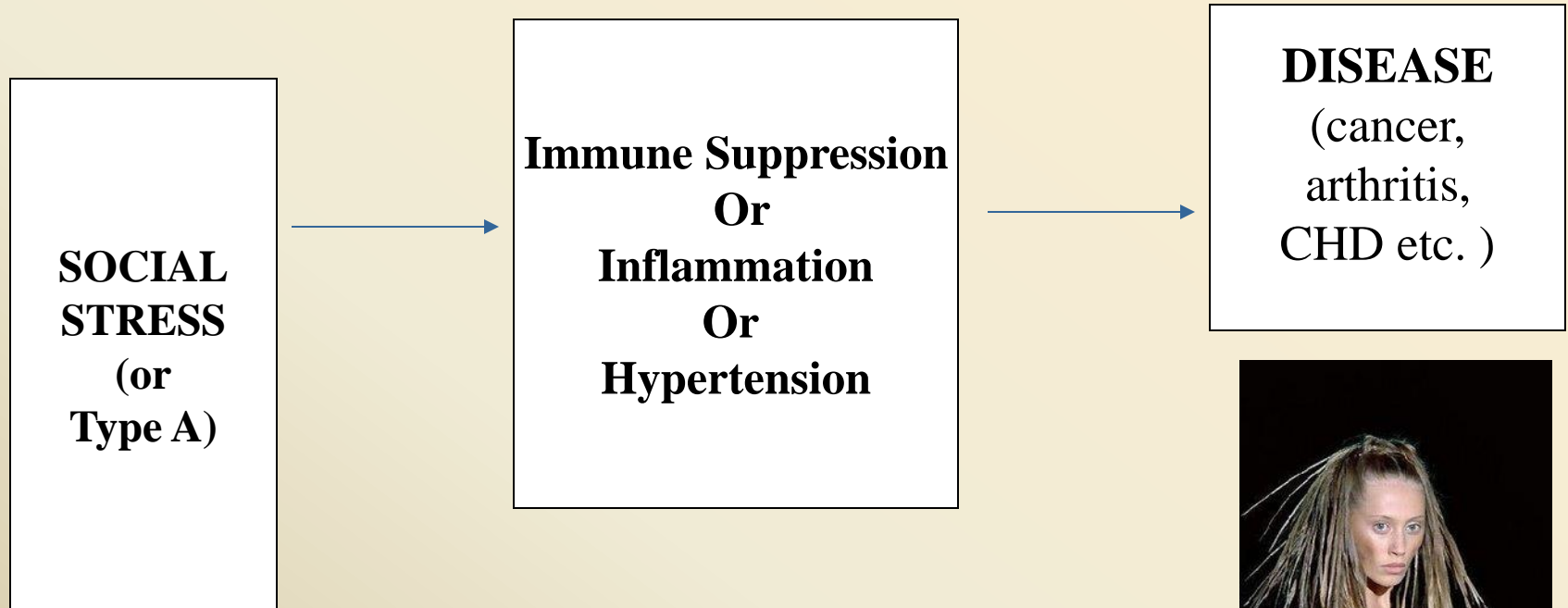
Now 102 years old



Why are there now many elderly people?

- ❖ The average 65-year-old these days lives only five or six years longer than his or her grandparents did
 - ❖ There are now so many elderly people because so many individuals live & thrive in good health into their 50s, 60s and 70s
 - ❖ Why do some people thrive while others succumb?
-

Common View of Stress & Illness

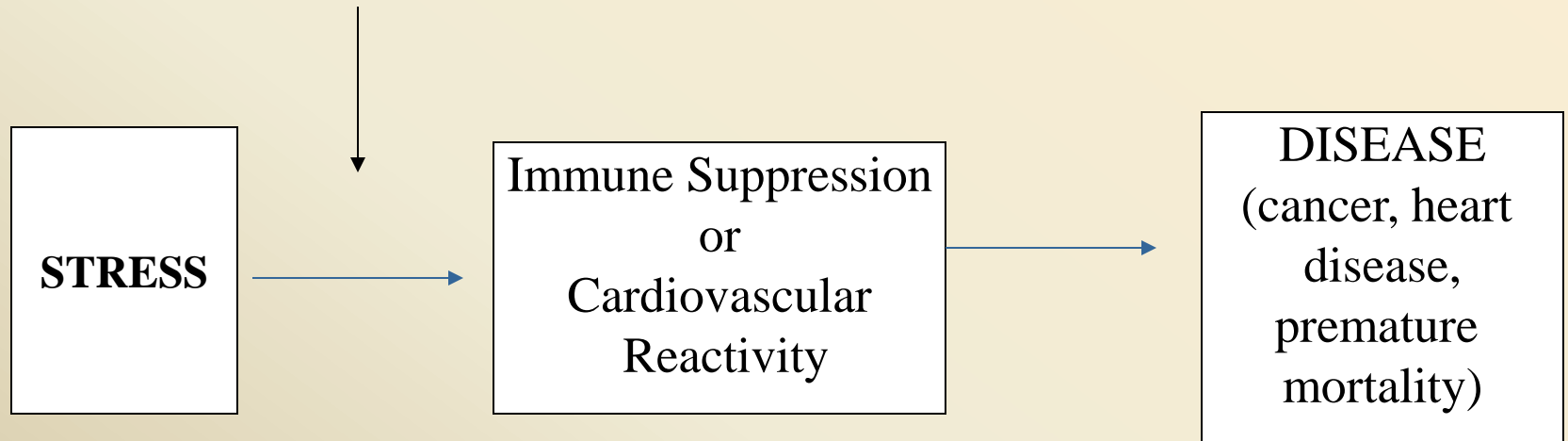


Too limited!
(Unhealthy model)

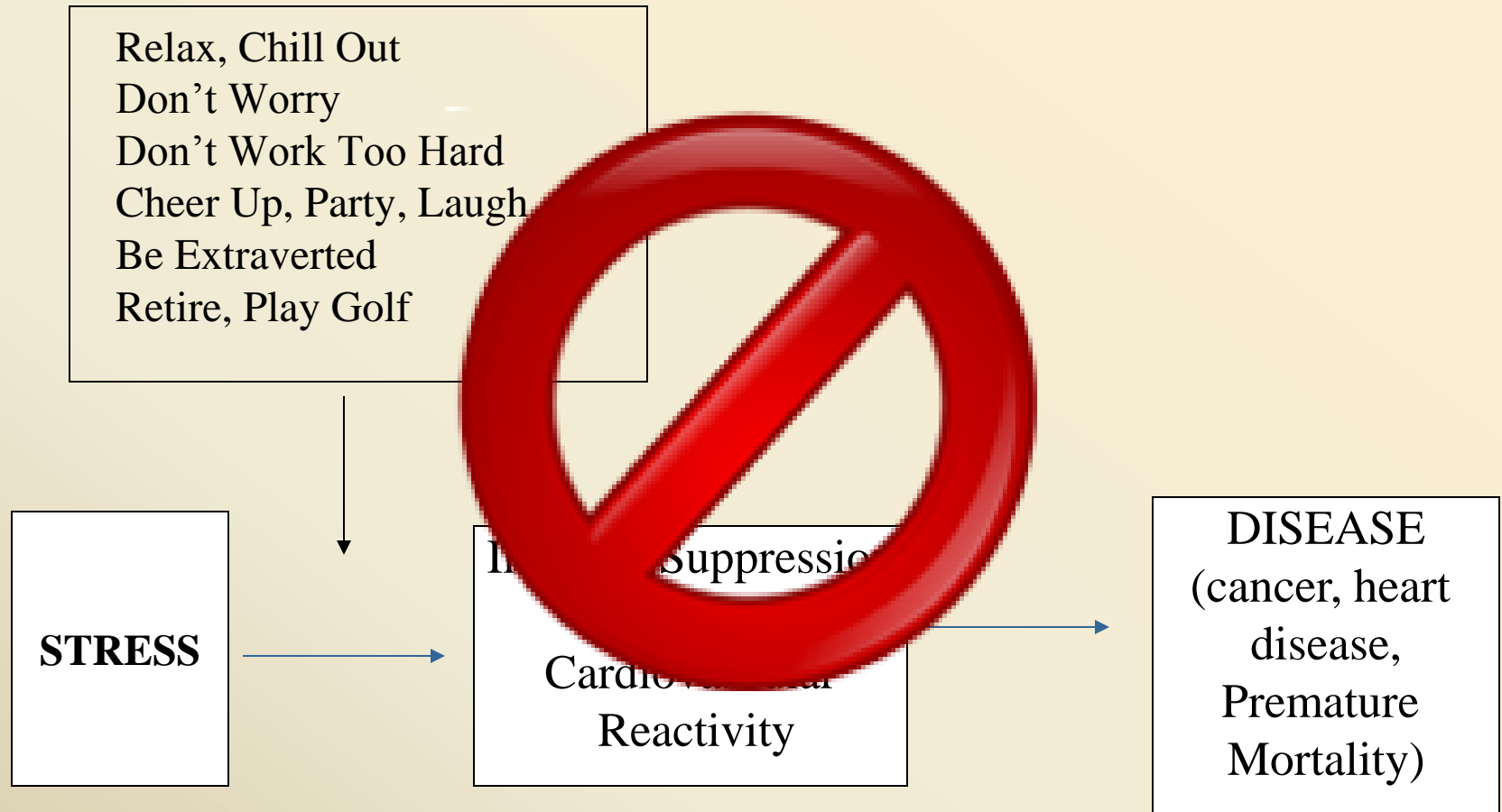


Common Advice

Relax, Chill Out
Don't Worry
Don't Work Too Hard
Cheer Up, Party, Laugh
Be Extraverted
Retire, Play Golf



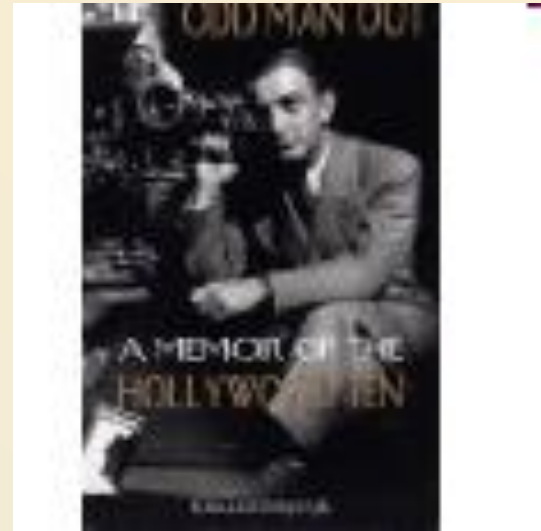
Bad Common Advice



Edward Dmytryk



Directed 56 films
(incl. The Caine
Mutiny)



*Odd Man Out: A
Memoir of the
Hollywood Ten*

Limits of Centenarian Studies (100-year-olds)

There is no proper control group.
You really want to compare the
healthy centenarians to dead
centenarians.

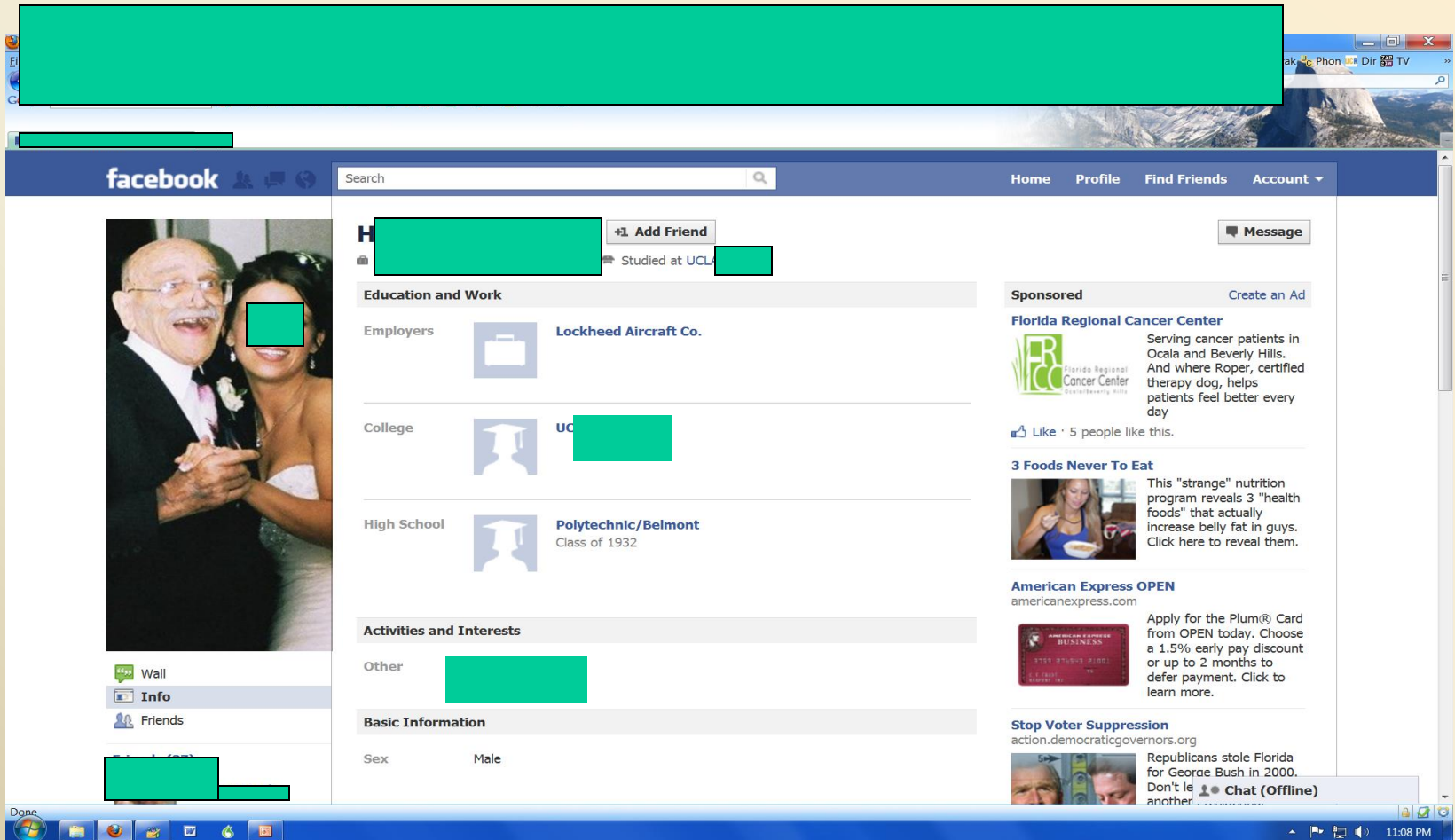


So we need to examine *the context of
their full lives*, from childhood on.

The Terman Life Cycle Study

- ❖ Began around 1921 when most of the 1,528 participants were in elementary school
 - ❖ Data have been collected and refined on the social relations, education, personality, habits, careers, families, mental health, life stress, physical activities, and physical health
 - ❖ **importantly, we have created valid variables, & collected death certificates and coded date and cause of death**
-

Just Found Him!



A screenshot of a Facebook profile page. The profile picture shows an elderly man with glasses and a mustache, smiling, next to a woman. The name of the profile is redacted with a green box. The page layout includes a navigation bar at the top with 'facebook' and search, home, profile, find friends, and account links. The profile section shows 'Education and Work' with entries for Lockheed Aircraft Co., UC (redacted), and Polytechnic/Belmont Class of 1932. The 'Activities and Interests' section shows 'Other' as 'Polytechnic/Belmont'. The 'Basic Information' section shows 'Sex' as 'Male'. The right sidebar contains sponsored ads for Florida Regional Cancer Center, 3 Foods Never To Eat, American Express OPEN, and Stop Voter Suppression. The bottom of the page shows a Windows taskbar with the time 11:08 PM.

facebook

Search

Home Profile Find Friends Account

Message

Education and Work

Employers Lockheed Aircraft Co.

College UC

High School Polytechnic/Belmont Class of 1932

Activities and Interests

Other

Basic Information

Sex Male

Sponsored

Create an Ad

Florida Regional Cancer Center

Serving cancer patients in Ocala and Beverly Hills. And where Roper, certified therapy dog, helps patients feel better every day

Like · 5 people like this.

3 Foods Never To Eat

This "strange" nutrition program reveals 3 "health foods" that actually increase belly fat in guys. Click here to reveal them.

American Express OPEN

americanexpress.com

Apply for the Plum® Card from OPEN today. Choose a 1.5% early pay discount or up to 2 months to defer payment. Click to learn more.

Stop Voter Suppression

action.democraticgovernors.org

Republicans stole Florida for George Bush in 2000. Don't let it happen again.

Chat (Offline)

In response to clever “Termites”

- My grad students demanded that we come up with our new name:

THE TERMAN-ATORS

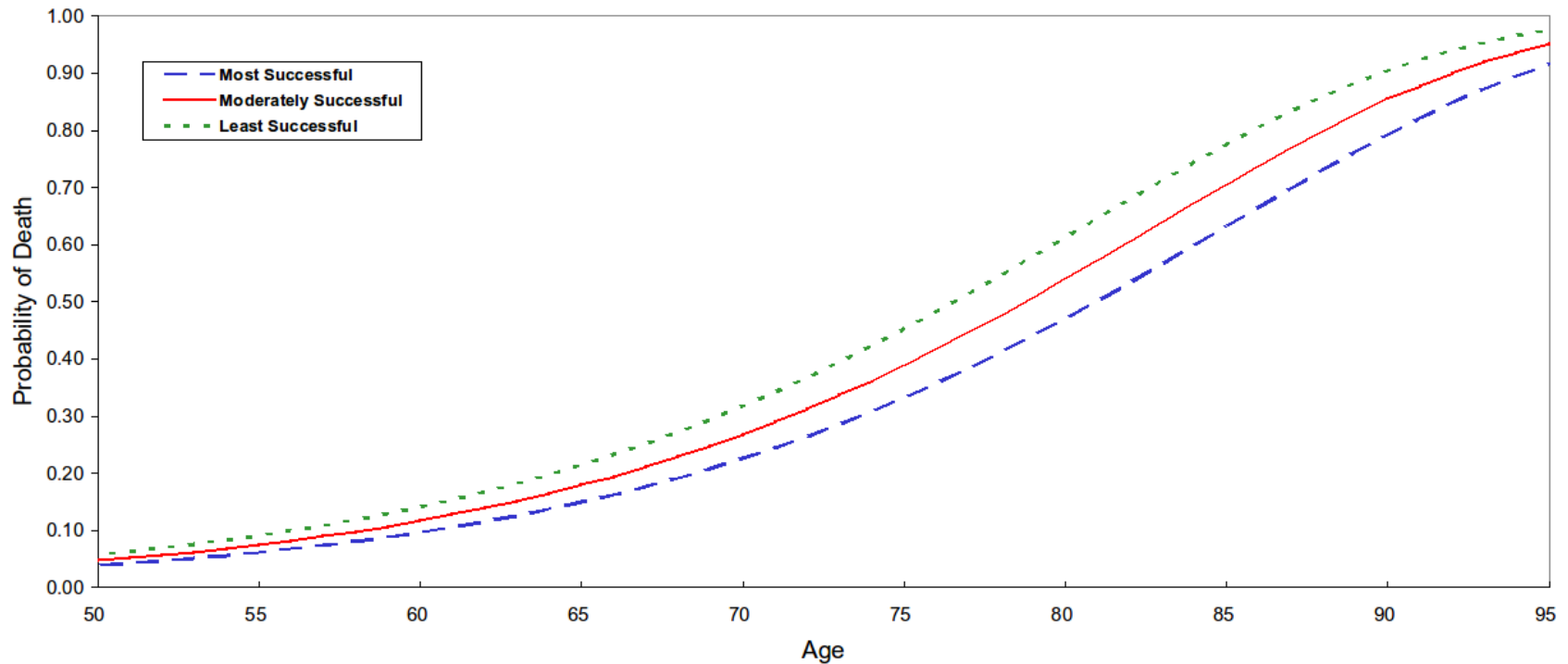
You can see the resemblance



Working at 102



Probability of dying at a given age by Career Success group



N=693 men Interquartile relative hazard (rh) = .80 [.71, .91]

Core predictor is Conscientiousness

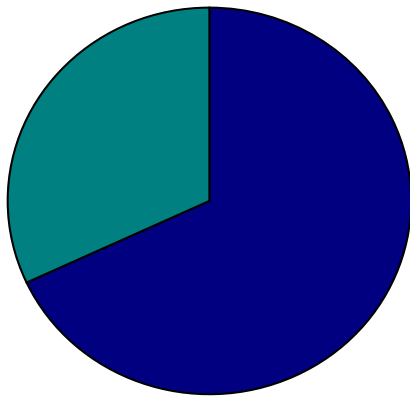


- Childhood: Ratings (parent & teacher) of **prudence, freedom from vanity, conscientiousness**
- Validated new indexes w/ measurement invariance in contemp. sample
- Confirmed in meta-analysis (Kern & Friedman) & many very recent studies by others. Confirmed in Adulthood: persistent, careful, self-controlled

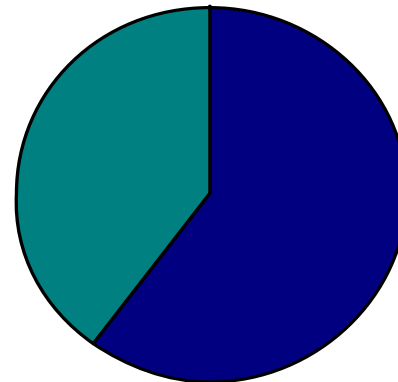
Conscientiousness in Childhood

Percent Alive vs. Dead by Age 70

High Childhood Conscientiousness

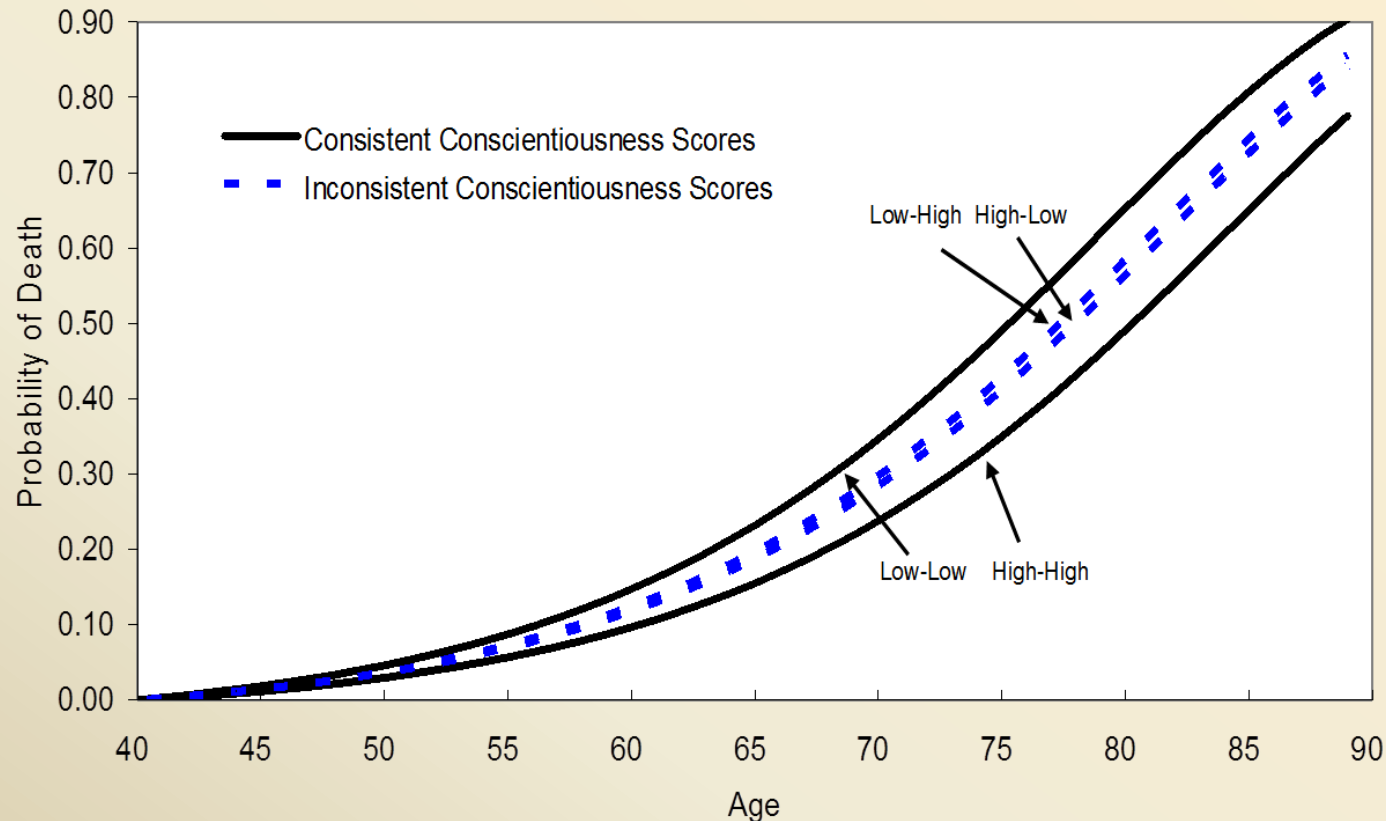


Low Childhood Conscientiousness



■ Alive
■ Dead

Probability of death based on Conscientiousness at two time points

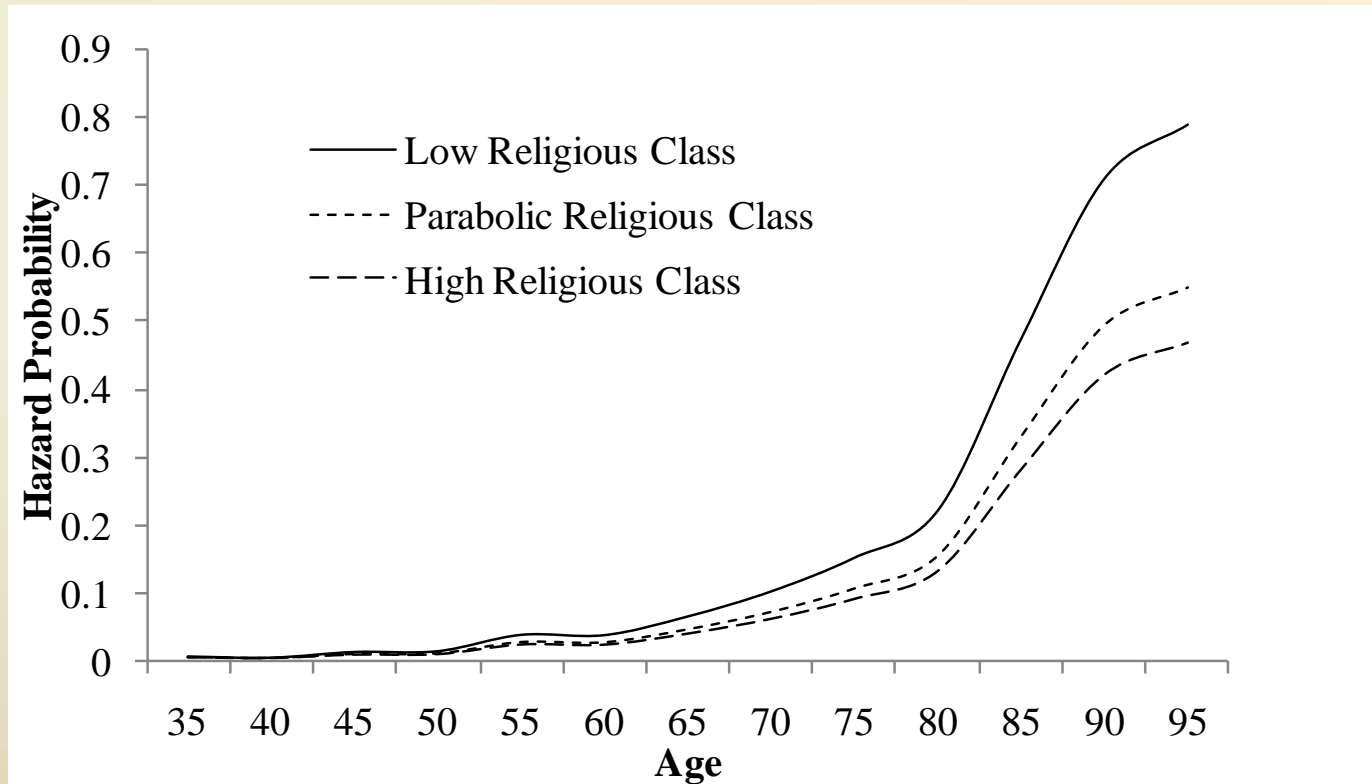


The more conscientiousness across time, the better

Three Key Elements of Healthy Aging Across the Decades

- Religiosity Patterns (trajectories) women
- Physical activity patterns age 25-61
- Terman & Hawaiian combined studies of conscientiousness, education, and health/longevity ...

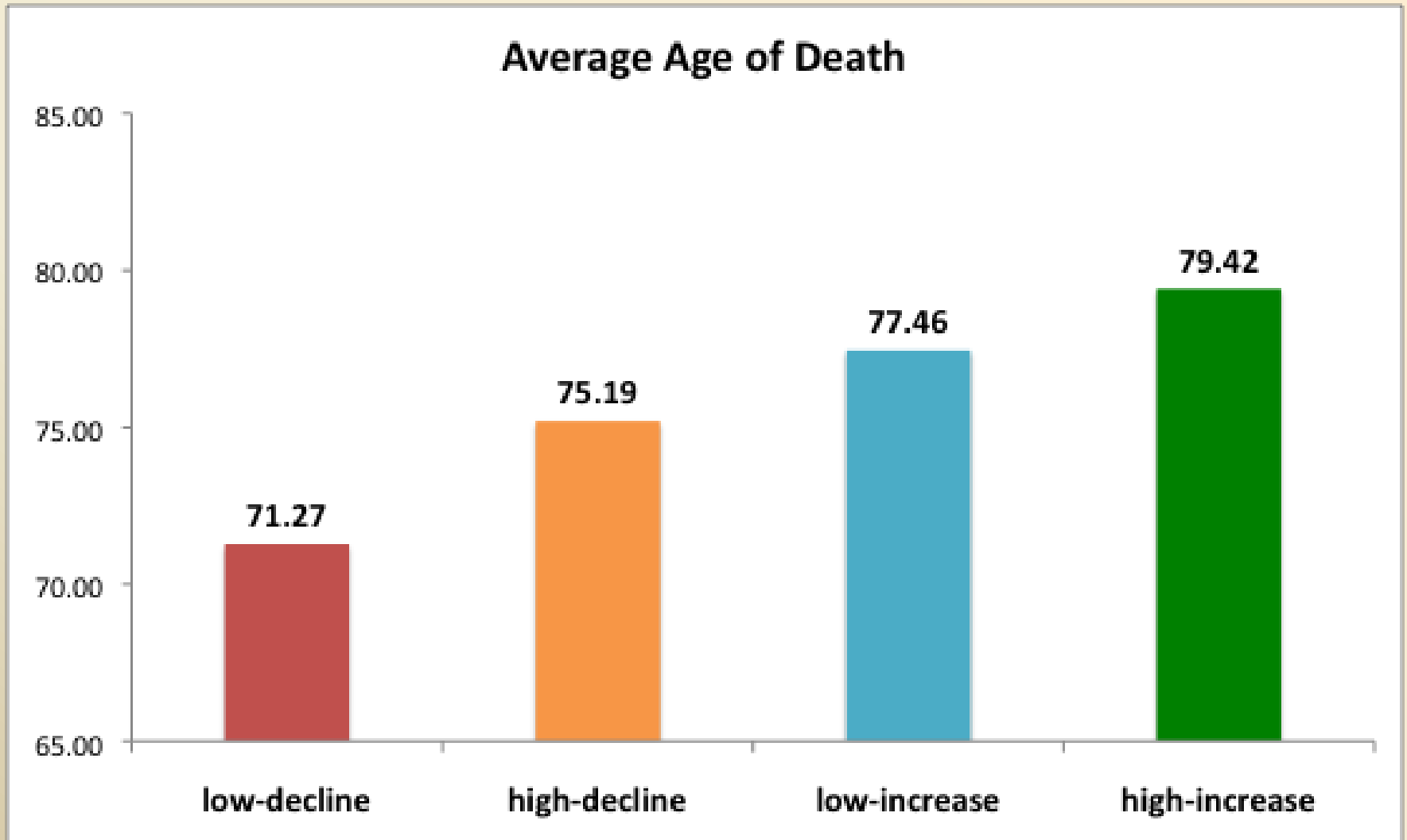
Religiosity & Mortality Risk



Women in the 3 religious trajectory classes [w McCullough & Enders]

The steadily religious lived longest -- had the best social involvement

36-Yr Activity *Patterns* & Longevity



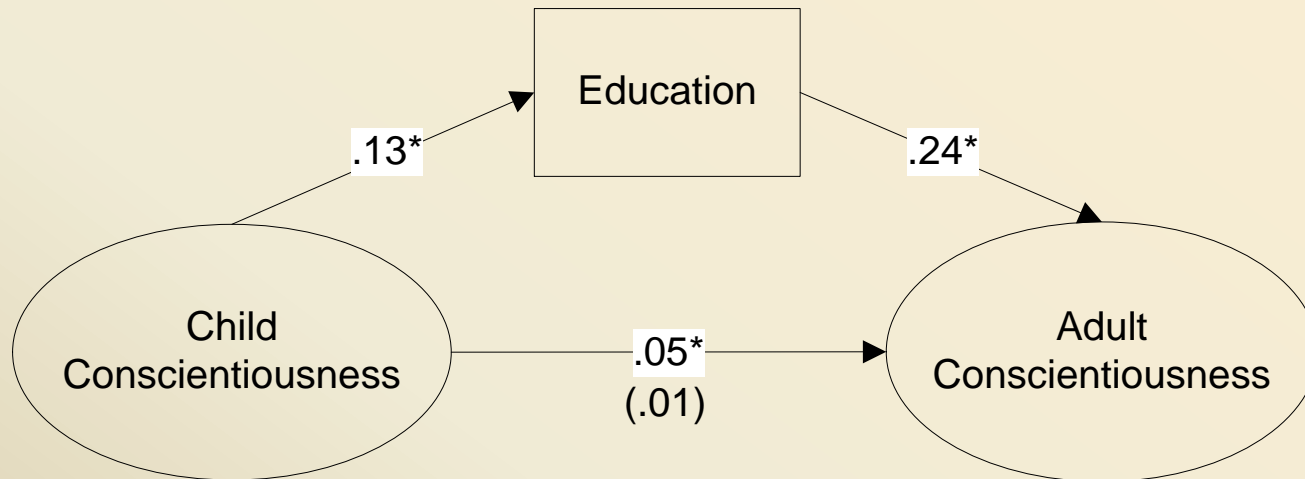
Hawaii Teacher Assessments of Children (different study, with similar life-span measures)

(Digman collected ~1959 to 1967: re-analyzed by Goldberg, Hampson, Edmonds & others at ORI)

- 2,400 elementary-school students rated by 88 teachers on Oahu and Kauai
- Each teacher rank-ordered all her students on each of 50 personality traits
- E.g. *Persevering*: “Keeps at his/her work until completed; sees a job through despite difficulties; painstaking and thorough”

Terman

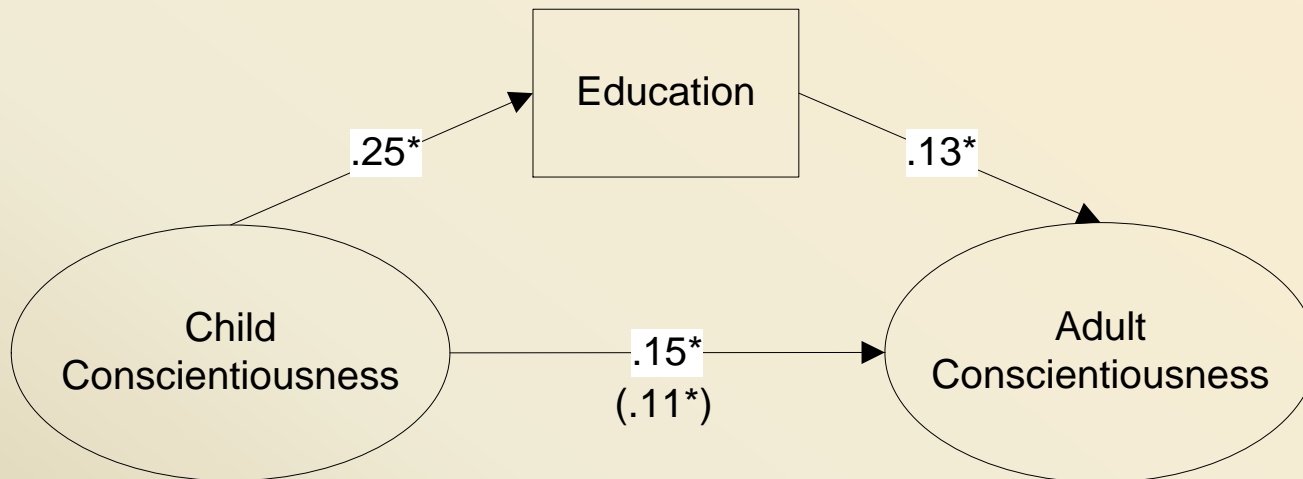
Conscientiousness & Education



The path from child to adult conscientiousness controlling for educational attainment is reported in parenthesis.

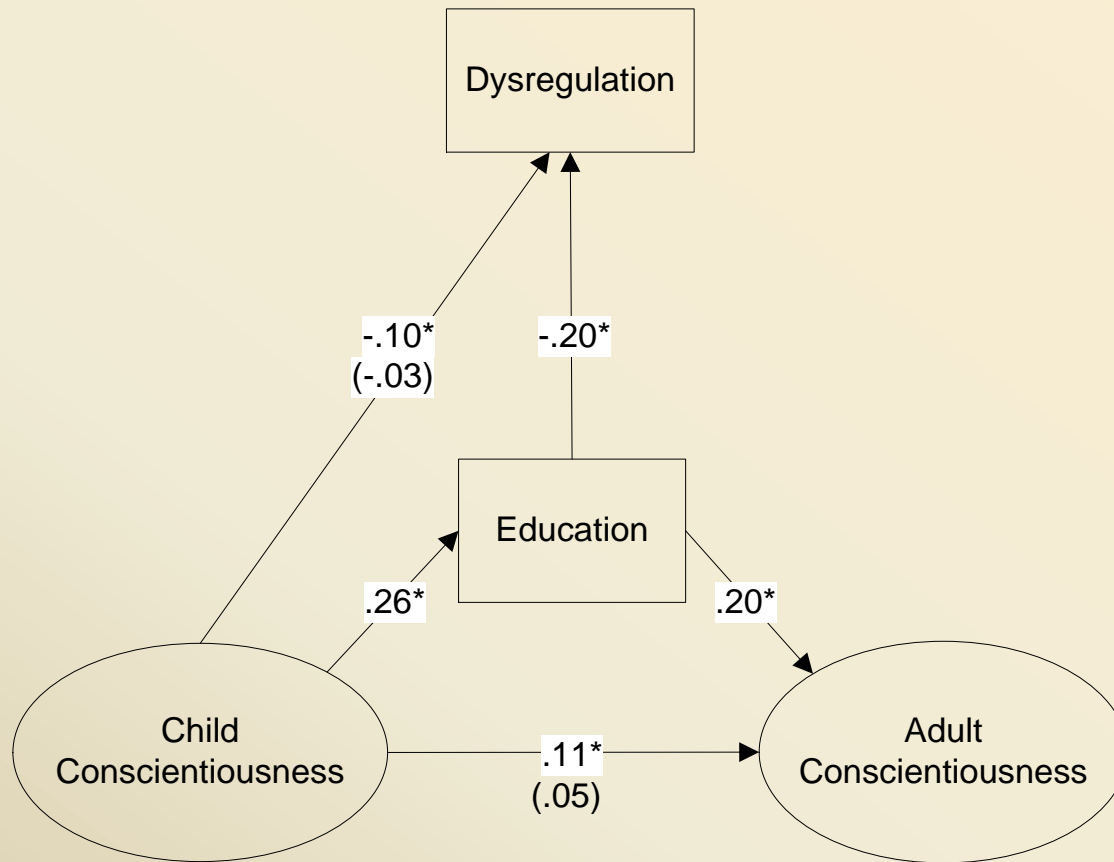
Hawaii

Conscientiousness & Education



In both studies, conscientious kids get more education and education makes them more conscientious!

Hawaii: Physio dysregulation in adulthood [Hampson & Edmonds]



Pathways/ Mechanisms: Homeostasis

Personality →

(loner, low self-control)



Disruption in
Homeostasis

(immune suppression
etc.)

→ Poor Health

Pathways/ Mechanisms: Unhealthy Behaviors

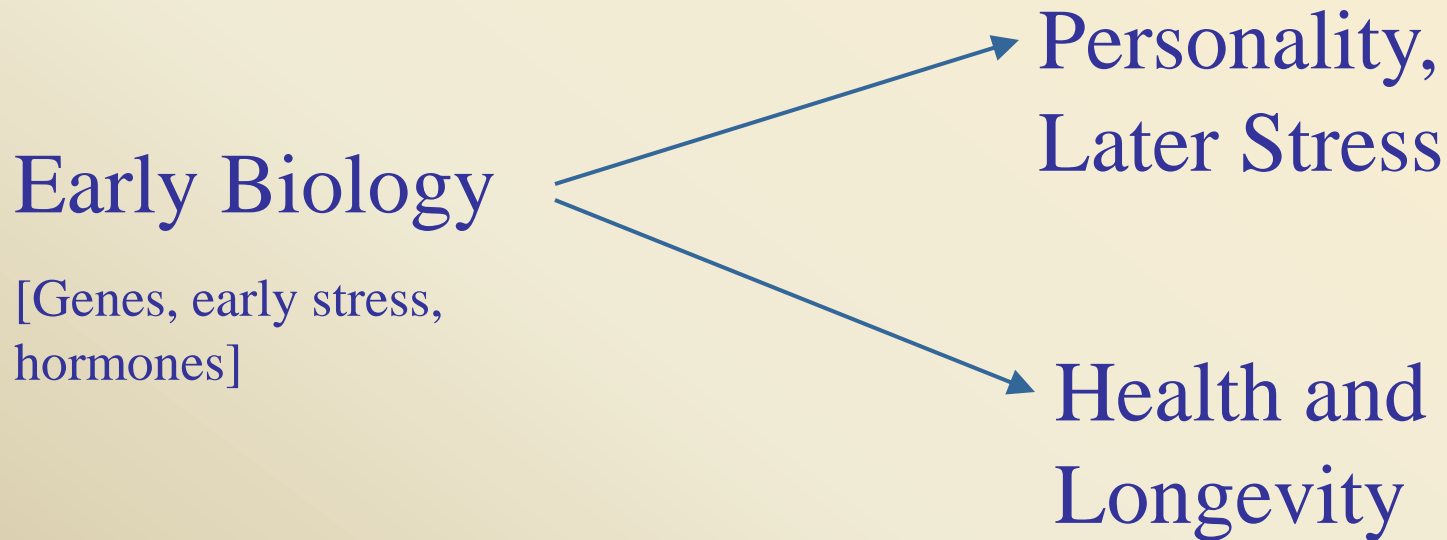


**LOTS of evidence for this Pathway:
Stress gets under your skin through
your MOUTH**



Pathways/ Mechanisms

(underlying 3rd variable) (too often ignored)

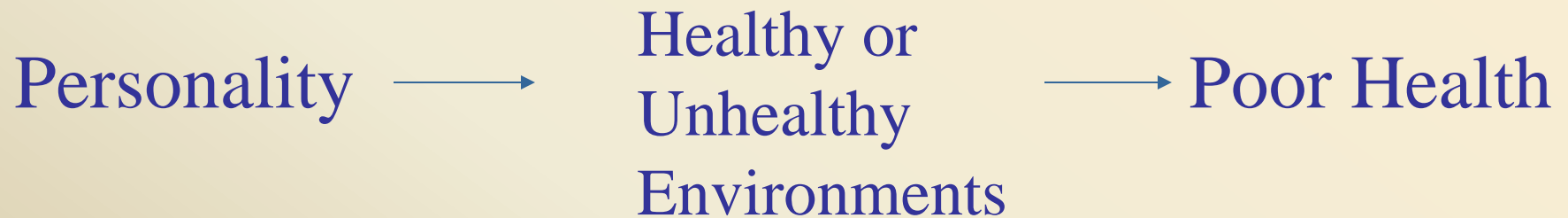


Probably very important Pathway

Meteor Feb. 2013



Pathways: Select *and* Elicit Unhealthy Situations



It is not random who enters and sustains flourishing marriages, community ties, and successful careers.

**Very important Pathway,
usually overlooked**

CONCLUSION 1: Effort

- Prudence, persistence, seeking meaningful challenges is healthy. Accomplishment & hard work is a path to long life
- Tiziano / Titian worked very, very hard his whole life, was extremely persistent, and lived in good health to about age 90, until he died from the plague!
- Promoting relaxation, or easy-going, less intense lives to the public is not justified by lifespan scientific studies

CONCLUSION 2: Policy

- **Good character & good social relations – positive involvement with others – is not only a moral issue, it is also a health issue!**
- **Factors that promote longevity do not occur in isolation, but bunch together. The biology of longevity needs to be understood in the psychosocial context.**
- **A key health issue is how to structure societies that can raise responsible children who grow into prudent, persistent and dependable young adults, who are well-integrated into society, and involved with others.**



The Termination

Prof Friedman's research has been supported by
the National Institute on Aging

