

Longer, Healthier, Happier

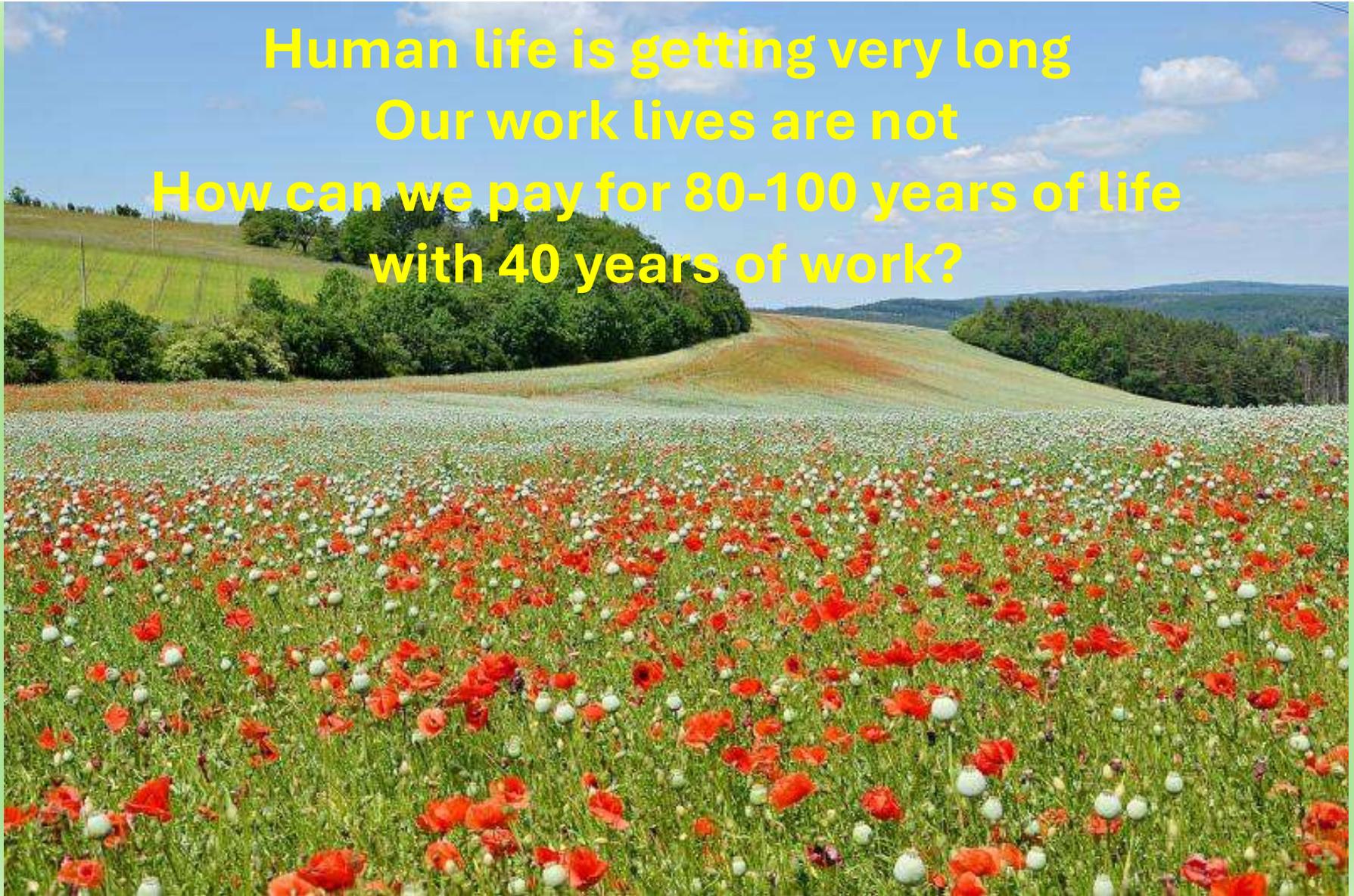
How working longer

(but only if you want to!)

helps almost everything

Laurence B. Siegel and Stephen C. Sexauer

**Human life is getting very long
Our work lives are not
How can we pay for 80-100 years of life
with 40 years of work?**



We've considered or tried...

More saving

Income redistribution

Financial engineering (pensions, annuities)

Financial engineering (individual investing
closer to efficient frontier)

Is there something obvious we're
overlooking? A constraint that can be
relaxed which will make a huge
difference?



Work longer!

But wait...

Physical limitations/poor health

Some people hate their jobs

*These people should not work longer...
at least in current employment situation*

Many people would like to work longer
(and need the money) but require...

Easier work

Shorter and more flexible hours

and can't negotiate these working conditions!

Why not?



Benefits of working longer

To the individual

- More money
- Social life
- Purpose and meaning
- Improved health
- Your mind – use it or lose it

To the employer

- Trained and responsible workforce
- Lower compensation and benefits
- Flexibility
- Institutional and practical memory

To government

- Increased revenue
- Less or delayed entitlement spending

To society

- More productivity
- More economic growth
- Better investment performance

Assumptions:

Columbus, Ohio school teacher actual salary schedule

New 22 year old teacher earns \$47,424

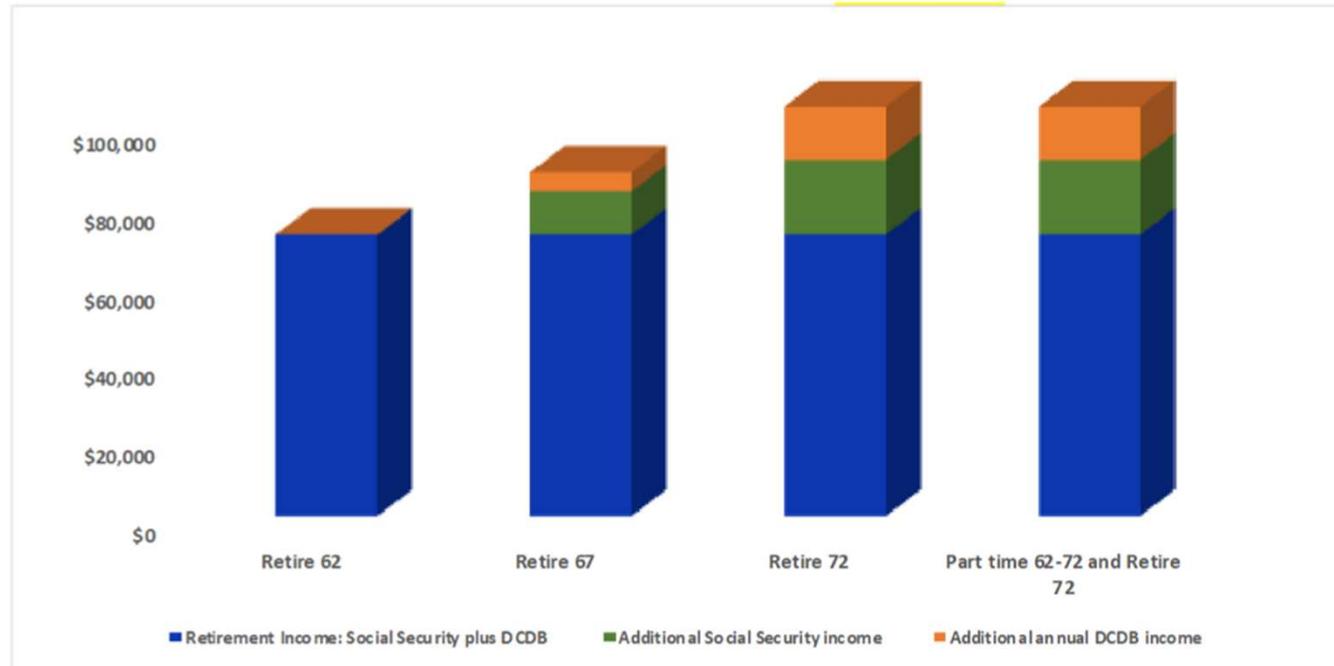
Teacher with master's degree and 40 years' experience earns \$107,217,

Real wage growth = 1.94% per year. We used actual growth curves from salary schedule, not constant growth rate

All numbers are in constant (2022) dollars

EXHIBIT 5: GAINS IN ANNUAL RETIREMENT INCOME FROM WORKING LONGER (STATED IN CONSTANT 2022 DOLLARS)

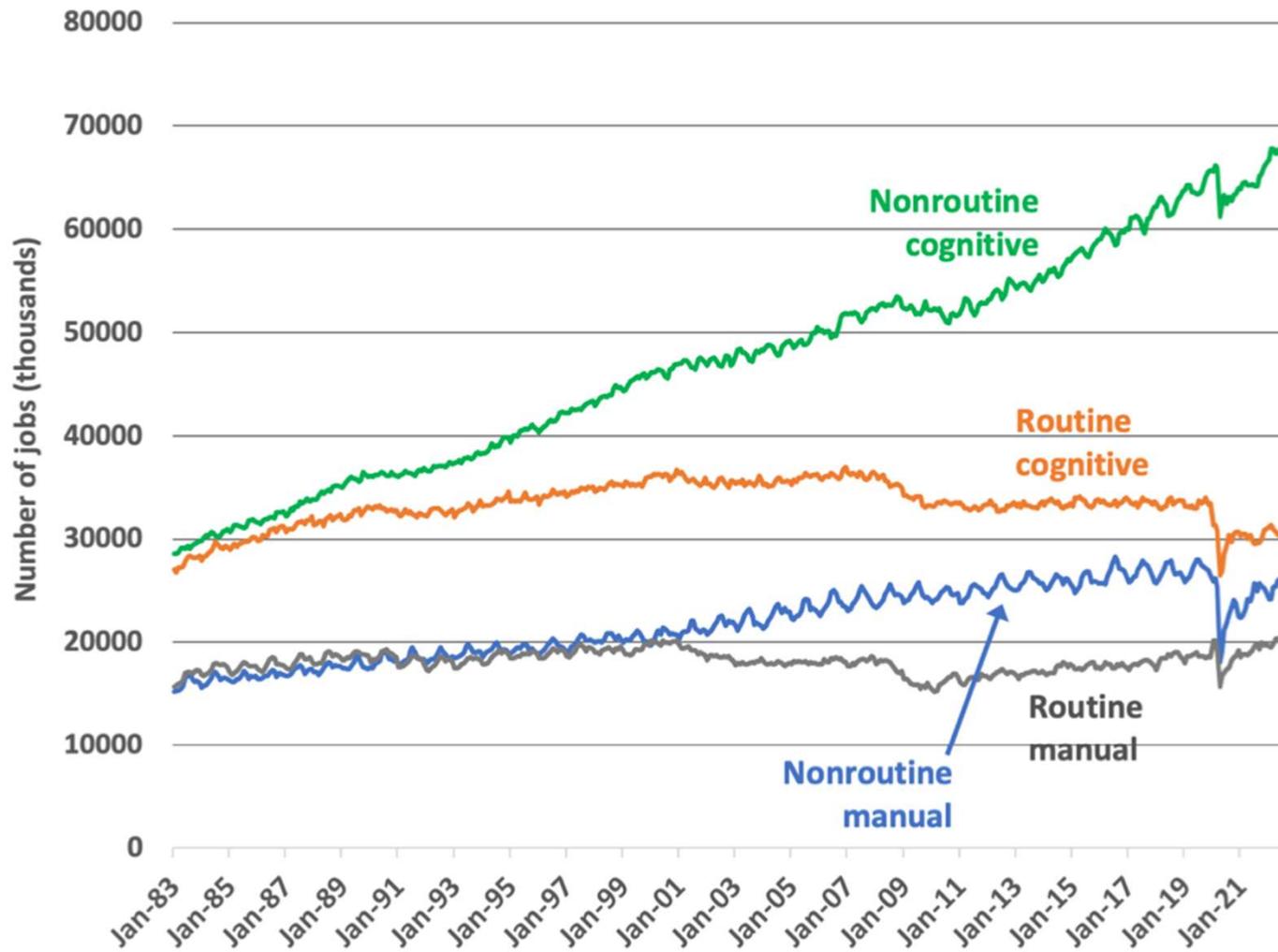
Annual retirement income gains to working longer



	Retire 62	Retire 67	Retire 72	Part time 62-72 and Retire 72
Retirement Income: Social Security plus DCDB	71,552	71,552	71,552	71,552
Additional Social Security income	0	11,028	19,596	19,596
Additional annual DCDB income	0	4,812	13,552	13,552
Total Retirement Income	71,552	87,392	104,700	104,700
Total Increase in Retirement Income	0	15,840	32,608	32,608
Saving Balances at Retirement	67,421	438,631	835,456	581,301

Note: Based on converting savings to DCDB income at 65 and taking Social Security at 62, 65, and 70. Return on savings is 2.00%

EVOLUTION OF JOB QUALITY IN THE U.S., JANUARY 1983-AUGUST 2022



Source: FRED, Federal Reserve Bank of Saint Louis. Drawn by the authors.

Long-term real GDP growth consists of only two things:

- How many people are working
- How productive they are.

Trend growth, U.S., 1948-2023

Productivity:	1.6 % per year
+ Labor force:	<u>1.5 %</u>
= Real GDP:	3.1 %

That's it: Removing constraints that inhibit work lead to more growth.

Let's put this in *per capita* terms:

- How many people are working as % of the population
- How productive they are.

Trend growth, U.S., 1948-2023

Productivity:	1.6% per year
+ Employment/population ratio:	<u>0.1%</u>
= Real GDP <i>per capita</i> :	1.7%

Same answer: Removing constraints that inhibit work lead to more growth.

Real stock returns are the sum of three and only three things:

- Real earnings growth
- Dividends paid
- Change in the multiple

Here's the fabulous 1990s:

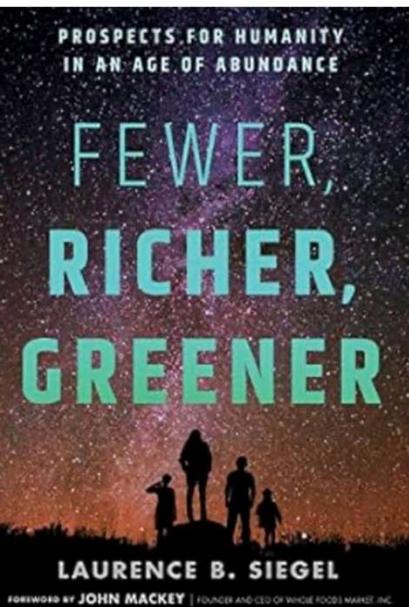
Real earnings growth:	4.0%
+ Dividends:	2.4%
+ Change in PE:	6.9%
+ <i>Interaction of factors:</i>	<u>1.4%</u>
= U.S. real stock returns (S&P 500):	14.7%

(All data are annualized and are in real terms)

Conclusion

Policies and practices that allow for *more work* including all its benefits to *employees, employers, government, and society* will increase ***health, wealth, and happiness***

It's a world that will be ***richer***
and ***greener***



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