

ATTACHMENT C.4.

HOW MUCH IS ENOUGH AND WHAT IS FAIR?

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ATTACHMENTS

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DISCUSSION NOTES

REFERENCES

Spreadsheet C.4: *How Much is Enough and What is Fair?* (online only)

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C.4. HOW MUCH IS ENOUGH AND WHAT IS FAIR?

This attachment addresses questions of sufficiency and fairness that are necessarily at the core of any serious proposals for a just, sustainable and technologically responsible world. This is hardly a full treatment of the topic; rather, it's an initial inventory of ways in which assorted studies and proposals address and answer these questions. It highlights studies and proposals that put hard numbers on the table. ¹

In the first seven sections of this Attachment (4.a–4.g) I show dollar values as reported in their source publications, except in a few cases as noted. In the concluding ninth section (4.i) I show a summary table, **TABLE 29**, with all dollar values converted to their 2023 USD equivalents.

4.a. PROPOSED LONG TERM STABILIZED LEVELS OF OUTPUT

I began this working paper by constructing three archetypal scenarios of global development over the period 2000 to 2150. Selected key economic values generated by each of these scenarios are shown here in **Table 1**.

Table 1. Scenarios of Global Development, 2000-2150 (all values 1990 USD)					
		<i>Historical values for 2000</i>	ARCHETYPAL SCENARIOS – values as of 2150		
			<i>Techno-Progressive World (BAU)</i>	<i>Balanced Equitable World</i>	<i>Green Sustainability World</i>
World GDP/capita		4,876	127,000	75,000	25,000
GDP/capita growth (%/year)		1.2	2.0	0	0
GDP/capita, by global income sector:					
Low income countries		520	99,000	112,000	37,000
Middle income countries		4,130	214,000	112,000	37,000
Hi income countries		40,000	699,000	112,000	37,000
Mean Household incomes by quintiles, all countries:					
Low-income countries (n=51)					
1 st		248	23,000	90,000	30,000
2 nd		411	55,000	111,000	39,000
3 rd		586	89,000	134,000	46,000
4 th		850	141,000	166,000	57,000
5 th		1,931	354,000	270,000	90,000
Middle-income countries (n=57)					
1 st		1,934	51,000	90,000	30,000
2 nd		3,157	124,000	111,000	39,000
3 rd		4,463	202,000	134,000	46,000
4 th		6,387	317,000	166,000	57,000
5 th		14,327	795,000	270,000	90,000
High-income countries (n=25)					
1 st		18,267	145,000	90,000	30,000
2 nd		34,983	498,000	111,000	39,000
3 rd		50,728	830,000	134,000	46,000
4 th		69,979	1,235,000	166,000	57,000
5 th		119,257	2,274,000	270,000	90,000
Ratio: Q5 high-income to Q1 low-income		481:1	99:1	3:1	3:1

The values shown in Table 1 are from the larger set of scenario values derived and discussed in Narrative Section III.A and in ATTACHMENT B.2. See also Working Paper Narrative DNs 29-46.

In **Techno-Progressive World** the concepts of ‘enough’ and ‘fairness’ are not particularly germane, as per capita GDP grows indefinitely for all people everywhere. The dollar values shown in Table 1 for this scenario in 2150 are transient point values.

The values shown for **Balanced Equitable World** suggest that **\$90,000/yr** per average household is ‘enough,’ that a ratio of **3:1** between highest and lowest mean household income quintiles worldwide is ‘fair,’ and that these values are indefinitely sustainable at the levels shown.

The values shown for **Green Sustainability World** suggest that **\$30,000/yr** per household is ‘enough,’ that once more a **3:1** mean income quintile ratio is ‘fair’ and that these values are indefinitely sustainable.^{2 3}

These scenarios were originally developed as part of my 2004 dissertation. A key portion of that study queried the credibility of these scenarios. I concluded that the scenario of Techno-Progressive World was not credible. Regarding Balanced Equitable World and Green Sustainability World, I concluded that achieving a ratio of 3:1 between highest and lowest mean household income quintiles by 2150 was not credible. In its stead I adopted a ratio of 6.5:1 by 2150 as a more credible equity objective. This value is roughly the ratio that obtained in the most equitable developed countries as of 2000. With regard to economic justice the final preferred and advocated scenario thus called for all countries world-wide to converge to a quintile ratio of 6.5:1 by 2150. None of this would preclude efforts to reduce within-country economic inequality further after 2150.

Tables 2, 3 and **4** show 13 long-range global scenarios in which per capita GDP/income/consumption stabilizes at some given value indefinitely. In all but one scenario the authors consider these stable values to be ‘enough.’ The exception is case d of Table 3.⁴

Table 2. Long-range projections of stabilized levels of world per capita GDP [1990 USD]			
[source: Hayes (2018) - Working Paper ATTACHMENT B.1, <i>Review of Past Quantitative Scenarios</i>]			
	<i>Author</i>	<i>per capita GDP</i>	<i>notes</i>
a	Meadows (1992)	\$ 5,400	stable by ~ 2100
b	Greenpeace (1993)	22,400	US/Europe/Japan stable by ~ 2100; others catch up later
c	Kahn (1979)	40,000	stable by ~ 2200
d	Nordhaus (1996)	42,000	stable after ~ 2200
e	Nordhaus (1990)	134,000	developed countries stable at this level by ~ 2200
f	Nordhaus (1990)	52,000	less developed countries stable at this level by ~ 2200

Table 3. Alternative projections of levels of steady-state world per capita GDP			
[source: Hayes (2018) Working Paper ATTACHMENT E.1, <i>Steady-State Political Economy</i>]			
	<i>Author</i>	<i>per capita GDP</i>	<i>notes</i>
a	Hayes (2018)	\$ 48,000	high GDP, well-planned transition, favorable circumstances
b	“	32,000	moderately high GDP, moderately planned transition
c	“	16,000	unplanned transition but smart adaptation
d	“	3,000	unplanned transition, chaotic response => near subsistence

Table 4. Climate model projections of stabilized world per capita consumption/output			
[sources – a-c: Working Paper ATTACHMENT D.2; d: WP ATTACHMENT D.4-A]			
	<i>Author</i>	<i>per capita consumption</i>	<i>notes</i>
a	Hayes (2019)	\$ 50,000	stabilizes here after 2215 and avoids 2° C warming
b	“	85,000	developed world stabilizes by ~ 2100, ROW by 2200-2250
c	“	32,000	stabilizes here after peaking at \$59K in 2055, then declining
		<i>per capita output</i>	
d	Hayes (2021)	\$ 71,000	stabilizes here by 2150; allows peak & return to 2° C or below

4.b. COST-BASED ESTIMATES: MINIMUM, BASIC, LIVING, COMFORTABLE AND WEALTHY INCOMES

Many measures of sufficiency are based on estimated costs of a particular material standard of living. Several common examples are shown here.

Minimum wages have historically been intended to prevent gross exploitation of workers in difficult situations, and not necessarily to support a full family household indefinitely, although some might. See **Tables 5 and 6**.

	<i>jurisdiction</i>	<i>\$/hour</i>	<i>full time equivalent</i>
a	AL, LA, MS, SC, TN	\$ 0.00	(no minimum wage)
b	Federal - 15 states	7.25	x 2080 hrs/yr = \$ 15,080
c	Washington State	17.54	" = 36,483

	<i>author</i>	<i>\$/hour</i>	<i>annual FT equivalent</i>
a	Robert Reich (2009)	\$ 16.83	x 2080 = \$ 35,000
b	Democratic Socialists of America (2020)	15.00	" 31,200
c	Socialist Party USA (2023)	25.00	" 52,000

Universal Basic Income (UBI) is generally meant to be high enough that a household can remain intact and viable over some period while recovering from adverse health, economic, job transition or other serious situations, or to take advantage of otherwise inaccessible educational, training or other opportunities. See **Table 7**.

	<i>author</i>	<i>UBI (yearly)</i>	<i>notes</i>
a	Chris Hughes (2018)	\$ 6,000	for all working adults in households with household incomes < \$ 50,000
b	Annie Lowrey (2018)	25,100	for a family of four
c	Scott Santens (2017)	13,266	for each adult and \$4,598 for each < age 18; 2 adults+2 children = \$ 35,724
d	Andy Stern (2017)	12,000	for each adult; thus \$24K for a typical family household
e	Thomas Piketty (2013)	27,030	60% of mean after-tax income (.60 x \$45,033; mean pre-tax income = \$67,565)
f	Charles Murray (2006)	10,000	for all adults 21 and over

Table 8 shows annual ‘living wage’ incomes for the San Francisco Metropolitan Area generated by the [MIT Living Wage Calculator](#). While minimum wages and UBIs are generally understood to imply just barely enough, if that, living wages are sometimes taken to imply somewhat, though not greatly, more than just getting by. ⁸

<i>Case</i>	<i>Adults</i>	<i>Employment</i>	<i>Children</i>	<i>Before-tax income</i>
a	1	working	0	\$ 49,429
b	2	2 working	0	69,337
c	2	1 working	2	103,263
d	2	2 working	1	113,284
e	2	2 working	2	143,648
f	2	1 working	0	75,213

Villanova (2023a) calculated the annual after-tax income needed for a single adult to live ‘a comfortable life’ in 25 American metropolitan areas as of 2022. See **Table 9**. He defined a comfortable life using the 50/30/20 rule whereby 50% of after-tax income covers basic living expenses (‘needs’), 30% covers discretionary spending (‘wants’), and 20% goes to savings or debt payments. He used the *MIT Living Wage Calculator* results for ‘needs’ and extrapolated from that value to get values for wants and savings/debt payments. He calculated after-tax values because state and local taxes vary greatly, from negative (Alaska) to high (Los Angeles, Washington D.C.).

Villanova (2023a)			Ratios...	
	Metropolitan area	After-tax income needed for a single adult to 'live comfortably'	... to U.S. Average	... to U.S. Lowest
a	San Francisco CA	\$ 84,026	1.23:1	1.46:1
b	New York NY	78,524	1.15:1	1.37:1
c	U.S. AVERAGE	68,499	1.00:1	1.19:1
d	Phoenix AZ	65,670	0.96:1	1.14:1
e	San Antonio TX	59,270	0.87:1	1.03:1
f	St. Louis MO	57,446	0.84:1	1.00:1

The 'living wage' values of Table 8 and the 'living comfortably' values of Table 9 might be taken to bracket a normatively desirable range. A single person in San Francisco with income below \$49,000 might merit some level of economic support, while a similar person earning above \$84,000 might incur some redistributive obligation.

The U.S. Census Bureau income categories shown in **Table 10a** might be used to suggest normative categories; two examples are shown in **Table 10b**.

	Designation	Household income	% of U.S. households
a	Below or near poverty	Less than \$ 20,000	14
b	Low income	20,000 – 44,999	20
c	Middle class	45,000 – 139,999	45
d	Upper middle class	140,000 – 149,999	2
e	High income	150,000 – 199,999	8
f	Highest tax brackets	200,000 or higher	10

	Normative category	rosy judgements	% of HHS	smoky judgements	% of HHS
a	Less than enough	< \$ 20,000	14	< \$ 45,000	34
b	Enough	20,000 – 149,999	67	45,000 – 199,999	55
c	More than enough	150,000 or more	18	200,000 or more	10

Reeves et al. (2018) of The Brookings Institution review dozens of ways in which scholars have sought to define the category of *middle class*. Many definitions involve some mix of economic, cultural and/or credentialist criteria. Three representative definitions using economic criteria are shown in **Table 11a**.

	author	Definition of 'middle class'	Annual household income
a	Alan Krueger (2012)	50-150% of median income	\$ 35,000 – 104,000
b	Pew Research (2015)	67-200% of median income	46,000 – 139,000
c	Lester Thurow (1984)	75-125% of median income	52,000 – 87,000

The mean lower and upper bounds of these three definitions of middle class is \$44,000 – 110,000. We might use this range to inform three normative categories, as shown in **Table 11b**.

a	Less than enough	< \$44,000
b	Enough	\$44,000 – 110,000
c	More than enough	> \$110,000

We might then use this normative scheme to suggest that a ratio of 110K/44K = 2.5:1 between upper and lower levels of household income might be considered *fair*. Under this judgement it would not be unreasonable to tax incomes above \$110,000 to bring households with incomes below \$44,000 up to that \$44K level.

4.c. SUBJECTIVE ASSESSMENTS CONCERNING INCOME AND WEALTH

4.c.1. Summary of the 1998 Voluntary Simplicity' Survey

In September 1998 I conducted an opinion survey that addressed questions involving economic sufficiency, equity and related topics. Participants in the survey were drawn from attendees at a University of Southern California conference on Voluntary Simplicity. This audience was chosen in the expectation that it would be particularly sensitive to questions concerning economic sufficiency and fairness, and would represent a lower bound, so to speak, on stated preferences regarding material standards of living. A full account of the survey, with detailed results and analysis, is shown in this working paper as ATTACHMENT D.6. Two questions and their responses that directly address the topics of sufficiency and fairness are shown here in **Tables 12a** and **12c**.

Voluntary Simplicity Survey re *Enough* and *Fairness* (1998) [N = 255]

Question 12a. "In the part of the state where you live, what would you say is the minimum annual household income, before taxes, currently necessary to support a household of four people, including two children of high school age, at each of these levels?"

	<i>Queried level of household income</i>	<i>Response (adjusted mean)</i>	<i>Ratio to "Just enough..."</i>
a	"Just enough to get by"	\$ 33,330	1.0:1
b	"Enough to live in reasonable comfort and security"	54,990	1.6:1
c	"More than enough"	119,200	3.6:1

Following Question 12a the information shown in **Table 12b** was displayed:

a	The bottom 20%	\$ 18,100	1.0:1
b	The middle 20%	58,600	3.2:1
c	The top 20%	147,000	8.1:1

This information was followed by **Question 12c:** "What levels of income for families with heads of ages 45-55 do you believe would be consistent with sustainability and fairness, and might be aspired to, over the coming century, as goals for our country?"

	<i>Queried levels of quintile income</i>	<i>Response (adjusted mean)</i>	<i>Ratio to bottom 20%</i>
a	the bottom 20%	\$ 29,120	1.0:1
b	the middle 20%	51,350	1.7:1
c	the top 20%	91,340	3.1:1

4.c.2. What level of net worth is considered "wealthy"?

For several years running the [Charles Schwab](#) investment firm has asked a representative sample of U.S. residents (N=1000) about their opinions and behaviors regarding wealth. Two questions are shown immediately below and responses are shown in **Table 13a**.

Q.1: “At what level of personal net worth would you say a person in your area could be considered *financially comfortable*?”
 Q.2: “At what level of personal net worth would you say a person in your area could be considered *wealthy*?”

Table 13a. Personal net worth needed to be considered (a) financially comfortable and (b) wealthy (USD) [Schwab (2022)]						
		2018	2019	2020	2021	2022
a	Q.1	\$ 1.4 M	1.1 M	934 K	624 K	774 K
b	Q.2	\$ 2.4 M	2.3 M	2.6 M	1.9 M	2.2 M
c	Q2/Q1	1.7	2.1	2.8	3.0	2.8

Table 13b shows the Schwab survey results for net worth needed to be considered wealthy in selected U.S. cities.

Table 13b. Personal net worth needed to be considered wealthy in 12 U.S. cities (USD) [Schwab (2022)]					
a	San Francisco	\$ 5.1 M	g	Boston	\$ 2.7 M
b	Southern Calif.	3.9	h	Dallas	2.6
c	New York City	3.4	i	Houston	2.6
d	Washington DC	3.3	j	Atlanta	2.5
e	Seattle	3.2	k	Chicago	2.5
f	Phoenix	2.7	l	Denver	2.3

Robeyns et al. (2020) sought to determine where the people of The Netherlands drew the line between ‘the rich’ and ‘the extremely rich,’ the latter defined as those holding net assets such that an additional unit of asset would not add to the material quality of the life of the household. They used a combination of household budget estimates of low to very high standards of living, and nationally representative opinion survey results (N=2561). They concluded that there was general agreement among the Dutch that the demarcation between “rich” and “extremely rich” lay at some point between net assets of €1-3 million (**\$1.4–4.1 million USD 2023**).

These several results might be taken to suggest that large numbers of people perceive ‘wealthy’ households to be those holding net assets in the range of perhaps \$2-4 million USD. From one perspective this appears reasonable; after all, *median* net worth of all U.S. households in 2021 was \$166,900. But it’s the case that close to 4.5 million U.S. households have net worth of \$4 million or more, and more than 8 million households have net worth of \$2 million or more. That’s just over 3-6% of all U.S. households, or, very roughly, 1 out of every 17-33 people.⁹ That’s clearly a privileged and influential constituency, but consider now the numbers shown in Tables 14, 15 and 16.

Table 14 shows average wealth held by households in very high wealth percentiles.

Table 14. Average Wealth of Households in very high wealth percentiles – Blanchet et al (2023)			
	<i>percentile</i>	<i>average wealth/ household</i>	<i>number of households</i>
a	top 10.0%	\$ 5,500,000	18,400,000
b	top 1.0%	27,600,000	1,800,000
c	top 0.1%	145,300,000	183,700
d	top 0.01%	773,500,000	18,400

Table 15 shows the household net worth needed to ‘qualify’ for several very high wealth percentiles.

	<i>percentile</i>	<i>Threshold wealth for each percentile</i>	<i>number of households</i>
a	top 10.0%	\$ 617,000	23,866,300
b	top 1.0%	3,520,000	2,386,000
c	top 0.1%	17,200,000	238,700
d	top 0.01%	77,800,000	23,800
e	top 0.001%	362,825,000	2,400

Table 16 shows threshold net worth needed for inclusion within selected high wealth percentiles as reported by 1) the [Survey of Consumer Finances \(SCF\)](#) prepared at three-year intervals by the U.S. Federal Reserve and 2) the [analyses of economic data](#) (‘FRED’) independently prepared by the Federal Reserve Bank of St. Louis.

	<i>Percentile</i>	<i>Characterization</i>	<i>Percentile Threshold Net Worth</i>	
			<i>SCF (2019)</i>	<i>FRED (2019)</i>
a	90 th	“well off”	\$ 1.9 million	\$ 1.8 million
b	95 th	“wealthy”	3.2 million	
c	99 th	“very wealthy”	16.7 million	10.2 million
d	99.9 th	(<i>uncharacterized</i>)		38.2 million

The popular understanding of ‘wealthy’ appears to be shaped by the living standards of households of comparatively low levels of high wealth – say, those in the very low millions – while the far greater and more concentrated wealth held by the top 0.1-0.001% is effectively hidden. The category of ‘wealthy’ may no longer be particularly useful in many contexts, and might better be replaced by three or more categories *de novo* that would need to be as distinctive from one another as “working class,” “middle class” and “upper class” have been for the past century. In the rest of this Attachment I’ll continue using ‘wealthy,’ but now with a mental asterisk attached.

4.c.3. What Level of Income is Consistent with Being Wealthy?

Wealth is more commonly thought to be a matter of net assets or net worth than it is of income, but the association is close (see DN 26). Below we review several measures of wealth in terms of income.

Results of a survey of U.S. adults (N=2521) reported by the consumer financial information website *Bankrate* ([Foster, 2023](#)) are shown in **Table 17a**.

		<i>mean response</i>
a	... secure and comfortable with your finances?	\$ 233,000
b	... that you are rich and have achieved financial freedom?	483,000

At a finer resolution the *Bankrate* survey showed a direct positive relation between current earnings and the earnings that respondents said they would need to feel secure and comfortable regarding their financial situation:

	<i>Current annual earnings</i>	<i>Earnings needed to feel financially secure and comfortable</i>
a	Less than \$ 50,000	\$ 184,000
b	50,000 to 79,999	208,000
c	80,000 to 99,999	246,000
d	100,000 or more	341,000

Table 18 shows average income held by households in very high income percentiles.

	<i>percentile</i>	<i>average income/ household</i>	<i>number of households</i>
a	top 10.0%	\$ 641,900	18,400,000
b	top 1.0%	2,800,000	1,800,000
c	top 0.1%	13,000,000	183,700
d	top 0.01%	62,100,000	18,400

[Gobankingrates.com](https://www.gobankingrates.com) (2023) draws on IRS data to show a range of incomes associated with households in the top 5% in all U.S. states. Net worth of **\$317,000** gets you into the top 5% in the low-tier states and **\$540,000** gets you into the top 5% of the top-tier states.

Table 19 shows the minimum annual household incomes needed to place within successive high-end income percentiles, as reported by three major source institutions.

		1	2	3
	<i>Income percentile</i>	<i>ChatGPT-4</i>	<i>USCB/BLS</i>	<i>USFRS</i>
a	top 10%	\$ 170,000	\$ 191,406	\$ 212,110
b	top 5%	250,000	290,164	286,301
c	top 2%	400,000		417,174
d	Top 1%	421,926	867,436	570,003
e	top 0.1%	2,400,000		
f	top 0.01%	10 million +		
g	Top 0.001%	10s of millions +		

1. *ChatGPT-4*: results as of its “last knowledge update in September 2021.”

2. *US Census Bureau/BLS*. In *DQYDJ.com* (2022): [Household Income Percentile Calculator for the United States](#) period: calendar year 2021

3. *US Federal Reserve System*. In *Of Dollars and Data.com* (2023): [How Much Income Do You Need to Be Rich?](#) period: calendar year 2019

[Smartasset.com](https://www.smartasset.com) (Villanova, 2023) figures that an income of **\$388,000** would put you in the top 1% of households in the most low-cost regions of the U.S. and that **\$900,000** would put you in the top 1% in the most expensive regions. The threshold to make it into the top 1% of households nationwide is **\$652,657**.

[FinancialSamuri.com](https://www.financialsamurai.com) (2023) says that **\$200,000/yr** is considered to be wealthy in lower-cost regions of the U.S. but not in other regions, while **\$500,000/yr** is considered to be wealthy in all regions.

Many Democratic Party fiscal proposals, including the Inflation Reduction Act approved in August 2022 and President Biden’s proposed [2023-2024 budget](#), limit tax hikes to those with incomes over **\$400,000** (or married couples bringing in over \$ 450,000). This value is the threshold of entry into the top 1-2% of households and is taken in some policy circles as a demarcation line for ‘wealthy.’ See Iacurci (2021) and Dore (2023).

Table 20 shows total U.S. federal tax returns for TY 2020 categorized by adjusted gross income so as to focus on high-end returns.

Table 20. U.S. Tax Returns, Adjusted Gross Incomes			
Tax Year 2020 (Filing Year 2021) [US Internal Revenue Service (2020)]			
	Adjusted Gross Income	# of returns	% of total
a	under \$100,000	132,483,334	80.559
b	\$100,000 -> under \$200,000	22,415,415	13.600
c	\$200,000 -> under \$500,000	7,615,358	4.600
d	\$500,000 -> under \$5 million	1,777,542	1.200
e	\$5 million-> under \$10 million	40,567	0.025
f	\$10 million or more	26,576	0.016
	Total	164,358,792	100.000

Let's assume that those households with incomes less than \$100,000 are typically not considered to be wealthy. Let's say that for this exercise the 22.4 million households with incomes of \$100-200K are not regarded as wealthy either, although they'd certainly be considered by most Americans to be very well off. Households with incomes between \$200 K and \$500 K straddle the line (the IRS data I'm using doesn't show finer gradations.) Many Americans would consider households with incomes of \$250,000 to be wealthy; others might draw the line closer to \$400 K, as the Biden Administration does. For this exercise we can safely consider all households with incomes of \$500 K or more to be wealthy. These represent 1.2% of all U.S. households. If we draw the 'wealthy' line at \$400 K we would be closer to 2% of households. These modest assumptions leave us with more than **1.8 million wealthy households** in the U.S. If we want to pay special attention to what might be called the '*super-wealthy*,' which we might define as those households with annual incomes of \$5 million or more, we still wind up with **67,143 super-wealthy households**. These are formidable numbers. Any serious initiative to have the wealthy part with significant shares of their income is facing a very motivated, well-connected and highly-resourced opposition.

4.d. PROPOSED MAXIMUM INCOMES AND MAXIMUM WEALTH

Even strongly progressive income taxes are unable to prevent Industrial economies that depend heavily upon free markets, globalization and technological innovation from generating great inequalities of income and wealth. Many concerned about growing economic inequality have begun considering policies that would impose an absolute cap on very high incomes and/or net assets. Some historical and current proposals are noted here.^{10 11}

4.d.1. Proposals for Maximum Limits on Income and Wealth

In 1880 **Felix Adler**, founder of the New York City-based Society for Ethical Culture, called for a progressive income tax that would exempt income used for basic needs, savings, education and "spiritual life," but would impose a 100% tax on all other income, i.e., incomes for activities that were "...merely a means of pomp and pride and power—such power as no individual ought to possess." He did not, however, attach dollar values to his proposal.¹²

In 1935 radical populist **U.S. Senator Huey Long** (D-LA) released his 'Share-Our-Wealth' plan, which among other things called for:

- 1) a maximum annual personal income of **\$1 million**;
- 2) a maximum inheritance of **\$5 million**;
- 3) a progressive wealth tax beginning at 1% of all personal wealth between \$1-2 million and rising to 100% on all wealth over **\$100 million**.¹³

In a message to Congress (1942) **President Franklin D. Roosevelt** said, "... no American citizen ought to have a net income, after he has paid his taxes, of **more than \$25,000 a year.**" Married couples would be restricted to a maximum income of \$50,000. (In 2023 USD: \$468,000 and \$936,000.)¹⁴

In *These Times* labor journalist **Hamilton Nolan (2012)** proposed that all income over **\$5 million/yr** be subject to a 99% tax.¹⁵

4.d.2. Maximum Income or Wealth as a Multiple of Some Median, Mean or Minimum Income or Wealth Value

Many proposals seek to justify a particular maximum level of income or wealth by having it anchored to an acknowledged normative ratio between the maximum and some lower income or wealth value. This lower value, in turn, would be one that could presumably be agreed upon as appropriate with some measure of objectivity or at least empirical reference.

Harvard psychologist **Howard Gardner (2009)** has proposed that "No single person should be allowed annually to take home salary more than **100 times** as much money as the average worker in a society earns in a year." He goes on to propose that total individual wealth be capped at **50 times the maximum income**. Wealth above that level would be given to charity or taxed at 100%. See an illustrative example in **Table 21**.

Table 21. Howard Gardner's proposals for maximum personal income and wealth				
<i>mean 2023 U.S. personal income</i>	<i>Income multiplier</i>	<i>maximum personal income</i>	<i>wealth multiplier</i>	<i>maximum personal wealth</i>
\$ 71,000	x 100 =	\$7,100,000	x 50 =	\$355 ,000,000

Gardner says that although most Americans would almost certainly reject such a proposal on first hearing, once established it would come to be regarded as self-evidently reasonable.¹⁶

In **2013 Switzerland** voted on a citizens ballot initiative calling for a maximum ratio of **12:1** between executive pay and that of the lowest-paid employees in any firm. The measure was rejected by 65% of the voters.¹⁷

UK physicist and environmentalist **Alan Cottley (2014)** called for a maximum income no more than **10 times** greater than the basic income. He suggests no specific basic income value but situates his basic income concept as aligned with the sorts of proposals shown in Table 7.

Ecological economist **Herman Daly (2014)** was one of the first economists to include caps on income as a necessary part of an integrated ecological/economic world regime. He suggested a minimum income floor of **\$20,000/yr** and a maximum income no more than 100 times that amount, in this case **\$2,000,000/yr**.

In 2017 UK Labor Party Leader **Jeremy Corbyn** proposed that no government contracts be approved for any firms whose executives are paid more than **20 times** the wages of their lowest paid workers. The UK minimum wage was then the equivalent of ~ \$20,000 USD/yr, which would generate a cap of ~ **\$400,000/yr** on executive pay.¹⁸

As part of his spring 2017 presidential campaign French left-wing populist leader **Jean-Luc Mélenchon** called for 1) **a 100% tax on income 20 times** higher than France's average wage, i.e., on incomes above \$842,640 USD; and 2) **CEO pay to be capped at 20 times** the salary of a firm's worst-paid employee. Mélenchon came in fourth place with 19% of the first-round vote and thus did not qualify for the runoff.¹⁹

U.S. economic justice advocate **Sam Pizzigati (2018)** argues that maximum personal income should ideally be no more than **10 x minimum wage**. He acknowledges that this would be politically difficult to establish all at once. He suggests that we start modestly by seeking a multiplier of, say, 100, and ratchet that down as socio-political values evolve, as illustrated in **Table 22**.^{20 21 22}

	<i>Annualized U.S. minimum wage (2023)</i>	<i>multiplier</i>	<i>Maximum personal income/yr</i>
a	\$ 15,080	x 100 =	\$ 1,508,000
b	“	50	754,000
c	“	25	377,000
d	“	10	150,800

French economist **Pierre Concialdi (2018)** suggested that countries should set *needs satisfaction lines* (NSLs), corresponding to and appropriately higher than the already widely used *poverty lines*. Income would be progressively redistributed from the highest incomes to the lowest, until no household is below the NSL. At that point the top level of income left unredistributed defines the new policy-relevant *affluence line*. Concialdi calculated that as of 2015 the annual pre-tax affluence line values (here converted to 2023 USD for a household of four) for three selected developed countries would be as shown in **Table 23**.²³

a	France	\$ 220,000
b	Ireland	180,000
c	United Kingdom	170,000

In 2023 the Center for the Advancement of the Steady-State Economy (CASSE) drafted [U.S. legislation](#) calling for:

- 1) A tax of **100% on incomes above \$600,000** of married individuals filing jointly, household heads and unmarried individuals (married individuals filing separately would each be taxed at 100% over \$300,000); and
- 2) Compensation of the highest-paid executive of any firm contracting or subcontracting with the U.S. government not to exceed **40 times the salary of that firm’s lowest-paid employee**.²⁴

4.e. MINIMUM WEALTH PROPOSALS^{25 26}

Maximum limits on income and wealth are of no immediate benefit to those with little or no income or wealth. We’ve noted universal basic income proposals; what about wealth? Those who have access to even very moderate wealth early in their lives are greatly advantaged. This equity gap has motivated proposals to provide all people with some amount of minimum or universal basic wealth.

In 1796 American revolutionary **Thomas Paine** proposed that £15 (**\$2,699 USD 2023**), be awarded to all citizens at age 21, this to be funded via an inheritance tax.²⁷

Julian Le Grand of the London School of Economics (1991) proposed that upon turning age 18 all persons receive a ‘universal basic capital’ grant of £10,000 (**\$27,653 USD 2023**).

Yale Law professors **Anne Alstott and Bruce Ackerman (2000)** proposed that upon turning age 21 all Americans with a high school diploma and no prison record receive an unconditional grant of **\$80,000**.

Noted LSE economist **Anthony Atkinson (2015)** suggested a capital endowment of £5,000-10,000 (**\$8,650-17,300 USD 2023**) for every young adult, financed by a tax on inheritances and other capital transfers.

In **2018 Carys Roberts and Matthew Lawrence** of the UK Institute of Public Policy Research (IPPR) proposed that a ‘universal citizen’s dividend’ of £10,000 (~ **\$24,000 USD 2023**) be awarded at birth and be accessible at age 25 (by then ~ **\$55-60K**). It would be financed by a wealth tax and administered through a sovereign wealth fund.²⁸

In his 2020 campaign for his party’s presidential nomination, **U.S. Senator Cory Booker** (D-NJ) featured his ‘baby bonds’ proposal. It would establish for children from low and moderate income households an account that would

grow to as much as **\$46,200** by age 18, and could be accessed then for educational, home purchase, business start-up and similar wealth-building purposes.^{29 30}

Thomas Piketty (2021) proposed that upon turning age 25 citizens receive an ‘inheritance’ pegged at 60% of net national wealth per adult. In 2022 such an ‘inheritance’ would have amounted to **\$193,244** in France and **\$347,431** in the United States.³¹

4.f. PROPOSED EQUITY OBJECTIVES

Several authors foreground the equity dimension of any income or wealth policies rather than the absolute amounts *per se*.

The Spirit Level (Wilkinson and Pickett, 2009) was praised for documenting the many ways in which growing economic inequality has contributed to a host of societal ills. The authors called for a wide range of policies to halt and then reverse growing economic inequality. They did not specifically suggest a reduced level of inequality that might serve as a societal policy objective. In their conclusion, however, they suggested that “if the United States was to reduce its income inequality to something like **the average of the four most equal of the rich countries (Japan, Norway, Sweden and Finland)...**” major improvements in the prevalence of mental illness, obesity, violent crime, incarceration, lifespan, teenage births and more could be realized.³²

Table 24 shows in column (1) four widely used measures of economic inequality; (2) the mean value of each of those measures across five large developed countries with very high levels of distributional equity; (3) the value of each of those four equity measures for the USA; (4) and (5) two (equivalent) measures of the rank of the USA among all countries for each of the four measures; and (6) the percent by which the USA would have to reduce each of those measures of inequality in order to match the top five country mean for that measure. See DNs 33-36 for details, sources and comment.^{33 34 35 36}

	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Measure of Inequality</i>	<i>Top five developed country mean*</i>	<i>USA value</i>	<i>USA rank (raw score)</i>	<i>USA rank (% down the scale)</i>	<i>% reduction needed by USA to match the top five country mean</i>
a	10/40 Palma ratio	3.1	5.4	90 th of 158	0.57	43%
b	20/20 ratio	5.0	9.4	113 th of 147	0.77	47%
c	10/10 ratio	5.9	18.5	91 st of 126	0.72	68%
d	Gini Coefficient	31.0	41.5	120 th of 167	0.72	25%

* Japan, Sweden, Germany, Vietnam and Czech Republic.

Park and Kim (2021a, 2021b) say that perfect equality of income is not feasible. They use a sigmoid welfare function, and an income distribution function adapted from thermodynamics, to model a Gini coefficient and 20/20 ratio that they suggest are feasible, fair and optimal (F/F/O) for any given country. They apply the model to four selected countries and **Table 25** shows their results.

	<i>Country</i>	<i>Gini Coefficient</i>		<i>20/20 Ratio</i>	
		<i>Current Gini</i>	<i>F/F/O Gini</i>	<i>Current 20/20</i>	<i>F/F/O 20/20</i>
a	United States	.45	.17	16.7	2.3
b	China	.36	.13	7.0	1.9
c	Finland	.25	.12	3.9	1.8
d	South Africa	.57	.14	28.4	2.1

The derived values for the feasible, fair and optimal inequality measures are dramatically lower than any proposed

elsewhere in this review. It's arguable as to whether these values are in fact practically feasible. The choices of welfare and income distribution functions are of course normative choices that require justification; see DN 37.³⁷

Yu and Wang (2017) say that it's generally agreed that the degree of economic inequality in a society has an important impact on many other social metrics, including metrics of happiness, but that there's disagreement about the dynamics of that impact. The authors suggest that the relationship between inequality and happiness should take the form of an *inverted U*. They say that people feel *most happy* when income inequality is low but increasing, because the increase in inequality signals prospects of upward mobility in which they themselves might reasonably expect to take part. Past a certain point, however, as it becomes clear that most people will not in fact be included in the ranks of the most upwardly mobile, most people will become increasingly *unhappy*. Yu and Wang test their hypothesis with two studies of the correlation between inequality and happiness: a longitudinal study focused on the United States and a cross-section study focused on Europe. In both studies the explanatory variable is the Gini coefficient and the response variable is happiness.³⁸ The authors say that both studies provide support for the inverted-U hypothesis. The Gini values at which happiness peaks in the **U.S. = 0.356** and for **Europe = 0.286**. The authors acknowledge many methodological assumptions used in this analysis and call for further research.³⁹

Jared Bernstein (2016), senior fellow at the Center on Budget and Policy Priorities and former economic advisor to President Obama, notes that the last time that the productivity and incomes of the U.S. middle class were growing at the same rate was in the mid-1970s, at which time the top 1% received ~ 10% of all income. By 2016 (and continuing today in 2023) the top 1% received ~ 20% of all income. Bernstein suggests that a distributive policy objective should be that **the middle class receive the full share of its productivity gains**, as it last did in the mid-1970s, and that **the top 1% receive closer to 10% of all income**.

Many others, including many economists and notably many neoliberal economists, are concerned about concerns about economic inequality. **Jonathan Ostry (2016)**, deputy director of the Research Department of the International Monetary Fund, says "We don't have a threshold level for how much inequality is too much... Sometimes you need to have a little bit more inequality in order to get growth going as part of deregulating of your economy."

4.g. DOES WELL-BEING SATIATE WITH RISING INCOME AND/OR WEALTH?

Many people believe that human happiness, well-being, flourishing, eudaimonia or other greatest good tends not to increase, and may decrease, after some particular level of income or wealth has been realized. Others differ, and believe that such goods increase continuously with income and wealth, and that policies intended to constrain the growth of income and wealth would be counter-productive and in any event probably futile.

John Maynard Keynes (1930) famously predicted that by 2030 per capita GDP in the developed world would have grown to **\$60,000-120,000** (2023 USD). He believed that with that level of income people would have ready access to all the material goods and services they would ever need or could ever even desire, and that any subsequent productivity gains would be taken in the form of leisure rather than income.⁴⁰

Writing near the end of the post-WW2 economic boom, **Easterlin (1974)** asked *Does Economic Growth Improve the Human Lot?* He reviewed surveys of subjective well-being and concluded that although within any given country persons with more income are in general happier than are those with less income, there is **no absolute level of income that would satiate** human desire for more: "Rather, the growth process itself engenders ever-growing wants that lead it ever onward." **Easterlin (1995)** revisited this question and reaffirmed this conclusion.⁴¹

A large number of follow-on studies appeared to show that greater income generates greater well-being so long as *basic needs* remain unmet, but that after that point greater income shows little correlation with subjective well-

being. These studies include those by **Frey and Stutzer (2002)**, who pegged the satiating level of income at **\$10,000** per capita, and **Layard (2005, 2003)**, who discerned thresholds at **\$15-20,000** per capita.

Judge et al. (2010) do a meta-analysis of 92 independent samples/studies to estimate the correlation between pay levels and pay and job satisfaction. Their results suggest that this relation is positive but only marginally so.

In an influential study **Kahneman and Deaton (2010)** distinguished between *life evaluation*, defined as “the thoughts people have about their life when they think about it,” and *emotional well-being*, defined as “the emotional quality of an individual’s everyday experience.” The authors found that for U.S. adults life evaluation satiates when annual household income reaches **\$75,000**, while emotional well-being shows no sign of satiation with income, at least to the maximum household income of ~ \$180,000/yr tested in their analysis.

Stevenson and Wolpers (2013) reviewed a large collection of studies and conducted their own, using cross-section data within and among countries. They sought correlations between income and well-being using alternative definitions and measures, and using alternative data sets (e.g. Gallup World Poll, Pew Research Center, International Social Survey Program). They examined in particular the hypothesis that well-being varies positively with income among poor people but not among wealthy people. They report that while well-being clearly shows diminishing returns with income, in none of their exercises did they find evidence of satiation: **“If there is a satiation point, we are yet to reach it.”**

Proto and Rustichini (2013) analyze the relation between per capita GDP and life satisfaction in scores of countries worldwide. They show that this relation is uniformly positive in countries with GDP/capita **less than \$15,000** (2005 USD) but rises more slowly after that point and satiates at ~ **\$30,000** per capita; further growth is associated with a *decline* in life satisfaction. The authors hypothesize this pattern as the result of two opposing dynamics. Life satisfaction alone will increase indefinitely with per capita GDP, but as per capita GDP increases the gap between aspirations and realized income also increases, and at an increasing rate. This negatively impacts life satisfaction, such that the net trajectory is one of satiation followed by decline.

Kushlev et al. (2015) analyze the results of a large (N=12,291) survey of U.S. householders that generated indices of both *happiness* and *sadness* for each survey respondent, along with range estimates of household income. The survey used a methodology in which respondents prepare a fine-grained account of the previous day’s activities, reported as a sequence of ‘episodes,’ and record how happy or sad they were during each episode. The authors find that while **greater income had little bearing on daily happiness**, it is significantly associated with lesser daily *sadness*.

Yu and Chen (2016) studied the bearing of relative and absolute income on happiness and sadness. Would members of a household with \$50,000 annual income feel happier (or sadder) if the community household mean was \$35,000, and would they feel sadder (or happier) if the community mean was \$65,000? The authors analyzed a large data set (N=30,144) of individuals from 162 counties in China. They found that both **happiness and life satisfaction are positive functions of both relative and absolute income**, while sadness was a function of absolute income and not relative income.

Jebb et al. (2018) find that life evaluation and emotional well-being satiate at different levels of income in different countries depending on level of development. See **Table 26**. They also find that life evaluation and emotional well-being tend to decline somewhat as incomes continue to grow beyond satiation levels. The authors propose that the initial diminishing returns are the prosaic result of the tendency to consume more satisfying things first. The subsequent absolute decline in well-being may reflect disutilities associated with those higher incomes: longer work hours, greater responsibilities, more stress, decreased leisure and family time and more.

Table 26. Income Satiation by Developmental Clusters [based on Jebb et al. (2018)]
Dollar values shown are for *single-person households*.

State of Development/Region		Mean income levels of satiation for LE and EWB	
		Life Evaluation	Emotional Well-Being
a	Developing Regions	\$ 48,000	\$ 33,000-38,000
b	Developed Regions	110,000	50,000-61,000
c	Middle East/No. Africa	115,000	110,000-125,000
d	Global Mean	95,000	60,000-75,000

Developing regions: Eastern Europe/the Balkans, Southeast Asia, Latin America/the Caribbean, Sub-Saharan Africa.

Developed regions: Western Europe/Scandinavia, Australia/New Zealand, East Asia, Northern America.

Middle East/No. Africa is a developing region but is shown here separately given the apparent outlier levels at which income satiates.

Killingsworth (2021) notes that studies that find an income satiation point for experienced well-being use the Day Reconstruction Method (described in Kushlev et al. above), which he considers unreliable. Killingsworth conducts a study of U.S. adults in which smartphones ping study participants several times daily; at each ping the participant notes their immediate feelings of experienced well-being. Life evaluations, total household income before taxes, household size and other data are collected on a one-time basis. In an exercise in which ~ 33,000 participants reported ~ 1.7 million data elements, Killingsworth found that although both well-being and life evaluations increased more slowly with increasing income, there was **no sign of satiation**, not even as household incomes exceeded \$500,000.

Killingsworth and Kahneman, with facilitator Mellars (2023) held an ‘adversarial collaboration’ to determine why the 2021 Killingsworth study and the 2010 Kahneman and Deaton study, involving the same queries of statistically similar populations, generated such different results. They found that conventional methodological procedures used in both studies obscured more nuanced results, otherwise supported by both sets of data. They found that happiness does increase with income, and does reach **satiation at ~ \$100,000, but only for the least happy 15% of the population**. Among happier people happiness increases steadily with income, and in fact **among the happiest 15%, happiness accelerates after \$100,000**. They noted, however, that although these results are statistically significant the magnitude of the impact that income has on happiness is not great.

Bain and Bongiorno (2022) surveyed residents of 33 countries (N=7860) to determine if there are levels of *wealth* that satiate. They asked respondents “to imagine their absolutely ideal life, and then consider how much money they wanted in that life.” Respondents were then asked to choose which of eight possible dollar amounts, ranging from \$10,000 to \$100 billion USD, came closest to this ideal; see **Table 27a**. Respondents were told that if their desire for wealth was insatiable they should choose the high-end response of \$100 billion.

Responses for all countries showed a bimodal distribution: one set of responses clustered at the \$1 million and \$10 million levels and a second clustered at the final \$100 billion value. Table 18a shows the pattern of responses given in seven of the 33 countries. The first four – China, India, USA and Russia – are the four most populous of the 33 countries surveyed. The next three, along with Russia, show the range of responses: of the 33 countries, the residents of Indonesia and the USA are the *most insatiable* and those of Russia express the *least desire for great wealth*. The Argentines, New Zealanders, Chinese and Indians strongly cluster at the *middle values of wealth*: they are averse to the lowest values but express no strong desires for the highest values. For all 33 countries the mean share of those choosing \$1 million or less was 38% and the mean share of those choosing \$100 billion was 31%. These same results weighted by population size are 44% and 25% respectively.

Bain & Bongiorno interpret these results as being supportive of the contention that people do not have insatiable material wants and would thus be comfortable with limits on wealth and income that might be necessary to address climate change and other consequences of high consumption. They note that a majority of respondents said that \$10 million or less would be enough to let them lead their “absolutely ideal life;” see **Table 27b**. The authors go on to say that \$10 million “...by Western standards is not extravagantly wealthy.” They note that \$1 million in savings would provide a 38-year old who could expect to live to age 78 with an annual income of

\$25,000/yr, and that this amount might be considered to be an Aristotelian golden mean between deficiency and excess. They say further that even a nest egg of \$10 million, which would generate income after 40 years of \$250,000/yr, might “not be considered excessive by contemporary Manhattanites.”⁴²

		<i>USD</i>								
	<i>Country</i>	<i>Population (millions)</i>	<i>\$ 10 K</i>	<i>100 K</i>	<i>1 M</i>	<i>10 M</i>	<i>100 M</i>	<i>1 B</i>	<i>10 B</i>	<i>100 B</i>
			Percent of respondents choosing each dollar amount of wealth							
1	China	1,439	4	9	33	23	11	3	1	15
2	India	1,380	12	9	31	18	8	4	3	16
3	USA	331	6	5	18	27	14	5	2	25
4	Russia	145	18	13	24	16	11	4	3	11
5	Indonesia	273	16	12	6	12	8	6	2	39
6	Argentina	45	4	20	33	19	6	2	1	15
7	New Zealand	5	2	4	17	47	11	4	2	19
8	Total mean (N=33)		8	10	20	21	10	5	3	23
9	Weighted mean by population		9	9	26	20	10	4	2	19

<i>Wealth desired (USD)</i>	<i>Mean % of 33 countries</i>	<i>Mean % weighted by population</i>
1 million or less	38	44
10 million	21	20
100 million	10	10
1 billion to 100 billion	31	25

The interpretation of these results as being supportive of limits on wealth and income is a stretch. These results could be interpreted so as to support pretty much an opposite account, namely, that 55% of the world’s people believe they’d need at least \$10 million in net assets before they could lead their ideal lives, and further, that fully 45% of these would need at least \$1 billion to do so.

What might we conclude from this brief review of the relation of income, wealth and subjective well-being? I’ll forego an assessment regarding wealth because the single study reviewed is too small a sample to tell us much. We’ve noted some two dozen results concerning income and well-being, but many of these results are not readily comparable. I’ve identified 17 results that are arguably comparable, and show these in **Tables 28a** and **28b**.

	<i>As incomes rise...</i>	<i>number of results:</i>
1	...subjective well-being rises and	
a	does not satiate	3
b	satiates	4
2	...life evaluation rises and	
a	does not satiate	2
b	satiates	3
3	...happiness rises and	
a	does not satiate	3
b	satiates	1
4	...happiness shows no association with income	1

If we aggregate these results assuming that life evaluation and happiness are component expressions of a generalized subjective well-being we get:

Table 28b. Aggregate comparison of income/well-being study results		
	<i>As incomes rise...</i>	<i>number of results:</i>
1	...well-being rises and	
a	does not satiate	8
b	satiates	8
2	... well-being shows no association with income	1

Given the wide range of methodologies, study design, sample populations and other particulars that are used for these seventeen studies, it's questionable how useful the aggregate results reported in Tables 28a and 28b really are. For now a default conclusion might be that the question of the relation of income and well-being remains uncertain. At the same time, the intuitive hunch that well-being rises as lower incomes rise and in some sense tends to level off as higher incomes are realized has not been clearly rejected.

4.h. PROPOSED 'JUST WAGE' SCHEMATA [This section is in preparation.]

How were/are wages, salaries, household incomes and other flows of monetary and non-monetary resources determined in non-market economies? Throughout human history different societies with different cultures and political economies arrived at different ways of determining what constitutes a just wage or a fair income. In this section I'll briefly review, among other cases:

1. Applications of neo-scholastic/Neo-Thomist teachings regarding the just wage as well as secular proposals grounded in these teachings. See e.g.,
 - * [The Just Wage Initiative](#), University of Notre Dame (USA).
 - * Brian J. Boyd (2022) *A Just Wage: Equality, Proportionality, and Solidarity in the American Economy*.
 - * Skidelsky and Skidelsky (2012) *How Much is Enough?* ^{43 44}
2. Applications of Islamic teachings regarding the just wage and related topics, e.g. the Qur'anic *zakat*.
3. Applications of Hindu teachings on the just wage. [See e.g. [Work and Wages of Labor: A Study of Ancient India](#)]
4. Applications of Confucian, neo-Confucian and Chinese Socialist concepts of the just wage. [See e.g. [Salary of State Officials](#).]
5. How were pay differentials determined in Eastern European countries during soviet socialist times? What accounts for the relatively low pay differentials that obtain in Eastern European firms today, over three decades since the end of soviet socialism?
6. What accounts for the markedly low pay ratios between executives and other workers in Japanese firms today?
7. How are wages, salaries and other incomes determined in Anabaptist (e.g. Amish, Hutterite, Bruderhof) and similar communities?
8. Just wage and income teachings and practices in other religious communities – Jewish, Buddhist, Mormon et al.

4.i. CONCLUDING SUMMARY DISPLAY AND COMMENTS

TABLE 29 displays many of the queries, and aggregates many of the results, considered in the foregoing sections 4.a-4.g. All values are for pre-tax household incomes and have been converted to 2023 USD. Concluding summary comments follow. See **Attachment B** pp 21-23 for further comments on the TABLE 29 queries and results. See **Spreadsheet C.4: How Much...** (online) for the calculations that generated the TABLE 29 results shown.

A. Query		B. Number of Results	C. Median Result	D. Range of Results
1	What minimum income is enough to live a modest but secure lower middle-class life?	9	56,000	35-116 K
2	What is a fair and appropriate Universal Basic Income?	6	30,000	28-40 K
3	What minimum income is enough to live a very comfortable and secure middle-class life?	6	136,000	101-208 K
4	How much income might be considered 'more than enough'?	5	170,000	117-200 K
5a	Does well-being satiate as income rises? [8 studies say "no"]	8	na	na
5b	Does well-being satiate as income rises? [8 studies say "yes."] At what level does it satiate?	8	76,000	42-200 K
6	What should the maximum income be?	9	1,685,000	246 K-29M
7	What minimum net worth is needed to be considered wealthy?	9	6,600,000	4.3-18.2M
8	What minimum annual income is consistent with being considered wealthy?	9	533,000	450K-1.3 M
9	What should the maximum net worth be? [NB: small sample size makes this result precarious.]	2	2.6 B	700M-4.5B
10	Upon reaching adulthood, what should one's guaranteed minimum net worth be?	6	88,000	30-277 K
11	What is the desirable level of economic equality (20/20 ratio) we should strive for?	5	3.1 : 1	2.5 - 5.2:1
12	What income can we aspire to and stabilize at, globally, over the coming 150 years or so?	15	104,000	20-343 K

All income results are annual pre-tax incomes for a household of four, with two adults and two children, in 2023 U.S. dollars.

Concluding Summary Comments

We've compiled over 400 data points on income and wealth that bear on the questions of how much is enough and what is fair. "Enough" and "fair" are normative values that can only be determined through political engagement. Inventories such as this one can inform that engagement but not substitute for it.

The median results shown in TABLE 29 can be woven together, with a little stretching and twisting, into a somewhat consistent demonstration narrative:

"A family of four should be able to live a modest but secure lower middle-class life on **\$56,000/yr**. A very comfortable and secure middle-class life requires about **\$136,000/yr**. For many Americans household incomes of more than **\$170,000/yr** are in some sense 'more than enough.' Although some scholars argue that the more income people receive the happier people are, others suggest that once household incomes increase beyond **~\$76,000/yr** true quality-of-life doesn't increase much at all. Many Americans believe that a net worth of **\$6-7 million**, or an annual income of **~\$530,000**, marks a household as 'wealthy'. Scholars and progressive political leaders have proposed hard limits on both great wealth and great income, but tend to be relatively generous as to what those hard limits should be. On balance they suggest that household net worth should be limited to **~\$2.6 billion** and household income to no more than **~\$1.7 million/yr**. Broad public support for such limits has not as of yet been demonstrated. There appears to be greater public support for programs that augment the income and wealth of lower-tier households. Policy leaders and advocates have proposed both Universal Basic Incomes and Universal Basic Inheritances, at median values of, respectively, **\$30,000/yr** and **\$88,000** at age 21-25. There is concern about systemic equity as well. All the income and wealth policies just noted need to be made consistent with a world moving towards a ratio of **3:1** between the top and bottom 20% of all households. Finally, looking to the very long haul, a case can be made that the human community should be able to aspire to and achieve a world in which mean household income worldwide is in the ballpark of **\$100,000/yr.**"

This narrative of course includes contradictions, inconsistencies and implausibilities. A maximum net worth of \$2.6 billion can generate annual income of \$10 million, far greater than the proposed \$1.7 million/yr ceiling. The \$56-136 K annual income associated with middle-class households seems modest indeed when cited alongside the \$1.7 million income ceiling. And we can question this \$1.7 million ceiling from the opposite direction: Many would say

that to propose a 100% tax on incomes over \$1.7 million is simply *delusional*. As noted in Attachment B item 6, in 2019 there were ~ 765,000 U.S. households with annual incomes over \$1,700,000. Finally, the demonstration narrative, and the larger Attachment C.4 on which it is based, rely almost entirely on data from and on the United States, a likely declining power, at a time when it is clear—as the larger Working Paper asserts—that now more than ever global concerns call for fully global perspectives.

I've several comments. For one, it's easy to construct more consistent, plausible and non-contradictory narratives by pulling from the TABLE 29 column D *ranges* rather than the Column C *medians*. More seriously, this exercise is meant to be suggestive and exploratory only, not carefully analytic. That more rigorous exercise remains to be done. The "Americans suggest/believe..." construction is obviously the case with only a portion of the data collected but for now helps unify this summary narrative. Further, I suspect that the work-in-progress section 4.h, drawing on non-market and pre-market historical experience with just wages and fair incomes, will greatly complicate, in a good way, this consideration of sufficiency and fairness, especially given that all but a handful of the several hundred data points collected here were generated by or assume free-market capitalism. The parochial focus on the USA is a function of resource constraints. The exercise that remains to be done will need to be global if it hopes to be rigorous.

Finally, if we think beyond the short run (20-40 years) and the middle run (50-90 years) and consider what might be possible over a longer run (100-200 years), our prospects broaden. Over this longer period of 100-200 years we can expect that a combination of factors, as discussed throughout this working paper, are likely to move us towards a steady-state political economy, one in which per capita GDP is maintained at a constant, non-increasing level. In this situation considerations of distributional equity become a core, even determining, element of personal and political life. In that case agreement on maximum and minimum incomes and assets becomes both a political-economic and a moral necessity, in a manner that should seem fitting, even self-evident, to the human community a century or two hence.

None of this is at all meant to suggest that we wait a century or two before working in support of economic justice. Rather it's meant to suggest that the norms, institutions, worldviews and mentality that generate and support economic inequality are so great, and so deeply embedded in who we are and how we live today, that we'll need at least a century or two of intended, intergenerational effort if we are to begin moving along an alternative track.

ATTACHMENTS

A. Problematic Approaches to Sufficiency and Fairness

A-1. "How Much Do I Need to Retire Early?"

Self-help articles of this sort appear regularly in financial planning and money magazines. They typically suggest setting a capital accumulation goal based on the **25x expenses** or the (equivalent) **0.04% of savings** rules, and then working, saving and investing as much as you can until you've amassed the desired sum, at which point you can live off your investment income and never need work again.

This strategy has been employed by folks who set out to make a bundle quickly, often in the markets, and retire at age 35 with \$4M or more in the bank and thus at least \$120,000 a year to live on ever after. It's also been used by a variety of voluntary simplicity advocates, life-style bohemians and others who might save, say, \$375,000 by their mid-thirties and then get by (frugally) on \$15,000 a year.⁴⁵ Somewhat between those two expressions is the *FIRE Movement*, whose participants typically work to live on passive annual incomes of \$30-60,000.⁴⁶

The key problem with these strategies is that the more people who adopt them the less viable they become. In order for savings to generate income, somebody somewhere must be using those savings as capital to generate

profits, a portion of which are paid as interest or dividends to the now financially independent early retirees, be they profligate or frugal. The more people seeking to live on savings and investment returns, the lesser the return on those assets will be. If the entire human community were to adopt this strategy it would return to subsistence agriculture within a very few generations. It's a niche strategy, not a universal one.

There is, however, a viable variant that would allow universal adoption. People could reduce – though not eliminate – the hours spent in paid work. They could live frugally, save and invest their earnings and live in part off the return on these. The economy would grow more slowly and the return on investment would be less, but over time a new, long-term steady-state equilibrium could be established. For more see Working Paper ATTACHMENT E.1 re steady-state economics.

A-2. “Effective Altruism”

I discuss *Effective Altruism* (EA) in detail in Working Paper ATTACHMENT F.3, *The New Politics of Artificial Intelligence*. At that writing (2018) EA was a small but growing social, philosophical and philanthropic movement based at Oxford University and attracting attention from young people at elite schools in the UK and U.S. aligned with the tech world, the ‘rationalist’ (i.e. atheist) community and transhumanism. EA adherents are urged to pursue highly remunerative careers and then to pledge significant shares of their earnings to ‘effective’ charitable endeavors. ‘Effectiveness’ is evaluated using utilitarian/objectivist/rationalist methodologies that often serve as a cover for the normative preferences that drive the process and the results. At the end of a seemingly rigorous evaluation process, EA donors typically find that the most effective thing they can do is contribute large sums of money to building the EA community and to supporting the safe development of artificial intelligence, transhumanism and space colonization.

EA is not a model for the larger human community. Persons with greater ability to pay should be willing to be taxed at higher rates, and everyone, regardless of economic status, has an obligation to assist those in less fortunate circumstances. EA, however, puts a higher and very public valence on such action. In doing so it gives moral cover to a community of very privileged, highly educated individuals committed to a dominating ideology of techno-utopian capitalism, and, among much of the leadership and core membership, transhumanist techno-eugenics. See Working Paper ATTACHMENT F.3/Attachment S for more.^{47 48 49}

B. Comments on TABLE 29

Some of the queries and results included in TABLE 29 are empirical measures, some are normative judgments, others are socio-economic findings and others involve several or all of these. Given the disparate sorts of sources used to generate these results, they should be taken as broadly suggestive only and not analytic. Most of the values shown in columns C and D vary with country, region, stage-in-life, class background and other conditions. The values have been normalized as noted to more-or-less apply to households of two adults and two children, and might further be thought of as roughly applying to median households in middle America. The results shown for Query 8 are provisional given the small sample size. All dollar, euro and pound values were converted to 2023 USD using the Bureau of Labor Statistics [CPI inflation calculator](#).

Here are brief comments on the eleven queries and results shown in TABLE 29:

1. \$56,000 for a family of four is on the low end of the lower middle-class spectrum for much of the U.S. But it is ~ six times the 2013 global median household income of [\\$9,700 USD worldwide](#).
2. In developed countries a family of four can't live securely on \$30,000, but UBIs are meant to be significant supplements to, not substitutes for, other income. For more on UBI see Working Paper ATTACHMENT C.3.
3. These numbers roughly align with the long-run values used in the Working Paper Balanced Equitable World (BEW) scenario of Hayes (2004). The upper end of the range might not be achievable, much less sustainable, in a world of 10 billion people.

4. The material success of science, technology and capitalism buttressed by moral/philosophical arguments by thinkers such as John Locke (see DN 11) have put those arguing that moral/philosophical limits on material accumulation and inequality can and do exist on the defensive for the past several centuries. Still, my sense is that most people today can agree that such limits can exist; and further, that they can give dollar amounts that they believe are in fact ‘more than enough.’ But there is no agreement on what the moral or policy implications might be with regard to those enjoying more-than-enough income. People can believe, not inconsistently, both that income above a given amount is more-than-enough and that it would be greatly unjust for it to be taxed away.

5a/5b.1. Does well-being satiate? Our brief review of the various studies and the summary results shown in Tables 22a and 22b suggest that the question is complex. Results vary with different definitions and measures of the dependent variable: well-being, emotional well-being, happiness, life evaluation, life satisfaction, “sadness” or other. Results vary as well depending upon whether a study 1) is investigating the effect of income or wealth; 2) is longitudinal (incomes/wealth of one entity [individuals, households, countries] over a period of time) or cross-sectional (incomes/wealth of many entities at a point in time); or 3) investigating results that might differ with gender, race, religion or other cultural/sociological/psychological factors. Results will also vary with alternative methodologies (in-person interviews, web-based surveys, Day Reconstruction Method, iphone “ping” responses, etc.) and data sources (government statistical reports, academic data series, NGO compilations). As noted in the text, the intuitive judgement that some sort of diminishing returns operates with regard to well-being generated by income doesn’t appear to be strongly rejected by the data gathered in this review to date.

6. In 2019 there were ~ 765,000 U.S. households, about 0.4% of all households, with annual incomes greater than \$1,700,000. (*ChatGPT-4*). In 2018 there were ~ 17,500 households, about .01% of all households, with annual incomes greater than [\\$35 million](#). It’s clear that efforts to cap household incomes at either our median or our upper range values would face a small but heavily resourced and presumably highly motivated opposition. It’s difficult to construct a credible scenario for the U.S. as it is today in which such household income caps are proposed and secure the support of the U.S. House, the Senate and the President. I believe that will very likely come to pass, but will happen as part of a far more general transformation of our politico-socio-cultural lives.

7.1 It seems reasonable to consider a household with net assets of \$6 million as being *wealthy*. Households with net assets between, say, two or three million and six million might then be considered *well-off* or *very well-off*. But if \$6 million is wealthy, what is \$60 million, or \$600 million, or \$6 billion, or \$60 billion, or [\\$253 billion](#), or [1 trillion](#)? Each of these sums but the last two is an order of magnitude greater than the preceding sum. Wealth-holders at each level are able to do things, qualitatively as well as quantitatively, that wealth-holders one order of magnitude down cannot. Can we identify distinct interests, mentalities and preoccupations that characterize those situated at each of such gradations of wealth? I suspect so but haven’t studied the terrain.

7.2. A further sense of the significance of these categories of very great wealth can be had from these numbers gathered from the [World Inequality Report 2022](#) (Chancel et al. 2022) and shown in **Table 30**.

Table 30. Global millionaires and billionaires, 2021			
	<i>Wealth Group (\$)</i>	<i>Number of Adults</i>	<i>Average Wealth (\$)</i>
a	1M – 10M	60,300,000	1,800,000
b	10M – 100M	1,770,000	19,000,000
c	100M – 1B	74,000	230,000,000
d	1B – 10B	2,500	2,900,000,000
e	10B – 100B	160	26,000,000,000
f	Over 100B	9	147,000,000,000

I suspect that there is a fascinating and consequential social psychology and politics in part particular to each of these or similar ranks of wealth-holding, but I haven’t seen anything written up on this.

8. With adjustments for all the contingent household circumstances, \$533,000 household income should get you into the top 2% in most locales and the top 1% in some locales and so for now is a reasonable marker of ‘wealthy.’ Granted there are ambitious sorts with incomes of \$500K and *negative* net worth, but they intend this to be a temporary condition.

9. The small sample size makes the results shown here not very helpful. I’m in search of additional results. As with many other proposals noted in this review, a first reaction is that it’s unrealistic to imagine a tight cap on net worth ever being adopted anywhere. But if you bring to mind for a moment the full magnitude of the disparities of wealth and income now in place and projected to come, and the manifold ways in which this disparity alone is shaping the lives and future of the entire human community, it can appear all but inevitable that at some point there will be a reckoning.

10. Proposals for a state-guaranteed minimum net worth or ‘inheritance-for-all’ are similar to Universal Basic Income in that they share many attributes of conventional social security programs and could be established short of a deeper transformation of values, mentality, institutions, etc. A guaranteed gift of \$150,000 (more than the median value shown in TABLE 29 but well within the range) on reaching age 21-25 would allow young people to begin their vocations as adult citizens with already a significant stake in the game. It could enable a great number of young people to obtain education, training, homeownership and/or start-up capital that would be otherwise out of reach. Granted, it would be expensive. If we assume 3.2 million Americans are born in 2025 and that each is to receive a civil inheritance of \$150,000 in 2046, that’s \$480 billion, which is 7.7% of the FY2022 U.S. federal budget. This is a lot but not prohibitively so. Still, it’s unlikely to be adopted as a stand-alone measure in a conventional world such as ours is today.

11. The 2019 *United Nations Development Report* reported 20/20 quintile ratios for 147 of the world’s 195 countries. The country with the lowest 20/20 was Ukraine with 3.5; the highest was South Africa with 28.4. Burundi held the median 20/20 ratio of 6.7. The United States, with a 20/20 ratio of 9.4, was the most unequal of any developed country. Economic inequality has been declining in a (slight) majority of countries over the course of the 21st century, and this is moderately encouraging. It’s not clear how much of this decline is due to policy, how much to broad ongoing socio-economic and demographic change, and how much to unique cultural or other factors. The ten countries with the very lowest 20/20 ratios, all between 4.0 and Ukraine’s 3.5, are all either former soviet socialist republics or satellites (Belarus, Czech Republic, Kazakhstan, Slovenia, Kyrgyzstan, Moldova,) or Nordic/Scandinavian countries (Finland, Iceland, Denmark). The impact of secular population decline on inequality is uncertain; see the discussion in Working Paper ATTACHMENT B.5-A. My intuitive hunch would be that a global mean 20/20 ratio of ~ 4.5-5.0 can develop over the coming 150 years, and that this would be experienced quiet positively throughout the world. I see no reason to assume that inequality could not decline further if desired by enough people.

12. The first 10 queries shown in TABLE 29 involve immediate conditions or short-to-moderate term policy objectives. Query 12 is explicitly directed at the long term, defined in this working paper as ~ 100-200 years. The derived median household income of \$104,000 is very close to the preferred median value of \$108,000 that I postulated in my 2004 dissertation, and which I judged was achievable and sustainable, and would not require any periods of absolute GDP decline. The \$20,000 low-end of the range shown in Column D would require a period of absolute GDP decline among today’s high income countries, and the \$343,000 high-end of the range would be likely unattainable and almost certainly unsustainable.

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DISCUSSION NOTES (DNs)

¹ For simplicity the criteria of sustainability is treated here as covered by the criteria of justice: if a trajectory of development is unsustainable it's unjust with respect to future generations. For the moment all trajectories shown are assumed to be sustainable except where noted.

² All quintile values shown in Table 1 are mean values, that is, within each quintile there is some range of values around the displayed mean.

³ Note too that although the quintile values for Low-, Middle- and High-income countries as of year 2000 are, as would be expected, quite disparate, under our BEW and GSW scenarios these values, for all countries, have by 2150 converged. There is still (moderate) inequality within countries, but there is no longer significant inequality among countries.

⁴ In Table 2 cases a-d the values shown are global averages and don't address distribution of this GDP either within or among countries, and thus don't addresses questions of justice. Cases e and f by Nordhaus show currently developed and currently less developed countries stabilizing by 2200 at markedly different levels, viz., with a ratio of 2.6:1, which is inherently unjust. These trajectories describe a global caste system.

⁵ Source: [United State Department of Labor Minimum Wage](#) webpage

⁶ Sources: Reich: Working Paper ATTACHMENT C.2.a. DSA: WPA C.3.f SPUSA: WPA C.3.g.

⁷ Source: Working Paper ATTACHMENT C.2.d.

⁸ The six living wage cases shown here for San Francisco might be taken to represent a progression through the life-course:

Case a - single working person, no children:	\$ 50K
Case b - working couple, no children:	70K
Cases c-e - varied arrangements of both work and children:	100-140K
Case f - empty nest; equivalent of one partner working FT:	75K

⁹ For data on U.S. household median net worth see Sullivan et al. (2023). For data on numbers of households with \$2-4 million net worth see PK (2021).

¹⁰ Robeyns (2019) and Francoise et al. (2023) offer useful reviews of, respectively, the moral/philosophical and the pragmatic policy design questions that need to be addressed when hard caps on income and/or wealth are being considered. Philosopher/economist Ingrid Robeyns of Utrecht University is recognized as a leading voice of *Limitarianism* – she coined the term – identified as a political/ethical stance that holds that it is immoral for persons to have great wealth and/or great income. See Robeyns (2024, 2023) for more on Limitarianism.

¹¹ The foundational rationale *in support of* both unlimited accumulation and economic inequality was of course that provided by English philosopher John Locke (1632-1704) in his *Two Treatises of Government* (1698). Locke put forth both a moral argument for there being limits to how much a person could own, and a subsequent argument in accordance with which persons could morally exceed those limits. He said that God created the state of nature with the intent that it be held in common by all people. However, God imbued human lives with a unique human *dignity*, a feature of which is that we hold inalienable *property in their own bodies*. Further, if we apply our bodies, through labor, to improve some aspect of the state of nature, then that improved nature is now *our property*. Locke said we can accumulate such property only so long as 1) it can be used in ways that benefit the larger community; and 2) this accumulation does not prevent as yet unpropertied persons from creating or acquiring such property as they need to subsist. Locke gives an example from agriculture. He says that if we own so much land that some portion of the crops we grow on it spoil before we can consume them, we are violating both of the moral conditions of property ownership. The spoiled crops are not benefitting the community and the land on which the spoiled crops are grown is not available for productive use by others in need. Moving quickly here through the

rest of his argument, Locke finds that the invention and use of *money* allows unlimited accumulation. If excess crops are sold before they spoil, the community benefits; this includes landless community members who can exchange services for money with which they purchase their needed provisions. Importantly, money, unlike produce, does not spoil. It can be accumulated indefinitely without harming others; and its use in voluntary exchange can work to the betterment of the community. Locke acknowledges that money allows those who apply themselves more industriously to accumulate more of it than others do. But he says that society has agreed to accept this condition, albeit tacitly, because the opportunity for accumulation is now available to all. See Bell et al. (2000), Vaughn (1980) and Laslett (1988).

¹² See Litvak (2010). Litvak includes a transcript of the *New York Times* issue of 9 February 1880 that reports in some detail on Adler's presentation of his income tax proposal the day before at the Ethical Culture Society.

¹³ Huey ("the Kingfish") Long was arguably the most radically populist U.S. Senator ever elected. In 1934 he started the national grassroots Share-Our-Wealth movement to build support for his proposals. At its height this effort involved tens of thousands of local Share-Our-Wealth clubs and a membership of several million. Long made no secret of his intention to challenge incumbent President Franklin Roosevelt in the 1936 general election. Opinion surveys showing growing support for Long were instrumental in moving Roosevelt to propose the package of legislation in 1935 that established the Second New Deal. In September 1935 Long was assassinated at the Louisiana State Capitol in Baton Rouge by the son-in-law of a political adversary. See the Pulitzer Prize-winning biography by Williams (1981) and the account of Long's Share-Our-Wealth plan in Pizzigati (2004). See too this clip of Long giving his [Share-the-Wealth speech](#). And check out [Kingfish](#) by Randy Newman.

¹⁴ President Franklin D. Roosevelt, *Message to Congress on an [Economic Stabilization Program](#)*, 27 April 1942.

¹⁵ Nolan's call for a 99% rather than a 100% tax might have been intended to avoid objections that a 100% tax is confiscatory and thus illegal and/or unconstitutional. The legal issues concerning very high tax rates are complex.

¹⁶ What would be the impact of the Gardner proposal on economic inequality in the U.S.? Using an approach used by Minutolo (2015) we see that the [Global Rich List](#) estimates 5,393 individuals in the world with net worth in excess of \$300 M. The Credit Suisse Research Institute's [Global Wealth Report \(2022\)](#) estimates 62,800 people worldwide with net worth of \$50 M or more, of which 49% are U.S. residents. If we assume that that 49% figure applies to fortunes in excess of \$300 M, and if we use the U.S. Census Bureau figure of 3 persons per U.S. household, we can peg the number of U.S. households with net worth of \$300 million or more at 880. As of 2020 the USCB counts 124,000,000 U.S. households. It would appear that the number of individuals/households impacted by the Gardner tax would be too small to move the dial on any of the standard measures of wealth inequality. The Gardner tax could, however, have a significant impact on personal initiatives of interest to the top several hundred very wealthy individuals, e.g. space colonies, immortality, techno-eugenics and Effective Altruism.

¹⁷ See Ewing (2013).

¹⁸ See Mason (2017). She cites executives of firms with government contracts receiving upwards of \$3,200,000 in annual pay, at a time when the UK average wage of ~\$34,500/yr would limit annual executive pay to ~\$690,000. In the 2017 general election Labor significantly strengthened its representation in Parliament but not by enough to form a government, and Corbyn's proposal has remained untested.

¹⁹ See Kottasova (2017).

²⁰ Pizzigati acknowledges that he is calling for a maximum personal *income*, not maximum *wage* per se. He argues that the use of the phrase 'maximum wage' has the advantage of mirroring and evoking the already established and popular policy of *minimum wage*. He says that use of *maximum wage* will facilitate introduction of the new concept of maximum income into the popular lexicon.

²¹ For additional proposals regarding maximum wage/income in the UK see Ramsay (2005).

²² See also Buch-Hansen et al. (2019) for a review of proposed caps on income and wealth as components of degrowth economic scenarios.

²³ Concialdi, building on an earlier proposal by Drewnowski (1978), notes that while governments have been more or less able to define minimum incomes necessary for households to be able to participate effectively in society, they have been much less able or willing to define *maximum* incomes. Concialdi's proposal is thus to make the maximum income a function of the minimum income, as noted in the narrative. He acknowledges the many methodological questions that would need to be addressed for such maximum incomes/affluence lines to be constructed and employed in practice.

²⁴ See Wortel-London (2023). He notes that \$600,000/yr is approximately the annual income threshold that defines "the 1%" of household incomes and is about 40 times the level of the current annualized federal minimum wage of \$15,000. These numbers motivate a convenient name for this proposal: "the 40-to-One Act."

²⁵ See Le Grande (2020) for an overview and discussion of minimum wealth/'universal basic capital' proposals.

²⁶ Basic income and basic capital constrain and empower recipients differently. A basic annual income, received monthly, helps protect recipients from windfall profligacy, bad judgement and bad luck. OTOH, the one-time large basic capital grant allows for creative and innovative, albeit more risky, investment decisions. Note that policies of basic income and basic capital are to some extent intermutable. A basic capital grant can be invested to generate a basic income, and a guaranteed basic monthly income can be used to secure and repay a large one-time bank loan.

²⁷ Paine also in 1796 proposed that persons living to age 51 receive thereafter an annual sum of £10, or \$1,799 in 2023 USD. The first regular U.S. social security payments were made in 1940, in monthly payments amounting to \$270/yr, or \$5,843/yr in 2023 USD. The 144-year period between the first proposal and the inception of social security is not atypical of major systemic social and economic policy innovations. Although there are many exceptions, it's this history of long-term lags that in part motivates my contention that many of the sorts of transformations called for in this working paper should be realistically expected to come to fruition over periods not less than 100-200 years.

²⁸ In 2003 the UK government under then-PM Tony Blair, following an earlier proposal by the IPPR, established the Child Trust Fund (CTF). It provided children born after September 2002 with £250, or, if from a low income family or disabled, £500. At age seven children would receive an additional £250 or £500. The CTF account holder could draw on the proceeds upon reaching age 18. However, the Conservative government under PM David Cameron that succeeded the Blair government in 2010 promptly curtailed the CTF and in 2011 ended it altogether. Le Grand (2020) suggests that the Conservatives were motivated to end the CTF in part because the Labor government had promoted it as a strongly partisan measure rather than as a unifying, non-partisan communal good. He notes that there was little protest when the CTF was abolished, and attributes this in part to the fact that most account holders would, upon turning 18, have access to barely £1,000, a sum which carries with it little sense of 'inheritance,' much less 'wealth.'

²⁹ 'Baby bonds' were first proposed in the U.S. in 2010 by economists Darrick Hamilton of the New School for Social Research and William Darity of Duke University, as part of a package of measures intended to address the U.S. black-white wealth gap. In 2008 Le Grand had proposed a similar instrument, called *bambino bonds*, to the European Union. Others have called for baby bonds as a means of easing the financial burden of having children and thus hopefully encouraging higher total fertility rates; see Working Paper ATTACHMENT B.5 on the challenge of population decline for more on this.

³⁰ Senator Booker proposed that each child born in the U.S. receive a \$1,000 savings account under the auspices of the U.S. Treasury. The accounts of children in low-income households would receive an additional \$2000 each year; moderate income households would receive proportionately lesser annual contributions and children in households with more than \$125,751 annual income would receive no additional contributions. By age 18 a child from a low-income household would have ~ \$46,200 in their account. At age 18 account holders could withdraw

some or all of their accumulated funds, but only for specified ‘wealth-building’ purposes: education, home purchase, business start-up and the like. The ~ \$60 billion program would be financed through progressive estate taxes and by closing the inherited capital gains tax loophole. See Viebeck (2019) and Corasaniti (2019).

³¹ *National wealth* is a measure of the total value of wealth possessed by the citizens of a country as of a given date. Gross national wealth is the total value of assets, including all financial assets, tangible assets, and net foreign assets. Net national wealth is gross national wealth less asset depreciation. See rankings of countries by national wealth per adult at https://en.wikipedia.org/wiki/List_of_countries_by_wealth_per_adult

³² More specifically, Wilkinson and Pickett claim that with significant reduction of inequality:

- * rates of mental illness and obesity might each be cut by almost two-thirds
- * teenage birth rates could be more than halved
- * violent crime and prison populations might be reduced by as much as 75 per cent
- * people could live longer while working the equivalent of two months less per year
- * the proportion of the population feeling they could trust others might rise by 75 per cent, presumably with matching improvements in the quality of community life.

³³ Wilkinson and Pickett’s methodology has been criticized from both the right and the left for selective choice of data points so as to display association, for assuming that association implies causation without testing for other explanatory variables, and for other reasons. See Saunders and Evans (2010) and a reply from Wilkinson and Pickett (2010). See also U.K Trades Union Congress (2011), which acknowledges assorted methodological shortcomings but says that on balance these do not invalidate the main conclusions of the book.

³⁴ Wilkinson and Pickett’s choice of Japan, Norway, Sweden and Finland as aspirational models of distributional equity for the U.S. establishes a high bar. All four countries have cultural features and histories that give them a leg up along many socio-economic metrics. The five countries I chose for the Table 24 exercise - Japan, Sweden, Germany, Vietnam and Czech Republic - have 10/10 ratios below 7.0 and populations greater than 10 million, and together represent at least a bit more cultural and historical diversity.

³⁵ It would likely be relatively straightforward to seek to reduce inequality in the United States by, say, 10-20 percent over a period of several decades. It would be another matter to reduce U.S. inequality by the 40-70% implied by Wilkinson and Pickett’s proposal and shown in the right-most column of Table 24. (NB: I focus here on the percentile ratios because the Gini is less sensitive to growing inequalities in the highest and lowest percentiles, which is the driving dynamic of inequality at this time. But the Gini measures inequality inclusive of all income percentiles and remains an important comparative measure). The World Bank (2022) collects data on changes in country Gini coefficients over time. For 33 countries for which that the Bank shows data for the years 2000 through 2020 or 2021, inequality increased in eight of them and declined in 25. That much is encouraging. Of the 25 in which inequality declined, the mean decline over these 20-21 years was 13% and the median decline was 15%. Only six countries declined more than 20% and none declined more than 29%. For its part the U.S. Gini was effectively unchanged over this period, moving from 40.1 in 2000 to 39.7 in 2020. It’s difficult to draw useful conclusions from these minimal data, but the prospects for major inequality reductions in the United States over the short-term would appear to be challenging. As noted in the *Concluding summary comments*, however, reasonably longer time horizons allow for realistically more ambitious objectives.

³⁶ For Table 25 source data see [Our World in Data: Palmer Ratio](#) and [Wikipedia: list of countries by income inequality](#).

³⁷ Park and Kim adapted a distribution from theoretical thermodynamics known as the Boltzmann distribution. The physical systems modeled in thermodynamics are composed of particles (e.g. gas molecules), which are “identical to but distinguishable from each other,” and in which “interaction among the particles is negligible.” The authors take the functional form of the Boltzmann distribution and replace the physical variables and parameters used therein with ones representing a community with income to be distributed. They say “... the physical particle is replaced by the unit income, the physical substates by the individuals in a community...” They say that the physical model, grounded in the entropy laws, yields “the most probable, natural and unbiased distribution of a physical system at equilibrium,” and go on to say that “The concept of ‘most probable’ might be translated into ‘fair’ in social sciences...” I’m not able to fully critique this exercise. But this last step appears to be an example of the

naturalistic fallacy, and I'm skeptical of attempts to model human social behavior using simple functional forms from the physical sciences.

³⁸ Happiness trend data for the U.S. are taken from the University of Chicago NORC-General Social Survey and in Europe from the European Science Foundation European Social Survey. Gini coefficients for the U.S. are those prepared by the U.S. Census Bureau and for Europe those prepared by the [World Income Inequality Database](#).

³⁹ The results for the U.S. might be taken to motivate the following exercise. The U.S. Gini coefficient as of 2023 was 0.414. Assuming that the suggested U.S. point of maximum happiness remains stable at .356, it might be surmised that if the U.S. were to reduce its Gini by $(.414-.396)/.414 = 4.3\%$ we would be *happier*, but if we were to reduce our Gini/income inequality any further we would become increasingly *less happy*. Similarly, the 2023 average Gini for Europe as of 2023 was $\sim .301$. Most European countries have somewhat higher Ginis (although still much lower than that of the U.S.) and would become happier, albeit only moderately so, by becoming more equal. But four countries with current Ginis already less than .286 would presumably become less happy by becoming any more equal; these are Slovakia (Gini=.252), Norway (.270), Belgium (.274) and Finland (.274). My intuitive sense is that the level of generality and abstraction used in analyses and exercises of these sorts make their conclusions questionable.

⁴⁰ Keynes' estimate of future material living standards was spot-on: 2023 U.S. per capita GDP was $\sim \$80,000$. Keynes' estimate of our subsequent trajectory is iffier: he appears to suggest that by this time we'd be anticipating, or perhaps somewhat along the road towards, a 15-hour workweek.

⁴¹ Easterlin's results were taken by some to be paradoxical and were given a name, the *Easterlin Paradox*. How could it be that at a point in time happiness varies directly with income, but that over a span of time happiness shows little or no variation with income? Easterlin and O'Connor (2020) account for this pattern by invoking the psycho-dynamics of *social comparison*. At a point in time persons of high income are comparing their lot with the larger number of persons of lower income, which elicits feelings of happiness, or at least satisfaction. At the same time, persons of low income are making the same comparison and as a result feel *unhappy*, or at least dissatisfied, with their lot. Over periods of time, however – say several decades or longer – most person's absolute incomes tend to rise even as their relative incomes are, on average, more stable. In that case their subjective happiness would show little or no change, even as absolute incomes rise. I haven't read enough of this literature to have a considered opinion, but on first reading the Easterlin/O'Connor explanation, if I understand it correctly, strings together quite a few very broad and questionable generalizations.

⁴² Bain and Bongiorno don't appear to imagine that their respondents would *invest* their fortunes; rather, the respondents burn through their uninvested assets by a constant amount each year for 40 years, after which time assets = zero. Alternative scenarios might have respondents invest their fortune and live off the annual net returns – perhaps 2-3% per year – which would yield a significantly higher annual income *and* provide it for at least as long as economic output continues to grow at a comparable rate.

⁴³ In *How Much is Enough?* the authors correctly begin by asking: "Enough for what?" and answering "Enough to live the good life." Continuing, they ask, "But what constitutes the good life?" After rebutting *de gustibus* objections, and after acknowledging the metaphysical foundations of their inquiry, they proceed to identify important elements of the good life, i.e., *basic goods*. These include (but aren't limited to): *health, security, respect, personality, friendship, leisure and harmony with nature*. The authors then propose a sort of cooperative commonwealth in which property is widely distributed, a large sector of the population is employed in cooperative and worker-owned firms, productivity gains are used first to address disparities of income and then to significantly shorten the workweek, education is refocused to prepare citizens for the many and varied social roles now enabled by the much shorter workweek, public policy is initiated at the community level and referred to regional and national levels only when necessary, high consumption is discouraged via strongly progressive consumption taxes and strong taxes and regulations on commercial advertising, and strong export restrictions allow developing countries to catch up with their former colonial exploiters. The authors imply that under such a cooperative commonwealth gross domestic product and personal income would likely be less than they'd be otherwise but would surely be *enough* to live a good life, and would be fairly distributed. Unfortunately the authors don't venture hard numbers for any of this.

⁴⁴ Although Skidelsky *père et fils* make no reference, *How Much is Enough?* is clearly grounded in neo-Thomist moral philosophy and the work of mostly Roman Catholic thinkers on political and social economics over the past 150 years. See Working Paper ATTACHMENT G.1 for background and discussion.

⁴⁵ I reference the *Simple Living movement* in DNs 57-60, pp 55-58 of the exploratory outline of this working paper. In its benign iterations Simple Living is one more contribution to the broad effort of learning how to live our lives with less throughput of matter and energy. Simple Living shares many features with the “How to Retire Early” program, usually with a bit more normative loading of progressive Green worldviews and lifestyles. Authors Vicki Robbins and Joe Dominguez promoted a version of simple living in their book *Your Money or your Life* (1992). Dominguez was a Wall St. stock analyst who by age 31 had saved ~ \$741,000 (2021 USD); Robbins was a recent graduate of Brown University who received an inheritance of \$121,000 (2021 USD). Robbins and Dominguez together lived on the income provided by their investments – about \$32,000/yr (2021 USD) – and devoted themselves to promoting the spirit and practice of simple living. The couple did not have children; if they had then it’s likely that additional income would have been necessary. Dominguez died in 1997 at age 58. Robbins continued, and continues today, to promote simple living philosophy and practice.

⁴⁶ FIRE is the acronym for *Financial Independence, Retire Early*. There is an enormous network of people in online contact with one another over the merits and challenges of this life style and philosophy. See e.g. the websites [FIRE Explained](#) and [Early Retirement Extreme](#).

⁴⁷ Examples (as of 2023) of pledges by notable EA leadership to “Give What You Can” include:

- * Oxford professor and *Giving What We Can* co-founder Toby Ord: all his income above \$22,400.
- * Oxford professor and *Center for Effective Altruism* co-founder William MacAskill: all his income above \$35,000.
- * Julia Wise, *Giving What We Can* co-founder: 50% of her and her husband's income.
- * Katja Grace, Research fellow at Oxford's transhumanist *Future of Humanity Institute*: 50% of her income.
- * Nate Soares, Director of the *Machine Intelligence Research Institute*: 40% of his income.

⁴⁸ For accounts of the backgrounds and roles of two principal EA leaders, William MacAskill and Toby Ord, see respectively Lewis-Kraus (2022a) and Geoghegan (2010). Oxford philosopher MacAskill, who many consider the founder and intellectual leader of EA, is CEO of the flagship Center for Effective Altruism and is associated with numerous other inter-connected EA advisory, research and grant-making bodies. Fellow Oxford philosopher Ord is similarly associated with a large network of EA institutes and initiatives, and helped promote the ideology of *longtermism* within the EA community.

⁴⁹ One of Effective Altruism’s most prominent devotees was Sam Bankman-Fried, aka SBF, founder and now former CEO of the failed corrupt crypto-currency firm FTX. MacAskill had recruited SBF into the EA movement and in turn was recruited by SBF to serve as advisor to the FTX Future Fund, intended to funnel billions of FTX profits annually into EA organizations. MacAskill resigned from the Future Fund when FTX collapsed as a result of SBFs illegal commingling of depositor funds. For more on the interlocking and mutually supportive roles of the EA leadership and SBF see Lewis-Kraus (2022b) and Alter (2023).

REFERENCES

Alstott, Anne and Bruce Ackerman. 2000. *The Stakeholder Society*. New Haven: Yale University Press.

Alter, Charlotte. 2013. “[Exclusive](#): Effective Altruist Leaders Were Repeatedly Warned About Sam Bankman-Fried Years Before FTX Collapsed.” *Time*. 15 March.

Atkinson, Anthony. 2015. *Inequality: What Can be Done?* Cambridge, MA: Harvard University Press. DOI: <https://doi.org/10.4159/9780674287013>.

Bain, Paul G., and Renata Bongiorno. 2022. “Evidence from 33 countries challenges the assumption of unlimited wants.” *Nature Sustainability*. August.

-
- Bell, Stephanie, John F. Henry and L. Randal Wray. 2000. "A chartalist critique of John Locke's theory of property, accumulation, and money: or, is it moral to trade your nuts for gold?" [Paper presented](#) to the Association for Institutional Thought. San Diego, April.
- Bernstein, Jared. 2016. "[How much inequality is too much?](#)" BBC World Service Inquiry programme. 8 January.
- Boyd, Brian Joseph. (2022). [A Just Wage: Equality, Proportionality, and Solidarity in the American Economy](#). Doctoral dissertation, Department of Theology, Notre Dame University, Indiana USA.
- Buch-Hansen, Hubert and Max Koch. 2019. "Degrowth through Income and Wealth Caps?" *Ecological Economics*, 160, 264-271.
- Chancel, L., Piketty, T., Saez, E., Zucman, G. et al. 2022. *World Inequality Report 2022*. World Inequality Lab.
- Charles Schwab & Co. 2022. [Modern Wealth Survey 2022](#).
- Concialdi, Pierre. 2018. "What does it mean to be rich? Some conceptual and empirical issues." *European Journal of Social Security*. Vol 20(1) 3-20.
- Corasaniti, Nick. 2019. "[Booker Campaigns on Baby Bonds Program to Combat Inequality](#)." *New York Times*. 6 April.
- Cotter, Alan. 2014. "Technologies, culture, work, basic income and maximum income." *AI and Society*, 29(2).
- Daly, Herman. 2013. [Top 10 Policies for a Steady-State Economy](#). 28 October.
- Deaton, Angus. 2008. "Income, Health and Well-Being Around the World: Evidence from the Gallup World Poll." *Journal of Economic Perspectives*. 1 April. doi: 10.1257/jep.22.2.53.
- Dore, Kate. 2023. "[President Biden's proposed 2024 budget calls for top 39.6% tax rate](#)." CNBC.com. 9 March.
- Drewnowski, Jan. 1978. "The affluence line." *Social Indicators Research* 5, 263–278. <https://doi.org/10.1007/BF00352934>.
- Easterlin, Richard A. 1995. "Will raising the incomes of all increase the happiness of all?" *Journal of Economic Behavior and Organization*, Vol. 27, 35-47.
- Easterlin, Richard A. 1974. "Does Economic Growth Improve the Human Lot? Some Empirical Evidence." Published in: *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz* (1974): pp. 89-125. Online at: <https://mpa.ub.uni-muenchen.de/111773/>.
- Easterlin, Richard A. and Kelsey J. O'Connor. 2020. "The Easterlin Paradox." In Klaus F. Zimmermann (ed.) *Handbook of Labor, Human Resources and Population Economics*. Springer. 6 November.
- Ewing, Jack. 2013. "[Swiss Voters Decisively Reject a Measure to Put Limits on Executive Pay](#)." *New York Times*. 24 November.
- Foster, Sarah. 2023. "[Survey: The average American feels they'd need over \\$200K a year to be financially comfortable](#)." *Bankrate.com*. 6 July.
- Francoise, Martin, Sybille Mertens de Wilmars and Kevin Marechal. 2023. "Unlocking the potential of income and wealth caps in post-growth transformation: A framework for improving policy design." *Ecological Economics*. 12 Mar.
- Frey, Bruno S. and Alois Stutzer. 2002. "What Can Economists Learn from Happiness Research?" *Journal of Economic Literature*. Vol. 40, No. 2, June.

Gardner, Howard. 2009. "An Embarrassment of Riches: By letting markets control our destinies, we've lost sight of what it means to be 'rich enough.'" *Foreign Policy*. 12 October.

Geoghegan, Tom. 2010. "[Toby Ord: Why I'm giving £1m to charity.](#)" *BBC News Service*. 13 December.

Hamilton, Darrick and William Darity, Jr. 2010. "Can 'Baby Bonds' Eliminate the Racial Wealth Gap in Putative Post-Racial America?" *Review of Black Political Economy*. Vol. 37, 3-4. <https://doi.org/10.1007/s12114-010-9063>

Hayes, Richard. 2004. *A Scenario of Economic Well-Being, Ecological Integrity and Social Equity for the 21st Century*. Doctoral dissertation, Energy and Resources Group, University of California at Berkeley.

Iacurci, Greg. 2021. "[Why the White House and Democrats use \\$400,000 as the threshold for taxing 'the rich'.](#)" *CNBC.com*. 22 September.

Jebb, Andrew T., Louis Tay, Ed Diener and Shigehiro Oishi. 2018. "[Happiness, income satiation and turning points around the world.](#)": Letters. *Nature Human Behavior*, Vol 2, January; 33–38 www.nature.com/nathumbehav33

Judge, Timothy A., Ronald F. Piccolo, Nathan P. Podsakoff, John C. Shaw and Bruce L. Rich. 2010. "[The relationship between pay and job satisfaction: A meta-analysis of the literature.](#)" *Journal of Vocational Behavior*. 157–167.

Kahneman, Daniel and Angus Deaton. 2010. "High income improves evaluation of life but not emotional well-being." *Proceedings of the National Academy of Science USA* 107, 16489–16493.

Keynes, John Maynard. 1930. "Economic Possibilities for Our Grandchildren." In: J.M. Keynes. 1963. *Essays in Persuasion*. New York: W.W.Norton & Co.

Killingsworth, Matthew A. 2021. "Experienced well-being rises with income, even above \$75,000 per year." *PNAS* Vol 118. No. 4. 18 January.

Killingsworth, Matthew A., Daniel Kahneman, and Barbara Mellers. 2023. "Income and emotional well-being: A conflict resolved." *PNAS* Vol. 120, No. 10.

Kottasova, Ivana. 2017. "[French presidential candidate wants a 100% tax on the rich.](#)" *CNN Business*. 21 April.

Krueger, Alan. 2012. *The Rise and Consequences of Inequality*. Speech at the Center for American Progress. Washington D.C. 12 January.

Kushlev, Kostadin, Elizabeth W. Dunn and Richard E. Lucas. 2015. "Higher Income Is Associated With Less Daily Sadness but not More Daily Happiness." *Social Psychological and Personality Science*. June. DOI: 10.1177/1948550614568161.

Laslett, Peter. 1988. *Locke: Two Treatises of Government*. Cambridge: Cambridge University Press.

Layard, Richard. 2005. *Happiness: Lessons from a New Science*. New York: Penguin.

Layard, Richard. 2003. "Happiness: Has Social Science a Clue?" Lionel Robbins Memorial Lectures, London School of Economics.

Le Grand, Julian. 2020. "A Springboard for New Citizens: Universal Basic Capital and a Citizen's Day." *LSE Public Policy Review*. 1(2): 5, pp. 1–5. DOI: <https://doi.org/10.31389/lseppr.8> Le Grand, Julian.

Le Grand, Julian. 2008. "Investing in youth: Bambini Bonds." *European Commission Bureau of Economic Advisers Monthly Brief: Special Issues Social Agenda*. 16 June.

Le Grand, Julian. 1991. "Spreading it Around." *Fabian Review*; 103(3).

Lewis-Kraus, Gideon. 2022a. "Do Better." *The New Yorker*. 15 August.

-
- Lewis-Kraus, Gideon. 2022b. "Sam Bankman-Fried, Effective Altruism, and the Question of Complicity." *The New Yorker*. 1 December.
- Litvak, David. 2010. "Felix Adler: The Maximum Wage Prophet." 2 April. Available at SSRN: <https://ssrn.com/abstract=1583248> or <http://dx.doi.org/10.2139/ssrn.1583248>
- Mason, Rowena. 2017. "[Corbyn calls for wage cap on bosses at government contractors.](#)" *The Guardian*. 10 Jan.
- Minutolo, Michael. 2015. "[How many individuals in the United States have a net worth of 100-300 million dollars?](#)" Post to *Quora.com*.
- Nolan, Hamilton. 2012. "[Let's have a Maximum Tax.](#)" *Gawker*. 8 August.
- Ostry, Jonathan. 2016. "[How much inequality is too much?](#)" Interview, BBC World Service Inquiry. 8 January.
- Paine, Thomas. 1796. *Agrarian Justice, opposed to Agrarian Law and to Agrarian Monopoly*. <https://quod.lib.umich.edu/e/ecc o/004809374.0001.000/1:3?rgn=div1;view=fulltext>.
- Park, Ji-Won and Chae Un Kim. 2021a. "Getting to a feasible income equality." *PLoS ONE* 16(3): e0249204. <https://doi.org/10.1371/journal.pone.0249204>. 20 March.
- Park, Ji-Won and Chae Un Kim. 2021b. "[Towards a feasible income equality.](#)" Blog post. London School of Economics. 2 June.
- Pew Research Center. 2015. *The American Middle Class Is Losing Ground*. Report. Washington D.C. 9 December.
- Piketty, Thomas. 2021. "[From basic income to inheritance for all.](#)" *Le bloc de Thomas Piketty*. 18 May.
- Pizzigati, Sam. 2018. *The Case for a Maximum Wage*. Medford, MA: Policy Press.
- Pizzigati, Sam. 2004. *Greed and Good: Understanding and Overcoming the Inequality That Limits Our Lives*. New York: The Apex Press.
- PK. 2021. [How Many Millionaires Are There in America?](#) *DQYDJ.com*. 10 July.
- Proto, Eugenio and Also Rustichini. 2013. "A Reassessment of the Relationship between GDP and Life Satisfaction." *PLoS ONE* 8(11): doi.org/10.1371/journal.pone.0079358.
- Ramsay, Maureen. 2005. "[A modest proposal: the case for a maximum wage.](#)" *Contemporary Politics*, Vol 11, No. 4. December.
- Reeves, Richard V., Katherine Guyot and Eleanor Krause. 2018. [Defining the middle class: Cash, credentials, or culture?](#) The Brookings Institution. Washington D.C. 7 May.
- Roberts, Carys and Matthew Lawrence. 2018. [Our Common Wealth: A Citizens' Wealth Fund for the UK](#). London: Institute of Public Policy Research, Commission on Economic Justice.
- Robeyns, Ingrid. 2019. "What, if Anything, is Wrong with Extreme Wealth?," *Journal of Human Development and Capabilities*, 20:3, 251-266, DOI: 10.1080/19452829.2019.1633734.
- Robeyns, Ingrid, ed. 2023. *Having too much: Philosophical Essays on Limitarianism*. Cambridge, UK: Open Book Publishers.
- Robeyns, Ingrid. 2024. *Limitarianism: The case against extreme wealth*. New York: Astra House.
- Robeyns, Ingrid, and Vincent Buskens, Arnout van de Rijt, Nina Vergeldt and Tanja van der Lippe. 2020. "How Rich is Too Rich? Measuring the Riches Line." *Social Indicators Research*. 25 November.

-
- Robins, Vicki and Joe Dominguez. 1992. *Your Money or Your Life*. London: Penguin Books.
- Saunders, Peter and Natalie Evans (eds.) 2010. *Beware False Prophets: Equality, the Good Society and the Spirit Level*. London: Policy Exchange.
- Skidelsky, Robert and Edward Skidelsky. 2012. *How Much is Enough? Money and the Good Life*. New York: Other Press.
- Smith, Matthew, Owen Zidar and Eric Zwick. 2021. [Top Wealth in America: New Estimates under Heterogeneous Returns](#). Princeton Economics Working Paper. October.
- Stevenson, Betsey and Justin Wolfers. 2013. [“Subjective Well-Being and Income: Is There Any Evidence of Satiation?”](#) *Centre for Applied Macroeconomic Analysis* WP 21/2013. Australian National University. May.
- Sullivan, Briana, Donald Hays and Neil Bennett. 2023. [The Wealth of Households 2021](#). Current Population Reports. U.S. Bureau of the Census. June.
- Thurow, Lester. 1984. “Business Forum; The Disappearance of the Middle Class.” *New York Times*. 5 February.
- United States Federal Reserve System *Survey of Consumer Finances*. 2019.
- United States Internal Revenue Service. 2020. [SOI Tax Stats - Individual Statistical Tables by Size of Adjusted Gross Income](#).
- United Kingdom Trade Union Congress. 2011. [Spirit Level Criticisms](#). 1 March.
- United States Department of Labor. 2023. [CPI Inflation Calculator](#). Washington, D.C.
- Vaughn, Karen I. 1980. “John Locke’s theory of property: Problems of Interpretation.” *Libertarianism.org*. 1 March.
- Viebeck, Elise. 2019. [“Booker wants a ‘baby bond’ for every U.S. child. Would it work?”](#) *Washington Post*. 19 Aug.
- Villanova, Patrick. 2023a. [“Salary Needed to Live Comfortably in the 25 Largest Metro Areas.”](#) *SmartAsset.com*. 9 March.
- Villanova, Patrick. 2023b. “America’s Top 1% Is Different in Each State: From a \$370k to \$950K Income” [Smartasset.com](#). 17 July.
- Wilkinson, Richard and Kate Pickett. 2010. “Peters Saunders’s sleight of hand.” *The Guardian*. 9 July.
- Wilkinson, Richard and Kate Pickett. 2009. *The Spirit Level: Why Greater Equality Makes Societies Stronger*. New York: Bloomsbury Press.
- Williams, T. Harry (1981) [1969]. *Huey Long*. New York: Vintage Books.
- World Bank. 2022. Gini Index: <https://data.worldbank.org/indicator/SI.POV.GINI>.
- Wortel-London, Daniel. 2023. [“Limits to Wealth = Limits to Growth”](#). *Steady State Herald*. 8 June.
- Yu, Zonghuo and Li Chen. 2016. “Income and Well-Being: Relative Income and Absolute Income Weaken Negative Emotion, but Only Relative Income Improves Positive Emotion.” *Frontiers of Psychology* 7:2012. doi: 10.3389/fpsyg.2016.02012.
- Yu, Zonghuo and Fei Wang. 2017. “Income Inequality and Happiness: An Inverted U-Shaped Curve.” *Frontiers of Psychology*. 8:2052. doi: 10.3389/fpsyg.2017.02052