

A Brief Structural History of Economics

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A Brief, Structural History of Economics

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I'd like to thank the Rajk László College for Advanced Studies for inviting me to lecture on the themes of my book, *Redeeming Economics*, which is being published in Hungarian.

This evening, I would like to offer a “brief, structural history of economics,” based on the first section of my book.

But, perhaps, I should first answer the question, why? Why is such a history necessary, especially at a college as sophisticated as Rajk College, which after all has conferred its John von Neumann Award on such eminent economists as János Harsányi (1995: UC Berkeley), Oliver Williamson (1999: also UC Berkeley), Gary S. Becker (2004: University of Chicago), Glenn C. Loury (2005: Brown University), Olivier Blanchard (2012: MIT), Kenneth J. Arrow (2013: Stanford), and Emmanuel Saez (2014: UC Berkeley)?

It is my thesis that, by abolishing what had previously been a PhD requirement—mastering the history of economics—economists, eminent though many are, for more than a generation have missed rediscovering and reintegrating the most important original element in economics—the one that explains our interpersonal relations.

View of the World from 9th Avenue.

cover drawing for *The New Yorker*, March 3, 1976.

http://www.saulsteinbergfoundation.org/gallery/24_viewofworld.html

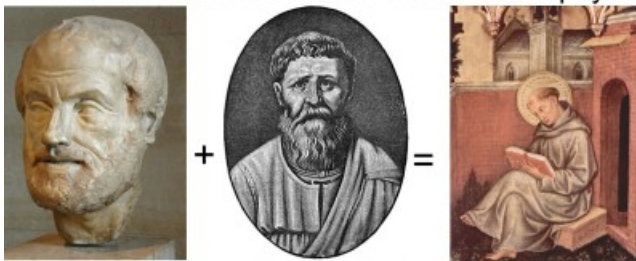


From the mid-nineteenth to the mid-twentieth centuries, even specialists in the history of economics viewed their subject much like Saul Steinberg's "View of the World from 9th Avenue": a famous poster which depicts Manhattan's Ninth and Tenth avenues in exquisite detail, right down to the fire hydrants, while across the Hudson River, the rest of the world consists of vast blank areas with labels like "Jersey" or "Japan." For years, any historical textbook would start with Adam Smith while in the hazy middle distance were the eighteenth-century "Physiocrats" and "Mercantilists." Moreover, economics seemed a very cozy British affair, presented like a biblical genealogy: Adam Smith begat David Ricardo, who begat John Stuart Mill, who begat Alfred Marshall, who begat Arthur Pigou, who begat John Maynard Keynes, whom Keynesian economists consider the pinnacle of economics.

This view began to change radically in 1954, when Joseph Schumpeter's *History of Economic Analysis* was published. Schumpeter showed that it was not until 1848, when John Stuart Mill's *Principles of Political Economy* was published, that, as Schumpeter put it, Adam Smith was "invested with the insignia of 'founder' — which none of his contemporaries would have thought of bestowing on him — and... earlier economists moved into the role of 'precursors' in whom it was just wonderful to discover what nevertheless remained Smith's ideas." Schumpeter concluded: "The fact is that the *Wealth of Nations* does not contain a single *analytic* idea, principle or method that was entirely new in 1776."

Hence I must begin with an important but widely overlooked fact: There have been three phases so far in the history of economics, and the logical and mathematical structures of the original scholastic, Adam Smith's classical and today's "neoclassical" economics differ fundamentally. Most students and even professors of economics are unaware of this fact because, starting in 1972 at the University of Chicago, Stigler succeeded in the national campaign he started in 1954 to abolish the requirement that students of economics master its history before being granted a degree.^[1]

The Formula of Scholastic Moral Philosophy



Aristotle

Augustine

Aquinas

This is why all of us, including (or especially) economists, require a *brief, structural history of economics*.

Rather than stating the thesis myself, I will quote J. Daniel Hammond of Wake Forest University, who opened a review of my book by remarking, “*Redeeming Economics* is likely to be ignored by economists”; but then gave this admirably succinct summary:

What, according to Mueller, is wrong with economics? In the simplest terms familiar to economists, there is an “equation” missing from the model. Economists have “equations” for production, consumption, and exchange, but not for the primary economic choice – the choices of persons. This missing element is a theory of distribution. Mueller argues that Thomas Aquinas had a complete economic model, with all four elements. Drawing on Aristotle and Augustine, Aquinas’s economics explained production (what is produced and how), consumption (utility), exchange (commutative justice), and distribution (production or purchase for whom).

How the Structure of Economics Has Changed (1): Simplified

Outline	Element	Distribution	Consumption	Production	Exchange
holistic (1250-1776) Thomas Aquinas		Yes	Yes	Yes	Yes
classical (1776-1871) Adam Smith		No	No	Yes	Yes
neoclassical (1871-c. 2000) Mills, Menger, Walras		No	Yes	Yes	Yes
scholastic (c. 2000-?) holistic outline, elements updated		Yes	Yes	Yes	Yes

Adam Smith, the father of modern (classical) economics, dropped two of the four equations, those for consumption and distribution. With neoclassical economics the equation for consumption was restored. But neoclassical theory has nothing to say about distribution, leaving the restoration of economics incomplete. Mueller sees this reconstruction (redemption) continuing with his book, with the efforts of other nascent neo-Scholastics and, he predicts, eventually by the profession at large. Thus Mueller himself does not think his book will be ignored. Or perhaps, if it is ignored the deficiency of economics will become evident to practitioners from their experiences doing economics. Mueller expects that economists will find their way to a neo-Scholastic economics that will preserve the best of both Smith and the neoclassicals, while restoring the theory of distribution. (Hammond 2012, 73).^[2]

How the Structure of Economics Has Changed (2): Detail

Outline	Element	Distribution (Gifts/crimes & distributive justice)	Consumption (type of utility)	Production (people/property)	Equilibrium ("Justice in exchange")
holistic		Yes/Yes	Yes (ordinal)	Yes/Yes	Yes
classical		No/No	No	Yes/ No * ("labor theory")	Yes
neoclassical Menger (Menger)		No/No	Yes (mixed ordinal)	Mixed No **/Yes	Mixed No (Mises)
Levins (Levins)		No/No	cardinal	No */Yes	Yes
Schultz (Schultz)		No/No	cardinal	Yes/Yes	Yes
Walras (Walras)		No/No	ordinal	No **/Yes ("stork theory")	Yes
o-Thomist Pesch (Pesch)		Mixed (domestic & political only)	Yes (cardinal)	Yes (all)	Yes
tributist (Belloc, Lester (Lester))		Political only Yes/Yes	No	Mixed (tangibles only; labor theory)	Yes
scholastic		Yes/Yes	Yes (ordinal)	Yes (all)	Yes
neo Scholastic		Yes/Yes	Yes (ordinal)	Yes/Yes	Yes

Mine is indeed the latter view: that “the deficiency of economics will become evident to practitioners from their experiences doing economics” so that “economists will find their way to a neo-Scholastic economics that will preserve the best of both Smith and the neoclassicals, while restoring the theory of distribution.”

This understanding of economics entails an alternate view of the history of economics; hence my book begins with a “Brief Structural History of Economics,” which describes and distinguishes the scholastic, classical, and neoclassical theories, as well as the incipient “Neoscholastic” school.^[3]

The technical problem is that with fewer equations than variables to be explained, the classical and neoclassical systems are “underdetermined,” thus requiring economists to adopt circular logic or empirically false assumptions (or both). I realized this by the accident of becoming an economic and financial market forecaster, which requires spelling everything out mathematically and verifiably. But in terms that most ordinary people can understand, the scholastic, classical, and neoclassical systems presuppose three different views of human and divine nature, differing on whether man and God have free will.

Since Adam Smith essentially “de-Augustinized” economics, it’s important to understand Augustine’s theories of benevolence and beneficence, which Aquinas integrated within the scholastic natural law moral philosophy and economic theory, which prevailed for five centuries before Smith.^[4]

Augustine's Personal Economy

remises: 1. All persons motivated by love of some person(s).
Love is willing some good to some person (Aristotle).
We express personal love/hate by our distribution of goods.

<i>descriptive</i> (“positive”):	<i>Outer Acts toward</i> :	
<i>kind of love</i>	<i>Inner Act</i>	<i>Self</i> <i>Others</i>
ordinate	Benevolence	Utility Beneficence (Gifts)
ordinate	Malevolence	Vice Maleficence (Crime)

rescriptive (“normative”): Two Great Commandments*
Standard of *benevolence* (“goodwill”): negative Golden Rule (“Do not do unto others” : Aristotle’s ‘justice in exchange’)
Standard of *beneficence* (“doing good”): positive Golden Rule (“Do unto others” = personal gifts, distributive justice)

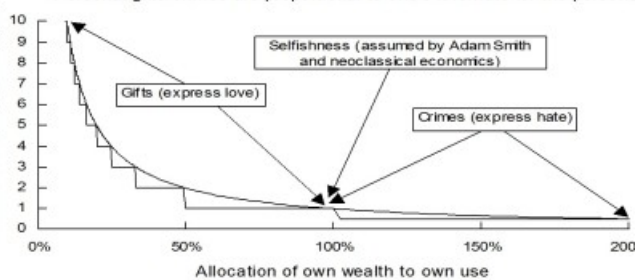
Love . . . God with all your heart” (Deut. 6:5);
Love your neighbor as yourself” (Lev. 19:18)

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Augustine’s anthropology and theology had both started from Aristotle’s insight that “every agent acts for an end”^[5] and Aristotle’s definition of love—willing some good to some person.^[6] But Augustine drew an insight that Aristotle had not: every *person* always acts for the sake of some *person(s)*. For example, when I say, “I love vanilla ice cream,” I *really* mean that I love *myself* and use (consume) vanilla ice cream to express that love (and in preference, say, to strawberry ice cream or Brussels sprouts, which order reflects my separate scale of utility).^[7]

Augustine's 'Personal Distribution Function'

Personal gifts/crimes are proportional to one's love/hate for the persons



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So Augustine's crucial insight is that we humans always act on not one but two scales of preference—one for persons as ends, and the other for other things as means: the scales of personal love and utility, respectively. And we express our preferences for persons with two kinds of external acts, “sale or gift.”^[8] Generally speaking, we *give* our wealth without compensation to people we particularly love,^[9] and *sell* it to people we don't, in order to provide for those we do love.^[10] Since it's always possible to avoid depriving others of their own goods, this is the bare minimum of love expressed as *benevolence* or goodwill, the measure of what Aristotle called “justice in exchange.”^[11] But our positive self-love is expressed by the utility of the goods we provide ourselves, and our positive love of others with *beneficence*: gifts. Conversely inner hate or *malevolence* is outwardly expressed by the opposite of a gift: *maleficence*, or crime: instead of giving to you what belongs to me, I take or destroy what belongs to you.

Augustine also introduced the important distinction between “private” goods like bread, which inherently only one person at a time can consume, and “public” goods like a performance in an ancient amphitheater, a modern radio or television broadcast, national defense, enforcement of justice—or even this lecture, which, at least within certain limits, many people can simultaneously enjoy because they are not “diminished by being shared.”^[12] That is if the acoustics and technology are good enough, the fact that the people in the front row can hear what I am saying now does not diminish the ability of those in the back row also to do so.

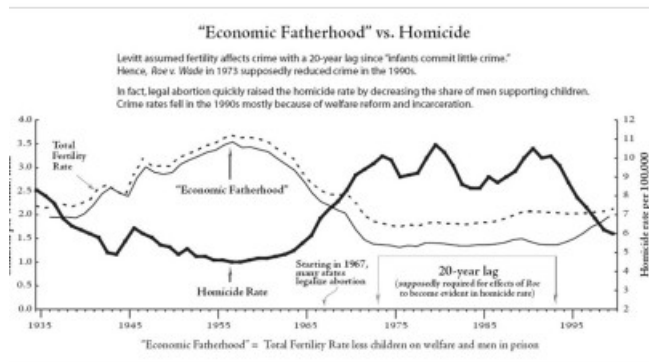
I'd like briefly to compare the empirical predictions made by today's neoclassical economic theory with those of “neoscholastic economics,” choosing some important examples at every level—personal and domestic economy, (I will address some important applications in political economy later this week at the KETEG-ÉrMe conference on “Money and Beyond Money.”

I must begin my comments on the “economic approach,” as I do in *Redeeming Economics*, by emphasizing two things.

First, I wrote, Gary Becker (who was alive when I was writing), is an economist whose sandals I am unworthy to untie. I choose Becker's version to illustrate the problem with neoclassical economic theory not because it is the worst, but precisely because it is the best. No other version of neoclassical economic theory has been as coherently or completely thought out. And no economist in the last third of the twentieth century was more ingenious in applying economic analysis to daily human life than Gary Becker.

The second thing I must emphasize, I wrote, is that Becker strikes me as a humane, humorous, and gentle man. In his footnotes, Becker often generously acknowledges the source of an inspiration, notes a change in his own earlier view, or illustrates a point with an apt quotation from Charles Dickens or John Galsworthy's *The Forsyte Saga* or St. Paul or the comic strip “The Wizard of Id.” But Becker's work also illustrates the dangers in choosing the wrong premises or assumptions for one's theory. On the advice of George Stigler,

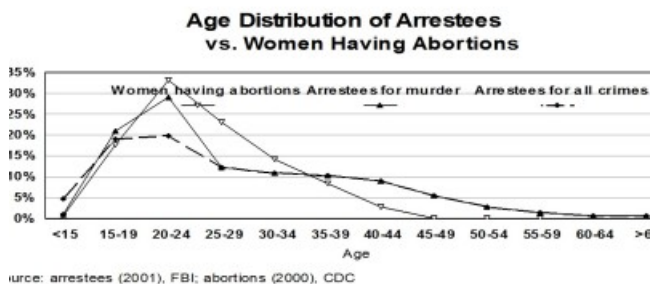
Becker was ignorant of Augustine’s theories of personal distribution and the theory of utility. As a result, Becker argued that Jeremy Bentham originated the theory of utility 14 centuries after Augustine, based on an Epicurean interpretation, which I will mention later. And this choice had consequences for the accuracy of Becker and Stigler’s “economic approach to human behavior.”



1. *The Levitt-Donohue Thesis about Abortion and Crime*. For example, in a famous paper co-authored with John J. Donohue III and later featured in his bestselling book *Freakonomics*, one of Becker’s students, Steven D. Levitt, applied the economic approach to human behavior and argued that after abortion was legalized by several states starting in the late 1960s and nationwide by the U.S. Supreme Court decision *Roe v. Wade* in 1973, millions of fetuses were killed who, when old enough, would have been disproportionately likely to commit crimes.^[13] Their culling by legalized abortion should therefore have lowered crime rates according to Levitt and Donohue. To “prove” this, Levitt and Donohue looked at crime rates 15-18 years after *Roe* and claimed to have found the drop they had retrospectively “predicted.”

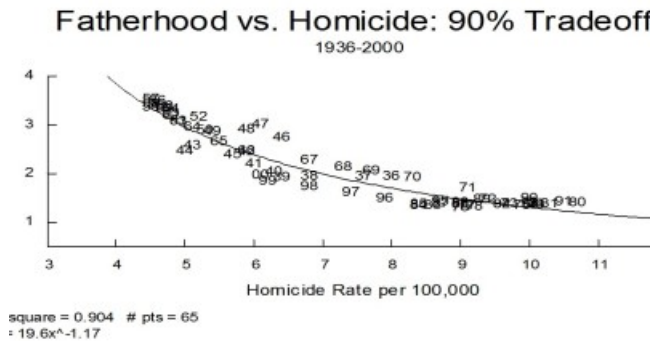
However, in their paper Levitt and Donohue actually found their results indistinguishable whether they used 1970s or 1990s abortion rates to try to explain overall 1990s crime rates. When both were included their models became unstable (in economic jargon, “standard errors explode due to multicollinearity”).^[14]

Such mishaps occur when research is “misspecified,” typically by omitting necessary variables. Failing even with the help of Nobel laureate Gary S. Becker to uncover any valid evidence for either a 20-year lag or for *no* lag, Levitt and Donohue replaced the missing facts with an arbitrary assumption: As they put it, “Consequently, it must be recognized that our interpretation of the results relies on the assumption that there will be a fifteen-to-twenty year lag before abortion materially affects crime.”^[15]



They justified their assumption by quipping that “infants commit little crime.”^[16] But this quip overlooks the fact that nearly all violent crime is committed by men (women are equally arrested, at least in the USA, only for nonviolent crimes requiring more brains than brawn)—men who are precisely the ages of the *fathers* of

aborted children. According to recent statistics, seventy-seven percent of all persons arrested and 93 percent of all convicted prisoners in the United States were men. The relation between abortion and crime rates is strong for *all* crimes, but stronger for *violent* crimes, and strongest for the most violent crime of all, homicide. [17]



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In short, the missing variable is “economic fatherhood.” “Economic” fatherhood is defined not by mere biological paternity, nor residency with, but provision for one’s children.[18] I defined economic fatherhood by the Total Fertility Rate for the same demographic mix as prisoners (though measured for women, the TFR is almost exactly the same for men) minus men in prison (who cannot provide for children) and children on welfare (who aren’t supported by fathers).

The relationship between economic fatherhood and crime is a straightforward application of Augustine’s personal “distribution function” to the most valuable scarce resource of mortal humans: our time.

Including “economic fatherhood” as a variable not only invalidates Levitt’s claim but *reverses* it. One can see this in a comparison of homicide rates and economic fatherhood. As far back as data exist, rates of economic fatherhood and homicide have been strongly, inversely “cointegrated”[19] — a stringent statistical test characterizing inherently related events, like the number of cars entering and leaving the Lincoln Tunnel (or Mont Blanc Tunnel). The statistical tests for cointegration are quite strict,[20] and the correlation of economic fatherhood and homicide passes them.[21] Donohue and Levitt’s correlation is thus shown to be a “spurious regression,” which was misspecified by omitting a crucial variable: the one describing Augustine’s personal “distribution function.”[22]

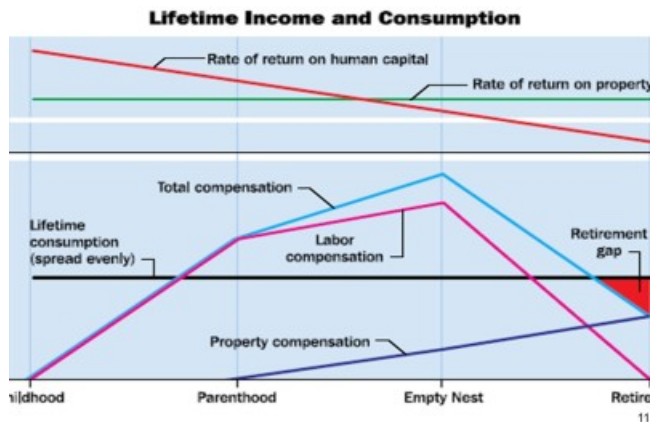
Thus, legalizing abortion didn’t lower homicide rates 15-20 years *later* by eliminating infants who *might*, if they survived, have become murderers: instead, it raised the homicide rate almost at once, by turning their fathers back into men without dependent children—a small but steady share of whom *do* murder. The homicide rate rose sharply in the 1960s and ’70s when expanding welfare and legal abortion sharply reduced economic fatherhood, and it dropped sharply in the ’90s partly due to a recovering birth rate, but mostly because welfare reform and incarceration raised the share of men outside prison who were supporting children.

This scenario didn’t occur to Levitt not because of a lack of ingenuity or data but because of the inherent weakness of the theory he was trying to apply, which Nobel Prize-winning economists Stigler and Levitt’s mentor, Becker, called the “economic approach to human behavior.” Levitt was unable to see the true correlation between abortion and crime because he was among the first victims of the epic change in the teaching of economics orchestrated by Stigler with Becker’s support which I mentioned earlier.

2. Explaining “Demographic Winter.” Next let us turn to the serious and widespread problem of

“demographic winter”—the failure of so many nations to reproduce themselves. Let me start by summarizing the findings of a “neo-scholastic” country-by-country model of fertility outlined in the book.[\[23\]](#)

We must begin by recalling and elaborating upon two highly significant features of family economics, which were first pointed out by Aristotle and St. Augustine.



Aristotle. Aristotle’s definition of man as a “rational”[\[24\]](#) and “political animal”[\[25\]](#) is well known. Indeed, these insights remain central to modern social science 23 centuries later, e.g. the World Values Survey. Yet the rest of Aristotle’s threefold definition of human nature is curiously omitted: “man and wife...are [even] more inclined by nature to conjugal than political society.”[\[26\]](#) In short, man is also a conjugal animal.

This fact also explains why wealth takes *two* forms: people and property[\[27\]](#)—or as University of Chicago economist Theodore W. Schultz called them, “human and nonhuman capital.”[\[28\]](#) Both are “reproducible”; both may be tangible or intangible (e.g. our bodies vs. our education, a machine vs. a patent); both require maintenance to remain productive; and both depreciate in use. Labor compensation is the return on previous investment in people, while property compensation is the return on previous investment in productive property.

Yet there is an important difference: the rate of return on property is the same for everyone in a competitive market. But the rate of return on investment in people varies inversely with the age of the person. For example, the real rate of return on college tuition at age 20 was about 16 percent recently in the U.S.[\[29\]](#) while the stock market’s long-term average is 6 to 7 percent. But after about age 40, the return on further education fell below the rate in the stock market, and after age 50 turned increasingly negative. This accounts for the pattern of lifetime earnings in the chart.

Labor compensation starts at zero during childhood, while we spend time learning valuable skills; but it rises rapidly between childhood and the mid-30s as we enter and gain experience in the labor market; [That’s where most of you seem to be now] then labor income rises more slowly to peak at around age 50; and finally drops to zero. Property income also starts near zero early in life (for those with little or no inherited property), but becomes increasingly significant as the expected rate of return on investment in human capital falls below that on investment in property. And for those who acquire significant wealth from any source—whether inheritance, talent, luck, or hard work—the only practical way to save it is in the form of claims on property (stocks, bonds, etc.).

Augustine. This much is contained in Becker’s rediscovery of Aristotle’s theory of household production. But he missed the significance of the large differences between total income and consumption in each phase of life, which reveal the other essential but neglected feature of family economics: the central role of gifts. “Human society is knit together by transactions of giving and receiving,”[\[30\]](#) Augustine noted. But these

outwardly similar transactions are of two essentially different kinds, he added: “sale or gift.”[\[31\]](#)

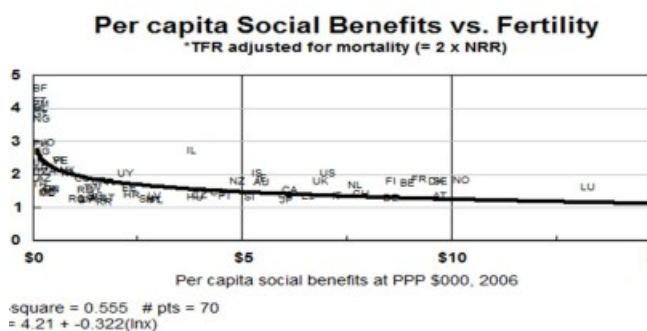
Family members acquire their incomes mostly by selling services or products to those outside the family. But within the family transactions are mostly gifts, not exchanges. We all need to be fed, clothed, sheltered, and transported, whether or not we earn income. Our income therefore typically exceeds consumption during active parenthood and the “empty nest” (after the children have left home); while consumption exceeds income during childhood and old age. These differences reflect extensive gifts, not only from parents to dependent children, but also between husbands and wives, and later from adult children to aged parents.

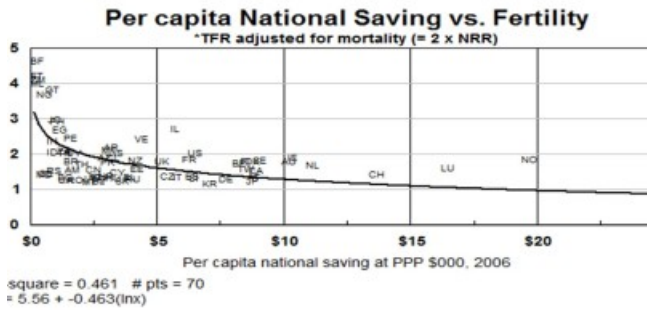
The retirement gap. Even with modern and well-co-ordinated private capital markets, an inherent “retirement gap” arises from the fact that for anyone to retire, labor compensation must fall to zero, yet consumption ordinarily remains higher than the property income that could result from earlier saving of stocks and bonds. The “retirement problem” is how to fill this gap without either forgoing retirement, suffering a sharp fall in consumption during retirement, or lowering one’s total lifetime earnings and consumption (which would result if early in life one invested more in lower-yielding productive property and less in higher-yielding human capital).

Positive and negative impact of government retirement pensions. Without government social benefits, the retirement gap could be bridged only by a gift from someone (most often one’s adult children) whose own consumption is thereby reduced. Pay-as-you-go Social Security went a long way toward solving the retirement problem by providing an asset that private financial markets cannot. Starting a well-designed pay-as-you-go system therefore typically boosts the birth rate: for example, the American Baby Boom. However, once benefits have closed the retirement gap, any further expansion must come at the expense of smaller investment in people or productive property.

“Neoscholastic” fertility model. What I call “neoscholastic” economics differs from neoclassical economics, then, by recognizing gifts as well as exchanges. This also makes it much more accurate.

Just four factors explain about seven-eighths of the variation in birth rates among the countries for which sufficient data are available (comprising about one-third of all countries, but more than three-quarters of world population.)

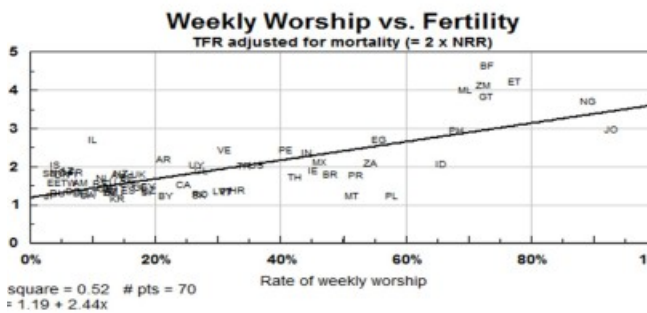




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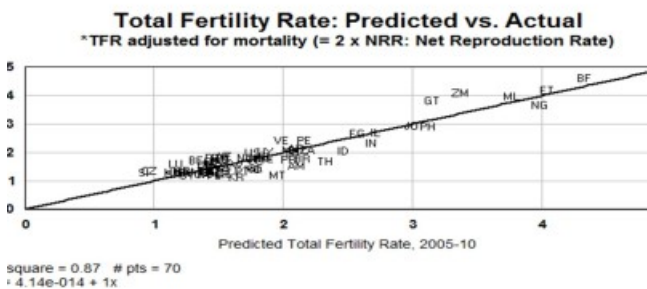
The birth rate is strongly and about equally *inversely* proportional to per capita social benefits and per capita national saving (both adjusted for national differences in purchasing power). Social benefits and national saving are inversely related to the birth rate because they represent provision by current adults for their own future well-being.

When these factors are taken into account, a legacy of totalitarian government is also highly significant in reducing the birth rate (by about 0.6 children per couple).



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Finally, the birth rate is strongly and *positively* related, in a linear fashion, to the rate of weekly worship. On average in the world recently, a couple which never worships has about 1.2 children; but a couple that worships once a week averages about 2.4 *more*, or about 3.6 children.



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At the same time, the rate of abortion increases exponentially as weekly worship declines.

There are four main reasons, then, for “demographic winter,” in order of importance: First, low rates of religious practice, which are associated with low birth rates and high incidence of abortion; second, social benefits so high as to displace gifts within the family, particularly the gift of life; third, legacies of totalitarianism; and finally, heavy reliance on fiscal policies which penalize investment in people: so-called “human capital.”

World Total Fertility Rates & Abortion

TFRs adjusted for mortality (= 2 x NRR)

Year:	(1) CN	(2) (1) ex abor tion	(3) IN	(4) (3) ex abor tion	(5) US	(6) (5) ex abor tion	(7) RU	(8) (7) ex abor tion	(9) HU	(10) (9) ex abor tion	(11) 52 countries (~2/3 world) weighted by population	(12) (11) ex abor tion
2005-2010	1.53	2.10	2.34	2.41	2.01	2.66	1.29	3.08	1.30	2.05	1.88	2.34
2083 est.	n.a.	n.a.	n.a.	n.a.	1.64	2.26	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

16

In nearly all developed countries, legal abortion is responsible for pushing the birth rate below the replacement rate of 2 children per couple.

What practical policies could improve the European and American birth rates, lower their unemployment rate, and render their real estate markets less vulnerable to boom-bust cycles?

First, as already mentioned, simply practicing one’s faith and encouraging others to join us is the most powerful antidote to demographic winter. Between 2001 and 2006, the rate of weekly worship in the USA fell from 44% to 36%, to 33%.^[32] The steepening fall in most nations’ birth rate and its recent fall back below the replacement rate in the USA are close to what one would have predicted based on the fall in religious practice. Yet where the rate of religious practice is low, even small increases are associated with large declines in abortion.

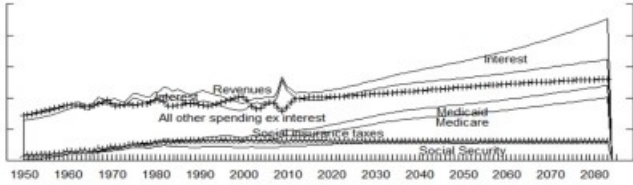
Second, the United States, has joined most nations in Europe by decisively substituting “benefits for babies,” though in different degrees and with different timing. In the USA, the social benefits rose from about 13% of national income in 1980 to 20% in 2010, and have since jumped further, while the U.S. birth rate has fallen below the replacement rate.^[33] The willingness or failure to reform social benefits has direct consequences for the birth rate and national survival of any country.

Fifty years ago, the three most populous countries were China, India, and the United States. That’s still true today. But the practice of abortion in China yet not as widely in India is causing a reversal of their first and second population ranks.

Adjusted for differences in mortality rates, in 2005-10 China’s TFR was 1.53 after but 2.10 before abortions; India’s 2.34 after and 2.41 before abortions, the USA 2.01 after but 2.66 before abortions, Russia’s 1.29 after but 3.08 before abortions).^[34] (Hungary’s TFR was 1.30 after, but 2.05 before abortions; I realize that Hungary’s TFR ticked up in 2014). Based on all countries for which data are available (comprising about two-thirds of world population), the World TFR was 1.88 after, but 2.34 before abortions.

Actual & Projected Federal Taxes and Spending

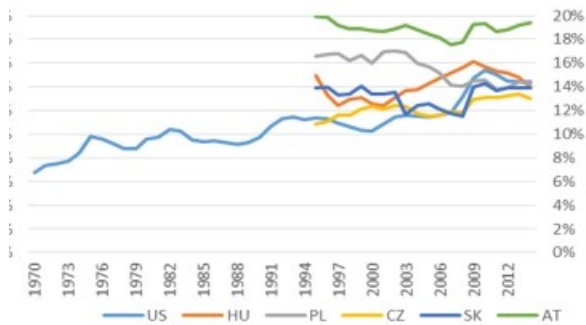
% of GDP, 1950-2085



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What does this mean for policy? Based on current projections, the U.S. budget has and would substantially increase Federal social benefits as a share of GDP. Without substantial reforms there will be no way to prevent a sharp decline in the U.S. birth rate, and thus a decline in the relative size of the U.S. population and economy.

Cash Social Benefits, % of GDP



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Like the United States, most countries of Europe, including most of Eastern Europe, have decisively substituted “benefits for babies.” ^[35] The figures for cash social benefits are not as high as for total social benefits, but benefits as a share of GDP have risen steadily both in the USA and, with few exceptions, to similar levels in most countries of Eastern Europe. It’s worth repeating that where abortion is legal, the willingness or failure to reform social benefits has direct consequences for the birth rate and national survival of any country.

3. The Three World Views in Economic Theory

Divine Economy (Metaphysics): (a) The Three World Views

Biblically orthodox natural law: God freely created man as a rational animal though sinning person: free to choose persons as ends, other things as means (AAA's: Aristotle, Augustine, Aquinas)

Stoic pantheism: Cosmos one big rational animal, God its immanent soul; man manipulated by "invisible hand" to "ends ... no part of his intention" (Adam Smith)

Epicurean materialism: no Creator or providence, only "matter and chance"; man a *clever* animal choosing means, not ends: reason "slave of the passions" (Hume)

The notion that Adam Smith invented or is somehow indispensable to understanding economics might be called "Smythology" (with two y's). By far the most influential piece of Smythology in the USA was Milton Friedman's argument linking Adam Smith's philosophy with the meaning of the American Declaration of Independence: "The story of the United States is the story of an economic miracle and a political miracle that was made possible by the translation into practice of two sets of ideas—both, by a curious coincidence published in the same year, 1776." According to Friedman, "the fundamental principles of our system [are] both the economic principles of Adam Smith...and the political principles expressed by Thomas Jefferson."^[36]

Like many others I found Friedman's argument persuasive, until I discovered that the "choice of 1776" was actually a divergence, not a convergence, and of three, not two world views. The third symbolically significant event of 1776 was the death of Smith's dear friend, the Epicurean skeptic David Hume.

I noted earlier that (Neo-) Scholastic economics is essentially a theory of providence. It mostly describes *human* providence. But each of the three basic economic theories also entails a different theory of divine providence: the three approaches to economic theory also express three distinct world views, the confrontation of which goes back nearly two millennia.

When the Apostle Paul preached in the marketplace of Athens, he prefaced the Gospel with a Biblically orthodox adaptation of Greco-Roman natural law. The evangelist Luke tells us that "some Epicurean and Stoic philosophers argued with him" (Acts 17:18). The same dispute has continued among scholastic, classical, neoclassical, and now neoscholastic economists.

In (neo-) scholastic natural law, economics is a theory of rational providence, describing how we "rational," "matrimonial," and "political animals" choose both persons as "ends" (which we express by our personal and collective gifts) and the scarce means to be used (consumed) by or for those persons, which we make real through production and exchange. By dropping both distribution (the choice of persons as ends) and consumption (the choice of other things as means), Smith expressed the Stoic pantheism that viewed the universe "to be itself a Divinity, an Animal"^[37] with God as its immanent soul, so that sentimental humans choose neither ends nor means rationally; instead, "every individual...intends only his own gain...and is led by an invisible hand to promote an end which was no part of his intention."^[38] By restoring utility (the choice of means) but not distribution (the choice of persons as ends), neoclassical economics expressed the Epicurean materialism that claims humans somehow evolved as merely clever animals, highly adept at calculating means but having no choice other than self-gratification, since "reason is, and ought only to be, the slave of the passions," as Hume put it.^{[39][40]}

As historian of economics Henry William Spiegel noted of the "marginal revolution" that ended classical and

launched neoclassical economics in the 1870s, “Outsiders ranked prominently among the pioneers of marginal analysis because its discovery required a perspective that the experts did not necessarily possess.”^[41] I don’t underestimate the time or effort it will take. But I predict that in coming decades, neoscholastic economists, building on the original scholastic outline, will supersede neoclassical economists for exactly the same reason the latter supplanted classical economists starting in the 1870s: It’s not that economists will draw back in horror at the moral implications of their theory. Rather, having one more indispensable explanatory element, their new theory will be both more comprehensive and empirically more accurate.^[42]

[1] “In 1972, he [Stigler] successfully proposed that the history of thought requirement be dropped at Chicago. Most other economics departments later followed suit. . . . At the same meeting Stigler unsuccessfully proposed that the economic history requirement also be dropped.” Robert Leeson, “The Chicago Counter-Revolution and the Sociology of Economic Knowledge,” Working Paper 159, Economics Department, Murdoch University, Murdoch, WA, Australia, July 1997, endnote 62. In his earlier campaign for the change, Stigler rejected Aquinas’ view that a scientist is defined by whether he understands his subject rather than having a degree. Stigler claimed instead that every science is continuously defined by a self-governing group calling themselves scientists. From this sociological definition, he said, it was obvious that “one need not read in the history of economics—that is, past economics—to master present economics.” Instead, “the young theorist... will assume... that all that is valid in earlier work is present—in purer and more elegant form—in the modern theory,” and that “the history of the discipline is best left to those underendowed for fully professional work at the modern level.” As my text indicates, the young economist who assumed that would be underendowed for fully professional work, because he wouldn’t know his subject. George J. Stigler, “Does Economics Have a Useful Past?” op. cit., reprinted in George J. Stigler, *The Economist as Preacher and Other Essays*, University of Chicago, 1982, 107-118; 107.

[2] In the book I note that I use the term “redeem” in the sense of “fulfill (an earlier promise or pledge).” If, as I believe, the next phase in economics is Neoscholastic, it will have fulfilled its original promise.

[3] The simplified version merely lists “yes” or “no” to denote the presence or absence of each fundamental element of economics. The three schools of neoclassical economics originated with Jevons 1871, Menger 1876 [1871], and Walras 1874 [1874]).

I presented the (neo-)scholastic system and contrasted it with subsequent classical and neoclassical revisions in *Redeeming Economics* (Mueller 2010) as follows (pp. 375, 400, 416):

$$(1) C_{Ki} + C_{Li} = Y_i D_{ii} / SD_{ij} \text{ [final distribution function],}$$

where C_{Ki} , and C_{Li} represent the use (“consumption”) by Person i of the services of his or her human capital, L_i , and nonhuman capital, K_i ; Y_i is total compensation (labor and property income) of Person i ; D_{ii} is the significance of Person i to himself, and SD_{ij} is the significance of all persons to Person i .

For clarity and simplicity later on, we will define

$$(5) Y_i = rK_i + wL_i$$

meaning that Y_i is the total net factor compensation (labor and property income) of Person i ; and

$$(6) T_i = Y_i - Y_i D_{ii} / dD_{ij}.$$

By substituting (5) and (6), (1) may therefore be restated as

$$(1a) CK_i + CL_i = Y_i - T_i.$$

This makes clear that the difference between Person i 's total consumption, $CK_i + CL_i$, and total compensation, Y_i , is equal to T_i —(net) personal, domestic, and political “transfer payments” from Person i to other persons. Transfer payments comprise any income *not* received as compensation for contributing to current production. “Net” means that personal gifts made are offset by gifts received, while taxes are treated as transfers paid to the government and balanced against government transfers received.

For a purely selfish person, the distributive share D_{ii}/SD_{ij} is 100 percent; for a person who makes gifts to others, less than 100 percent; for a criminal, more than 100 percent; and for the victim of crime (or abortion), less than zero percent.

$$(2) U_i = f(CK_i, CL_i) \text{ [utility function]},$$

where U_i is the ranking by Person i (“utility”) of CK_i , and CL_i , the units consumed in use by Person i of the services of his or her nonhuman goods, K_i , and human capital, L_i , respectively. In reality, K and L are not two goods but two classes of goods consumed: (K_1, K_2, \dots, K_n) and (L_1, L_2, \dots, L_n) . Scarcity implies that the value of each unit consumed declines as the number of units increases ($dU/dC < 0$: “declining marginal utility”) and that goods are “used up”—that is, rendered unusable—by consumption (for example, $CK_i = -DK_i$).

$$(3a) dK_i = f_1(K_i, L_i) \text{ [production function for nonhuman capital];}$$

$$(3b) dL_i = f_2(K_i, L_i) \text{ [production function for human capital];}$$

where DK_i is the change in the stock (production) of nonhuman goods and dL_i the change in the stock of “human capital,” owned by Person i .

(4) $PKdK_i + PLdL_i = rK_i + wL_i$, where PK and PL are the unit prices of K and L , respectively, w labor compensation per unit of L , r property compensation per unit of K . (PL is a market price only in a slave-owning society, like ancient Athens or the antebellum American South.)

To summarize: The neoclassical economists restored the utility function (equation [2] above). They restored the two-factor production function (3a) and (3b). But until about 1960, they interpreted both human and nonhuman capital as being limited to tangible factors. The neoclassical economists followed Adam Smith in ignoring the distribution function in theory, but in practice they have assumed that everyone is purely selfish, thus adding the restrictive assumption $D_{ii}/SD_{ij} = 1$. As with Adam Smith, this special assumption collapses equation (1) into:

$$(1b) CK_i + CL_i = Y_i.$$

It also means of course that there are no personal gifts, crimes, common goods, or distributive justice:

$$(6a) T_i = 0.$$

[4] In the book I typically use the term “final distribution,” to distinguish it from “distribution” as the term has been used since Adam Smith. The original scholastic theory of distribution comprises Augustine’s theory of personal distribution—gifts and their opposite, crimes—and in every social community (like a family or political community), what Aristotle called “distributive justice.” Smith conflated what is more properly called “compensation” or “justice in exchange” with distribution properly so called, by introducing the

assumption that “every individual ... intends only his own gain.” (Smith 1966 [1776], *Wealth of Nations*, IV.ii.9, accessed on 19 September 2009 from <http://www.econlib.org/library/Smith/smWN13.html#IV.2.9>). I recount Smith’s oversimplification of the scholastic economic theory he had been taught by his teacher Frances Hutcheson in Mueller 2010 chapter 3.

[5] This concise formulation seems to be that of Aquinas, paraphrasing Aristotle’s *Physics*, ii, 5: Summa 1-II Q1. A2: <http://www.newadvent.org/summa/2001.htm>; cf. <http://classics.mit.edu/Aristotle/physics.2.ii.html>.

[6] Aristotle (1932 [335-322 B.C.]), p. 2, p. 4, pp. 102-103.

[7] Augustine also introduced the important distinction between “private” goods like bread, which inherently only one person at a time can consume, and “public” goods (like national defense, enforcement of justice, or even this panel) which, at least within certain limits, many people can simultaneously enjoy, because they are not “diminished by being shared” (i.e., scarce) Augustine (395-396), viii, 19, p. 146. Private goods are now sometimes called “rival” goods. The formulation “diminished by being shared” is from Augustine (396/397), I, 2.

[8] Augustine (395/396), p. 131.

[9] To be more precise, love with both benevolence and beneficence.

[10] Or rather, love only with benevolence but not beneficence.

[11] Aristotle 1954 [c. 350 BC], V, v; pp. 117-122.

[12] Augustine (395-396), viii, 19, p. 146. Private goods are now sometimes called “rival” goods. The formulation “diminished by being shared” is from Augustine (396/397), I, 2.

[13] Donohue and Levitt 2001, 379-420 (cited hereafter as *QJE*). Earlier versions had been widely circulated, including Donohue and Levitt 1999 and Donohue and Levitt 2000 (hereafter cited as NBER). Levitt further promoted the claim in Levitt and Dubner (2005), pp. 117-144.

[14] Donohue and Levitt (2001), p. 402.

[15] Donohue and Levitt (2001), p. 402.

[16] Donohue and Levitt (2001), p. 394.

[17] U.S. Dept. of Commerce, *Statistical Abstract: 2006*, tables 339 and 313. The age distribution of persons arrested matches the age distribution of women having abortions quite closely. This is especially apparent after allowing for the fact that young men fathering children are typically two years older than their female sexual partners. Arrest rates by age and sex from *Sourcebook of Criminal Justice Statistics*; Ages of women having abortions from Elam-Evans et al. (2003). Fathers older than the age at which women are typically fertile are about eight years older than the mothers; see *Statistical Abstract: 1998*, p. 112.

[18] “Economic fatherhood” is the Total Fertility Rate, with fertility rates for white and nonwhites mixed in the same proportion as among men admitted to prison, removing children on welfare from the numerator and men in prison from the denominator. Annual data on the homicide rate go back to 1900, on white and nonwhite age-specific fertility rates back to 1917. Total Fertility Rate calculated from U.S. population by single year of age, sex, and race (since 1900, U.S. Census Bureau); age-specific fertility rates (since 1940 from annual *National Vital Statistics Reports* and beginning 1917 from Princeton University’s Office of Population Research). Data on persons arrested, starting in 1932, and admissions to Federal and state prisons,

starting 1926, are from U.S. Dept of Commerce (1975), Part 1, updated in annual *Statistical Abstract of the United States* and in (Eds.) Pastore, A.L. and Maguire, K; on federal and state prisoners back to 1925 from <http://www.albany.edu/sourcebook/>. Data for children supported by welfare begin in 1936: children on public assistance before 1970 from U.S. Dept of Commerce (1975), Part 1, p. 356; more recent statistics from U.S. Department of Health and Human Services (2004).

[19] The regression tested is $\log(\text{homicide rate}) = c_1 + c_2 * \log(\text{economic fatherhood})$.

Coefficient	Standard error	t-statistic	Prob.	
c_1	2.480789	0.022910	99.59044	0.0000
c_2	-0.771135	0.031829	-24.22761	0.0000
Adjusted $R^2 = 0.903073$		D-W=0.487996	F-statistic=586.9769	Prob(F-statistic) 0.000000

The complete multivariable model of the homicide rate is not reproduced in this paper, but its results remain dominated by the “economic fatherhood” variable.

[20] Cointegration can be detected with the Augmented Dickey-Fuller (ADF) test, which tests the likelihood that the two series will ever drift apart. While a “good” regression is one which holds at least 19 times out of 20, the ADF test must exceed 99 cases out of 100.

[21] The ADF Test Statistic for the unit root test on the residuals of the regression of economic fatherhood on homicide is -3.752339; the Mackinnon critical value for the hypothesis of a unit root at the 1% level is -3.5380. (At the 5% level the critical value is -2.9084, and at the 10% level the critical value is -2.5915.) Therefore, the series for economic fatherhood and homicide are cointegrated.

[22] Granger and Newbold (1974). Spurious relationships are characterized by high “autocorrelation” of residual forecasting errors, which can usually be detected by a statistical test known as the Durbin-Watson (D-W) statistic. Ideally, D-W should be close to a value of 2, but autocorrelation is reflected in a low D-W (e.g., 0.5).

[23] The model was first published in John D. Mueller, “How Does Fiscal Policy Affect the American Worker?” *Notre Dame Journal of Law, Ethics and Public Policy* Vol. 20 No. 2 (Spring 2006), 563-619; available at http://www.eppc.org/publications/pubID.2671/pub_detail.asp. It was updated in John D. Mueller, *Redeeming Economics: Rediscovering the Missing Element* (ISI Books, 2010). The model was further developed for WCF IV in Warsaw: John D. Mueller, “A Family-Friendly Fiscal Policy to Weather Demographic Winter,” <http://www.worldcongress.org/wcf4.spkrs/wcf4.mueller.htm>; for WCF V in Amsterdam: John D. Mueller, “How Do Nations Choose ‘Demographic Winter’? Is America Doing So?” <http://www.worldcongress.org/wcf5.spkrs/wcf5.mueller.htm>, and http://www.eppc.org/publications/pubID.3911/pub_detail.asp; and for the 2011 Moscow Demographic Summit: John D. Mueller, “Babies and Dollars: Babies and Dollars: Implications for USA, Russia, and the World,” available at <http://demographia.ru/eng/articles/index.html?idR=80&idArt=1946> and http://www.eppc.org/programs/economics/publications/programID.41.pubID.4522/pub_detail.asp.

[24] Aristotle, *Rhetoric*, I, 1 (1355b), <http://www.public.iastate.edu/~honeyl/Rhetoric/rhet1-1.html>

[25] Aristotle, *The Politics*, I, 2 (1253a2), tr. B. Jowett, <http://classics.mit.edu/Aristotle/politics.1.one.html>.

[26] Aristotle, *Nicomachean Ethics*, VIII, 12, <http://classics.mit.edu/Aristotle/nicomachaen.8.viii.html>. I

quote the more felicitous translation in Thomas Aquinas, *Commentary on Aristotle's Nicomachean Ethics*, tr. C.I. Litzinger, Dumb Ox Books, Notre Dame, IN, 1964, 520.

[27] Aristotle, *The Politics*, I, 3-4, op. cit., <http://classics.mit.edu/Aristotle/politics.1.one.html>.

[28] Theodore W. Schultz, "Investment in Human Capital," *American Economic Review*, (March 1961), 1-17.

[29] Bloendal, S., S. Fickel, N. Girouard, and A. Wagner, "Investment in Human Capital Through Post-Compulsory Education and Training," Organization for Economic Cooperation and Development (Paris, 2001): 10.

[30] To Simplician—"On Various Questions," Book 1, question 2 article 16 in *Augustine: Earlier Writings*, selected and translated with introductions by John H.S. Burleigh, Westminster Press, Philadelphia, 1953, 398.

[31] Augustine, *On Free Will*, in *Augustine: Earlier Writings*, edited by John H.S. Burleigh, The Westminster Press, Philadelphia, 1953, 131.

[32] World Values Survey, available at <http://www.worldvaluessurvey.org/WVSONline.jsp>.

[33] Adema, W., P. Fron and M. Ladaïque (2011), "Is the European Welfare State Really More Expensive?: Indicators on Social Spending, 1980-2012; OECD Social, Employment and Migration Working Papers, No. 124, OECD Publishing. <http://dx.doi.org/10.1787/5kg2d2d4pbf0-en>; Table A.I.1.3: Public social expenditures as % GDP, 1980 – 2012, estimated for 2008 to 2012, p. 41.

[34] Fertility rates should be adjusted for differences in mortality rates. The Net Reproduction Rate (NRR) represents a hypothetical woman whose experience matches the average rates of fertility and death of all women in a given year. (The Total Fertility Rate measures fertility alone.) An NRR of 1.00 indicates that each woman bears exactly one surviving daughter. The Total Fertility Rates used in the model equal twice the NRR. For example, the TFR in Mali in 2006 was 7.42, but the NRR was 1.987, which corresponds to a TFR of 3.97 children per couple. In other words, in Mali the typical couple had about 3-1/2 children simply to compensate for the likelihood of premature death before reaching child-bearing age. United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2008 Revision*, New York, 2009; <http://data.un.org/Data.aspx?d=PopDiv&f=variableID%3A48>.

[35] Adema, W., P. Fron and M. Ladaïque (2011), "Is the European Welfare State Really More Expensive?: Indicators on Social Spending, 1980-2012; OECD Social, Employment and Migration Working Papers, No. 124, OECD Publishing. <http://dx.doi.org/10.1787/5kg2d2d4pbf0-en>; Table A.I.1.3: Public social expenditures as % GDP, 1980 – 2012, estimated for 2008 to 2012, p. 41.

[36] Friedman, M., and Friedman, R. (1979), 1-2.

[37] Smith (1982 [1795]), para. 274.

[38] Smith (1966 [1776]), Bk. IV Ch. 2; Vol. 2, p. 35.

[39] Hume 1740, II, III, iii,. Though this worldview is usually ignored or left implicit, a few economic thinkers have worked out this view of human action explicitly and systematically. One of the most influential was the Austrian economist Ludwig von Mises (1881-1973). According to Mises, "Action is based on reason, action therefore which is understood by reason, knows only one end, the greatest pleasure of the acting individual. The attainment of pleasure, the avoidance of pain—these are its intentions." He added that pleasure or satisfaction must be construed broadly enough to embrace all action: "The modern concept of pleasure, happiness, utility, satisfaction and the like includes all human ends, regardless whether the motives

of action are moral or immoral, noble or ignoble, altruistic or egotistical.” Mises, *Socialism*, II.5.6, available at <http://www.econlib.org/library/Mises/msS3.html#Part%20IICh.5>. But if we accept this premise, it follows that all human action is a kind of exchange: “All human action, so far as it is rational, appears as the exchange of one condition for another. Men apply economic goods and personal time and labour in the direction which, under the given circumstances, promises the highest degree of satisfaction, and they forego the satisfaction of lesser needs so as to satisfy more urgent needs. This is the essence of economic activity—the carrying out of acts of exchange.” Ibid., II.5.9. Even the actions of an isolated individual, according to Mises, are a form of exchange: an exchange of one state of pleasure for another that he values more highly: “It is true that if an isolated man is ‘exchanging’ labour and flour for bread within his own house, the considerations he has to take into account are not different from those which would govern his actions if he were to exchange bread for clothes on the market. And it is, therefore, quite correct to regard all economic activity, even the economic activity of isolated man, as exchange.” Ibid., II.5.18. Moreover, it follows from the same theory that humans have no choice about the persons they choose as the end of their actions. “The power to choose whether my actions and conduct shall serve myself or my fellow beings is not given to me,” Mises maintained: Ibid., IV.27.7 <http://www.econlib.org/library/Mises/msS10.html#Part%20IVCh.29>. Presumed to have no choice of persons as ends, humans are therefore presumed to arrange all goods on a single comprehensive scale of preference, rather than on separate scales for persons as ends and other things as means, as in Scholastic economics: “Unity of action can exist only when all ultimate values can be brought into a unitary scale of values,” Ludwig von Mises, *Socialism*, IV.27.13, available at <http://www.econlib.org/library/Mises/msS10.html#Part%20IVCh.29>. According to Mises, “Nothing that men aim at or want to avoid remains outside of this arrangement into a unique scale of gradation and preference”: Mises, L. (1996 [1949]) p. 1; <http://www.mises.org/humanaction/introsec1.asp#p1>, accessed 28 March 2008.

[40] In 1922 Mises condemned Scholastic economics and modern Christian social reform as irremediable “state socialism,” singling out Leo XIII, Pius XI, and above all Pesch for obloquy: “The protagonists of Christian social reform as a rule do not regard their ideal Society of Christian Socialism as in any way socialistic. But this is simply self-deception. . . . Where private property exists, only market prices can determine the formation of income. To the degree in which this is realized, the Christian social reformer is step by step driven to Socialism, which for him can be only State Socialism.” Mises, L., (1981 [1922]), II.15.33. The premise of Mises’s assertion, “Where private property exists, only market prices can determine the formation of income” is wrong because of the usually false assumption that any goods produced and exchanged, e.g., by a head of household, are consumed by that person. Though usually implicit, Mises made this assumption explicit when he wrote, “Where each household is economically self-sufficient, the privately owned means of production exclusively serve the proprietor. He alone reaps all the benefits derived from their employment,” Mises, L. (1996 [1949]), *Human Action*, 683–84, <http://www.mises.org/humanaction/chap-24sec4.asp>.

[41] Spiegel (1971), p. 507.

[42] Other than Viner (1978), few academic economists so far have recognized the systematic differences between classical, neoclassical, and neoscholastic economics. An important recent exception is Aguirre, 2006; see also Aguirre, 2004. Also deserving special mention for insights drawn from scholastic theory are Worland (1967), Chafuen (1986), Chafuen (1993), Morse (2001), Piedra (2004) and Yuengert (2004). Aguirre and Morse have begun the necessary rewriting of the neoclassical economic theory of the family. Though similarly inspired by scholastic theory, Mueller (1996) was still formally neoclassical. Warning to theologians: “neoscholastic” has nearly opposite meanings in theology and economics. In 19th and 20th Century theology it essentially meant equating Aquinas with Aristotle and removing, Augustine’s fundamental insight that all persons (human or divine) are motivated by love for some person(s), and all personal love is expressed with a gift. In 21st Century economics “neoscholastic” theory restores that insight to its central role.

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