

The Case Against Education:

A Professional Student Explains Why Our Education
System is a Big Waste of Time and Money

Bryan Caplan

[alternate title: *The Magic of Education:*

Why The Real World Pays You to Waste Your Time In the Ivory Tower]

[cover idea: kids sleeping at their desks]

[cover idea: underwater basket-weaving]

© Bryan Caplan 2015

Please do not circulate without permission.

Chapter 7: Nourishing Mother: Is Education Good for the Soul?

As you can see, I have memorized this utterly useless piece of information long enough to pass a test question. I now intend to forget it forever. You've taught me nothing except how to cynically manipulate the system. Congratulations.

-Calvin and Hobbes

College graduates often proudly name-drop their alma mater. Few realize, however, that the phrase contains a worldview. In Latin, "alma mater" means "nourishing mother." A rich metaphor. A nourishing mother doesn't merely teach you practical skills or help you land a well-paid job. She nurtures your whole person. She teaches you right from wrong. She shows you the magic of life. A nourishing mother speaks from her heart and fills your soul with goodness.

Most economists are dedicated fans of education, but they still roll their eyes at such lofty words. They push education because they think it has a high social return, not because they think it good for the soul... whatever that means. Once in a while, philosophical economists muse that education might be a "merit good" – a product with value above and beyond customers' willingness to pay.¹ But such musings rarely sink in with their pragmatic peers.

Economists' philistine ways expose them to a sharp humanist critique. An old-school fan of liberal arts education could chide, "You base your support for education on its high social return. But Caplan convincingly shows that this 'social return' is poor at best. Those who live by the sword, die by the sword." The humanist could then turn to me and add, "Stop smirking. You may have beaten your fellow economists at their own game, but that game isn't worth playing. The humanist tradition continues to offer the most meaningful perspective: Education really is good for the soul. Laugh all you want, but ideas and culture matter more than dollars and cents."

In all sincerity, I'm not laughing. For all my iconoclasm, I love ideas and culture. "Impractical" ideas and "uncommercial" culture are my life. The journey from ignorance to enlightenment moves me. Consider Malcolm X's spell-binding story about teaching himself to read in prison:

I saw that the best thing I could do was get hold of a dictionary—to study, to learn some words...

I spent two days just riffling uncertainly through the dictionary's pages. I'd never realized so many words existed! I didn't know *which* words I needed to learn. Finally, just to start some kind of action, I began copying...

I woke up the next morning, thinking about those words – immensely proud to realize that not only had I written so much at one time, but I'd written words that I never knew were in the world...

I was so fascinated that I went on – I copied the dictionary's next page. And the same experience came when I studied that. With every succeeding page, I also learned of people and places and events from history. Actually the dictionary is like a miniature encyclopedia. Finally the dictionary's A section had filled a whole tablet – and I went on into the B's. That was the way I started copying what eventually became the entire dictionary...

I suppose it was inevitable that as my word-base broadened, I could for the first time pick up a book and read and now begin to understand what the book was saying. Anyone who has read a great deal can imagine the new world that opened.ⁱ

Unlike most economists, moreover, I think the value of ideas and culture reflects more than my personal tastes. Philosophy and opera really are merit goods. Reading David Hume's *Enquiry Concerning Human Understanding* is intrinsically better than reading E.L. James' *Fifty Shades of*

Grey. Hearing Richard Wagner's *Tristan und Isolde* is intrinsically better than hearing Toby Keith's *White Trash With Money*. Humanist fans of education grasp profundities that my fellow economists carelessly dismiss.

Old-school humanists nevertheless overstate their case. Education definitely *can* be good for the soul. But that hardly shows that actually-existing education achieves this noble end. In practice, education may turn out to be a neglectful or abusive mother rather than a nourishing one.

Meritorious Education

The Master said, In old days men studied for the sake of self-improvement; nowadays men study in order to impress other people.

-Confuciusⁱⁱⁱ

Practical education has no need to be uplifting. As long as students graduate with skills to apply outside the classroom, even academic drudgery serves a worthwhile purpose. When you have instrumental value, you don't need intrinsic value. To be a worthwhile end-in-itself, though, the educational process must meet higher standards. To plausibly qualify as a merit good, education needs three ingredients.

The first ingredient: Worthy content. Learning about great ideas and glorious culture uplifts the soul. Learning about half-baked ideas and so-so culture, not so much. While the liberal arts tradition wisely hails the value of grappling with error, this only holds for *well-argued, thoughtful* errors.

The second ingredient: Skillful pedagogy. Learning from enthusiastic teachers who have mastered their subjects uplifts the soul. Learning from uninspired teachers who parrot the textbook, not so much. Mediocre instruction is tolerable for practical training, but worthless for intellectual or artistic inspiration.

The third ingredient: Eager students. Sharing great ideas and glorious culture with students who find them fascinating uplifts their souls. Force-feeding great ideas and glorious culture to students who couldn't care less, not so much. Indeed, the charade degrades students, teachers, and the subjects themselves. Opera is divine, but herding country music fans into opera houses is not only futile, but cruel. Many educators assuage their consciences by insisting that youthful force-feeding will in time blossom into mature fascination. Even if they're right, the force-feeding is a regrettable pathway to the merit good of mature fascination, not a merit good in itself.

How does actually-existing education measure up against these standards of merit? As long as you've had a vaguely typical education, you already know the answer. The content of education is mixed at best: Pockets of greatness, surrounded by insipid busywork. The pedagogy is poor: Most teachers are, to be frank, pretty damn boring. The students are worse: No matter how great their teachers, few yearn for the life of the mind. Private education is arguably slightly better, but it's cut from the same cloth as public education. Harvard University's Steven Pinker sadly reports that the best students in the world yawn at the best teachers in the world:

A few weeks into every semester, I face a lecture hall that is half-empty, despite the fact that I am repeatedly voted a Harvard Yearbook Favorite Professor, that the lectures are not video-recorded, and that they are the only source of certain material that will be on the exam. I don't take it personally; it's common knowledge that Harvard students stay away from lectures in droves, burning a fifty-dollar bill from their parents' wallets every time they do.^{iv}

When I judge our education hollow, it is isn't just my opinion; it's almost certainly your opinion, too. Honestly, how many educators do *you* find fascinating? Do you really think kids find them any more fascinating than you do? Even if you refuse to voice the unseemly answers, your behavior speaks unvarnished truth. However big a nerd you are, you don't nourish your soul by watching YouTube videos of average teachers. No one does. The empirics on student boredom we've covered underscore the obvious: Stimulating education is the exception that proves the rule.^v

While I broadly accept the humanist critique of philistine economists, economists have a weighty comeback: Cost matters. Suppose opera really is good for the soul, and education genuinely promotes love of opera. These facts mean little until we know the per-capita cost of conversion. "Exposing a single person to opera is worth any expense" is childish bravado. Cost matters whenever you spend your own money. How could cost cease to matter when you spend taxpayer or donor money? Every dollar spent is a dollar that could have been repurposed.

This economic caveat is now more compelling than ever. Ours is an age of science fiction. Almost everyone in rich countries – and about half the earth's population – can access machines that answer virtually *any* question and teach virtually *every* subject.^{vi} The internet doesn't merely satisfy our curiosities; it connects us to global communities that share our curiosities. These global communities are more than clubs of novices; they include many of the greatest teachers on the planet.^{vii} The internet provides not just stream-of-consciousness enlightenment, but outstanding formal coursework. Khan Academy is the only most famous example. To top it all off, this ceaseless intellectual feast is, with rare exceptions, free of charge. If education is a merit good, the internet is the Merit Machine.

On reflection, this Merit Machine is swiftly making traditional humanist education policy obsolete. Once everyone can endlessly enrich their souls for free, government subsidies for enrichment forfeit their rationale. The objection, “But most people don’t use the internet for spiritual enrichment” is actually a damaging admission that eager students are few and far between. Subsidized education’s real goal isn’t to make ideas and culture accessible to anyone who’s interested, but to make them mandatory for everyone who *isn’t* interested.

The rise of the internet also undercuts the Machiavellian line that intellectual force-feeding ultimately blossoms into sincere appreciation. Today’s adults are the product of over a decade of mandatory exposure to abstract ideas and high culture. If educational force-feeding worked reliably, most educated adults would adore these nerdy realms – and eagerly tap the internet to explore them. To understate, they rarely do. “Kim Kashdashian” gets about twenty times as many Google hits as “Richard Wagner” and about two hundred times as many as “David Hume.” Insisting that “the end justifies the means” is comical when progress toward the end is near-invisible.

A philistine could summarily dismiss this logic: “Of course adults rarely bother studying ideas and culture online. There’s no money in it.” But this chapter isn’t aimed at philistines. It’s aimed at anyone who holds that actually-existing education is good for the soul. Once you embrace this stance, the rise of the internet has two unsettling lessons. First: The humanist case for education subsidies is flimsy today because the internet makes enlightenment practically free. Second: The humanist case for education subsidies was flimsy all along because the internet shows that low consumption of ideas and culture stems from apathy, not poverty or inconvenience. Just look: When the price of enlightenment drops to zero, demand for enlightenment remains embarrassingly low.

The Soulful Fallback

Education is a special, deeply political, almost sacred civic activity. It is not merely a technical enterprise – providing facts to the untutored. Inescapably, it is a moral and aesthetic enterprise – expressing to impressionable minds a set of convictions about how most nobly to live in the world.

– William Bowen and Derek Bok, *The Shape of the River*^{viii}

There are intermediate positions between “philistine” and “humanist.” Restrained educational idealists could fault the humanist tradition for overemphasizing students’ inner life. Sure, students rarely *feel* their souls being enriched. But why not pragmatically equate “enriching the soul” with fostering desirable adult attitudes and behavior? From this perspective, “Education is good for the soul” counts as true as long as education appreciably shifts society in the right direction. It follows that education cannot be good for the soul unless it appreciably shifts society in *some* direction.

This is a reasonable fallback position, and we’re ready to delve into it. Identifying the “right direction” for societal change is up to the reader. Ballparking education’s effect on society, however, is up to me.

To preview: Education does seem to shift students’ values, though less than teachers and parents advertise. To isolate education’s influence on society, however, you must unpack *how* education sways students. Is the mechanism “leadership” – planting teachers’ ideas in students’ heads? Then education remolds society. Is the mechanism “peer effects” – sorting kids into distinct groups? Then education *reshuffles* society without remolding it.^{ix}

Suppose you funnel an extra kid into college. His peer group seismically shifts. Given human conformity, the freshman will likely try to blend in with his new peers. College youths are less religious, for example, so one would expect the student to veer in a secular direction. This does not imply, however, that college makes *society* less religious. The existence of college splits kids into two subcultures with opposing peer effects. If college kids are less religious than average kids, then non-college kids must be *more* religious than average kids. Members of each subculture adjust their behavior to *locally* fit in. Religious conformity pressure in the non-college pool offsets secular pressure in the college pool. Net effect on *society's* religiosity: unclear, even if college demonstrably makes students less religious.

Both leadership and peer effects are at work in the real world. But there are three hefty reasons to think that peer effects dominate leadership. First: On the dimensions where academic leadership seems most intense, education's effect on attitudes and behavior is mild. Second: Although schools focus their preaching on a handful of issues, education sways attitudes and behavior on *many* dimensions. Indeed, as we shall soon see, educated opinion occasionally spurns the pedagogical consensus. Third: Individual and social effects rarely "add up." Boosting an individual's education usually changes that individual far more than boosting a society's education changes that society.

High Culture Falls on Deaf Ears

To the question "of what use are the humanities?", the only honest answer is none whatsoever. And it is an answer that brings honor to its subject. Justification, after all, confers value on an activity from a perspective outside its performance. An activity that cannot be justified is an activity that refuses to regard itself as instrumental to some larger good. The humanities are their own good.

-Stanley Fish, "Will the Humanities Save Us?"^x

Educators hope to enrich the soul in a hundred different ways. But there's one form of enrichment high school and college pursues more explicitly and energetically than any other: instilling appreciation for high culture. English classes push classic novels, plays, and poetry: William Shakespeare, Washington Irving, Edgar Allen Poe, Mark Twain, Edith Wharton, Sinclair Lewis, Robert Frost. Music classes push traditional music, especially classical music: Antonio Vivaldi, Ludwig van Beethoven, Wolfgang Amadeus Mozart, and above all else, John Philip Sousa. Art classes are more hands-on, but still try to raise the status of visual works in top museums. Even school's iconoclasm is conservative: Academic curricula often cover Kurt Vonnegut, Arnold Schoenberg, or Jackson Pollock, but rarely George R.R. Martin, Lady Gaga, or Frank Miller. Though some schools promote high culture more energetically than others, academic curricula are plainly tilted against pop culture.

How effectively has this tilt fostered high culture? Earlier in the book, I appealed to the truism that education can't be responsible for more than 100% of what we know. The same principle allows us to set an upper bound on education's cultural impact: Education can't be responsible for more than 100% of the high culture our society consumes.

How high is that upper bound? Let's start with books. Consumer demand is shockingly low overall: Americans spend 0.2% of their income on *all* reading materials, barely more than \$100 per family per year.^{xi} Americans used to spend more on reading, but never spent much: Back in 1990, well before the rise of the web, reading absorbed 0.5% of the family budget.^{xii} Today's Americans spend about four times as much on tobacco and five times as much on alcohol as they do on reading.^{xiii} Within this small pond, high culture is no big fish. Here are three rankings of the best-selling English-language fiction of all time. Sales figures include school purchases and assigned texts, so they *overstate* sincere affection for the canon.

Table 7.1: Best-Selling English-Language Fiction of All Time

Rank	Source		
	Wikipedia	Ranker.com	How Stuff Works
1	<i>The Lord of the Rings</i> (Tolkien)	<i>A Tale of Two Cities</i> (Dickens)	<i>A Tale of Two Cities</i> (Dickens)
2	<i>Harry Potter and the Philosopher's Stone</i> (Rowling)	<i>The Lord of the Rings</i> (Tolkien)	<i>The Lord of the Rings</i> (Tolkien)
3	<i>And Then There Were None</i> (Christie)	<i>The Hobbit</i> (Tolkien)	<i>Harry Potter and the Sorcerer's Stone</i> (Rowling)
4	<i>The Hobbit</i> (Tolkien)	<i>And Then There Were None</i> (Christie)	<i>And Then There Were None</i> (Christie)
5	<i>She: A History of Adventure</i> (Haggard)	<i>The Lion, the Witch, and the Wardrobe</i> (Lewis)	<i>The Lion, the Witch, and the Wardrobe</i> (Lewis)
6	<i>The Lion, the Witch, and the Wardrobe</i> (Lewis)	<i>She: A History of Adventure</i> (Haggard)	<i>The Da Vinci Code</i> (Brown)
7	<i>The Da Vinci Code</i> (Brown)	<i>The Da Vinci Code</i> (Brown)	<i>Harry Potter and the Half-Blood Prince</i> (Rowling)

8	<i>Harry Potter and the Half-Blood Prince</i> (Rowling)	<i>The Catcher in the Rye</i> (Salinger)	<i>Harry Potter and the Chamber of Secrets</i> (Rowling)
9	<i>The Catcher in the Rye</i> (Salinger)	<i>Anne of Green Gables</i> (Montgomery)	<i>The Catcher in the Rye</i> (Salinger)
10	<i>Harry Potter and the Chamber of Secrets</i> (Rowling)	<i>Black Beauty</i> (Sewell)	<i>Harry Potter and the Goblet of Fire</i> (Rowling)
11	<i>Harry Potter and the Prisoner of Azkaban</i> (Rowling)	<i>Charlotte's Web</i> (White)	<i>Harry Potter and the Order of the Phoenix</i> (Rowling)
12	<i>Harry Potter and the Goblet of Fire</i> (Rowling)	<i>The Tale of Peter Rabbit</i> (Potter)	<i>Harry Potter and the Prisoner of Azkaban</i> (Rowling)
13	<i>Harry Potter and the Order of the Phoenix</i> (Rowling)	<i>Harry Potter and the Deathly Hallows</i> (Rowling)	<i>Ben Hur</i> (Wallace)
14	<i>Harry Potter and the Deathly Hallows</i> (Rowling)	<i>Jonathan Livingston Seagull</i> (Bach)	<i>Lolita</i> (Nabokov)
15	<i>Lolita</i> (Nabokov)	<i>Angels and Demons</i> (Brown)	<i>Harry Potter and the Deathly Hallows</i> (Rowling)
16	<i>Anne of Green Gables</i> (Montgomery)	<i>Kane and Abel</i> (Archer)	

17	<i>Black Beauty</i> (Sewell)	<i>To Kill A Mockingbird</i> (Lee)	
18	<i>The Eagles Has Landed</i> (Higgins)	<i>Valley of the Dolls</i> (Susann)	
19	<i>Watership Down</i> (Adams)	<i>Gone With the Wind</i> (Mitchell)	
20	<i>Charlotte's Web</i> (White)	<i>The Thorn Birds</i> (McCullough)	

While sales figures are plainly flawed, all three lists paint similar pictures of the public's long-run literary tastes. High culture is but a niche market. Dickens' *A Tale of Two Cities* tops two of the three lists. *The Catcher in the Rye*, *Ben Hur*, *To Kill a Mockingbird*, *Gone With the Wind*, and *Lolita* all appear on at least one list. But fantasy – Tolkien, Rowling, Lewis – dominates. The point is not that fantasy lacks literary merit; by my lights, *Lord of the Rings* towers over *Catcher in the Rye*.^{xiv} The point is that the books high school and college classes hail for their supreme literary merit lose out to much less prestigious genres. By and large, literature teachers fail to “get through” to their captive audiences: They rarely spark love of reading, much less love of the genre they urge their students to admire.

In music, pop culture's victory over high culture is even more decisive. *The Three Tenors in Concert* is the best-selling classical album ever.^{xv} With twelve million copies sold, it does not even break into the top *fifty* albums of all time.^{xvi} Looking at overall sales, classical music is only 1.4% of the U.S. music market. Country is eight times as popular, and rock/pop over thirty times as popular.^{xvii} Classical does better globally, but still only commands a 5% share of the world's music marketplace. Well, at least it beats jazz.^{xviii} The point, again, is not that classical music alone is aesthetically worthwhile. Bad Religion isn't Bach, but it's good. The point, rather, is that schools'

aesthetic priorities have negligible cultural impact. Even if American schools are the root cause of *all* U.S. consumption of classical music, their combined efforts only boost its market share from 0% to 1.4%.

Why is high culture so marginalized? Humanists may be tempted to blame poor salesmanship: Students would learn to love Shakespeare and Brahms if they only had the right teachers. The straightforward story, though, is that high culture requires extra mental effort to appreciate – and most humans resent mental effort. Students are overwhelmingly bored by Shakespeare, and the rare fan of high culture would probably have come to love the Bard on his own. Students sample a little high culture when their grades depend on it. As soon as the exam ends, however, the vast majority of students rush back to their low-brow comfort zone.

Anyone reading this book is probably a bird of a different feather. You may even remember the names of the teachers who opened your eyes to the finer things in life. I owe my love of classical music to Mr. Zainer (General Music, 7th grade), and my love of literature to Mrs. Ragus (Honors English, 11th grade). A quick look at the basic facts, however, shows that our experiences are abnormal. The vast majority of our classmates emerge from years of cultural force-feeding with their aesthetic palates unchanged.

The Paper Tiger of Political Correctness

Three years of school was nice,
In rice fields, planting rice.
You did good work you see,
Re-educating me...
But men, will always be men.
They washed out my brain,

I'm still who I am.
Deep inside, I know what I know.
Wherever I go, I speak Uncle Ho,
And think Uncle Sam.
- *Miss Saigon*

American educators lean left. There's no denying it. The party breakdown for K-12 public school teachers is lopsided: roughly 45% Democrat, 25% independent, and 30% Republican.^{xix} The breakdown for college faculty is starkly lopsided: A nationally-representative study of all professors – including professors in two-year colleges – finds 51% Democrats, 35% independents, and 14% Republicans.^{xx} A similar study of four-year college faculty reports 50% Democrats, 39% independents/other, and 11% Republicans.^{xxi} Left-wing dominance seems even stronger at more elite schools.^{xxii}

Colleges are least balanced in the most politically-charged subjects. There are about five Democrats per Republican in the humanities, and eight Democrats per Republican in the social sciences.^{xxiii} As recently as 2006, 5% of humanities professors and 18% of social scientists were self-described “Marxists.”^{xxiv} The ratio of self-styled “liberals” to “conservatives” is less extreme, presumably because – unlike party affiliation – these are relative terms.^{xxv} When 18% of their colleagues are outright Marxists, many mainstream Democrats understandably feel “moderate” by comparison.

None of this proves that teachers and professors use their classrooms to “enlighten” or “brainwash” their students. But the conditions for enlightenment/brainwashing are most auspicious. Educators' distinctive worldview provides a compelling *motive* to mold students' minds. Captive student audiences provide a golden *opportunity* to mold students' minds. Even

if teachers avoid blatant proselytizing, ideological neutrality requires Vulcan self-discipline. When you and your colleagues share an ideology, your common ideology soon sounds like common sense – and there’s nothing unprofessional about promoting common sense. Even if lectures and readings are only subtly slanted, won’t a subtle slant, maintained year after year, win students’ hearts and minds in the end?

No. In the data, the well-educated are only microscopically more liberal. The General Social Survey has people place themselves on a seven-step scale, where 1 is “extremely liberal,” 4 is “moderate,” and 7 is “extremely conservative.” An extra year of education seems to make people .014 steps more liberal.^{xxvi} Taken literally, this means that over seventy years of education are required to shift ideology a single step. Statistical corrections make education’s impact on ideology look stronger, but it stays weak.^{xxvii}

If the effect on ideology is slight, the effect on partisanship is slightly perverse. As education rises, people actually grow *less* Democratic. The General Social Survey’s respondents place themselves on a seven-step scale, where 0 is “strong Democrat,” 3 is “independent” and 6 is “strong Republican.” An extra year of education seems to make people .071 steps more Republican.^{xxviii} Statistical corrections makes this effect look weaker, but education still appears to mildly boost support for the party that teachers and professors *disfavor*.^{xxix}

The plot thickens when you analyze education’s effect on specific issues. Abundant research confirms that education raises support for civil liberties and tolerance, and reduces racism and sexism.^{xxx} These effects are only partly artifactual. Correcting for intelligence cuts education’s impact by about a third.^{xxxi} Correcting for intelligence, income, occupation, and family background slices education’s impact in half.^{xxxii} When all corrections are done, education still fosters a package of socially liberal views.

At the same time, abundant research also confirms that education *raises* support for capitalism, free markets, and globalization.^{xxxiii} These effects, too, are partly artifactual. Correcting for intelligence cuts education's impact by about 40%. Correcting for intelligence, income, demographics, party, and ideology halves it.^{xxxiv} But when all corrections are done, education still fosters a package of economically conservative views.^{xxxv}

If educators are as left-wing as they seem, why would education have such contradictory effects on students' stances? The charitable story is that educators scrupulously keep their politics out of the classroom. The more plausible story, though, is that educators are unpersuasive. The Jesuits say, "Give me the child until he is seven and I'll give you the man." Society gives liberal educators the child until he's fifteen, eighteen, twenty two, or older. But issue-by-issue, teachers are about as likely to repel their students as attract them. Educators could protest, "The problem isn't that we're unpersuasive, but that students are stubborn," but students revise their opinions all the time. The longer they stay in school, the more they revise. They just don't revise in a reliably liberal direction.

Critics who highlight educators' leftist leanings usually have an ideological ax to grind (or swing): "Look at how liberal our teachers are! Leaving education of the young in the hands of 'politically correct' ideologues endangers our democracy. School should be a vibrant marketplace of ideas, not a center for indoctrination." I grant the political imbalance; as a college professor, I've repeatedly endured it. The point, though, is that political correctness is a paper tiger. Even extreme political imbalance leaves little lasting impression on students' minds. Contrary to the indoctrination story, education doesn't progressively dye students ever brighter shades of red.

Since education raises social liberalism *and* economic conservatism, neither liberals nor conservatives should cheer education's effect on our political culture. What about people who are both socially liberal and economically conservative? Should they admit that education really is "good for the soul" after all? It's complicated. If teachers aren't molding their students, the logical inference is that students are molding each other. But peer effects, to repeat, are double-edged. When schools cluster socially liberal, economically conservative youths inside the Ivory Tower, they inadvertently but automatically cluster socially conservative, economically liberal youths *outside* the Ivory Tower. If education is good for the souls of the former, it's bad for the souls of the latter. Net effect on the polity? Ambiguous.

Getting Out the Vote

Voting is a bipartisan tenet of our secular religion. "It doesn't matter how you vote, but vote": Educators say it loud, proud, early, and often. Staunchly partisan teachers plead with their students to vote, silently hoping they'll "vote correctly." Genuinely apolitical teachers are often equally insistent: Democracy is at stake. K-12 teachers probably preach the duty to vote more energetically than college professors, but the whole education system reads from the same prayerbook.

Do their sermons work? It's complicated. Voter turnout rises sharply with education. Substantial effects of education on turnout usually linger after statistically correcting for income, demographics, intelligence, and so on.^{xxxvi} Despite some thoughtful naysayers, the limited experimental data also shows that extra education boosts turnout.^{xxxvii}

The fly in the ointment is that education has sharply risen over the last century, but turnout has gently fallen. This could mean that offsetting factors masked education's pro-voting effect.^{xxxviii} But several prominent researchers defend a straightforward alternative: Turnout depends on

relative education.^{xxxix} People don't vote because they're educated, but because they have *more* education than others. This could, as usual, reflect peer effects: The longer you stay in school, the more politically active your social circle, and the more politically active you have to be to fit in. But it could also stem from sheer status: The higher your rank in the pecking order, the more you want to crow.

Suppose you're convinced that voting enriches the soul. As long as some version of relative education is what counts, education redistributes the enrichment rather than creating it. Schooling one more person makes him more likely to experience the wonder of democratic participation. But it also makes the rest of the citizenry less likely to partake in the wonder.

The Modern Lifestyle

Culture and politics aside, we also have stereotypes about education's effect on lifestyle. In our minds, the well-educated favor the "modern" way of life; the less-educated, the "traditional" way of life. The modern are secular and bohemian, with few children; the traditional are religious and stodgy, with many children. Schools may not loudly favor modernity over tradition, but perhaps they subtly turn their students into Modern Men and Modern Women nonetheless. Education could be good for the soul because it frees us from the dead hand of the past.

Or not. For all their appeal, stereotypes about education and modernity are unreliable. In the data, the well-educated are more modern in some ways, more traditional in others.

Religion. Stereotypes say that the well-educated are less religious, but this is a half-truth. The well-educated are less religious *theologically*. As education goes up, faith in God and the literal truth of the Bible recede. Yet the well-educated are actually more religious *sociologically*. As

education goes up, so do church membership and church attendance. These are well-established patterns, at least in the United States.^{xi}

Statistical corrections make education's theological effect look smaller but its sociological effect look bigger. The General Social Survey measures Americans' confidence in God's existence on a 1-6 scale (1= "I don't believe in God," 6= "I know God really exists and I have no doubts about it") and religious attendance on a 0-8 scale (0= "never," 8="more than once a week"). After correcting for income, intelligence, social status, demographics, and time, a year of education reduces faith in God by .04 steps, but increases religious attendance by .06 steps.^{xii} Global studies of religion typically conclude that *intelligence* reduces both forms of religiosity, but education's effect on religion remains fuzzy. The only clear-cut evidence that education seriously undermines religion comes from former Communist countries, where the curricula – not to mention the governments themselves – were harshly atheistic.^{xiii}

How can education – including college – matter so little for religion? Sociologists Jeremy Uecker, Mark Regnerus, and Margaret Vaaler paint a plausibly cynical picture:

[S]ome students have elected not to engage in the intellectual life around them. They are on campus to pursue an "applicable" degree, among other, more mundane pursuits, and not to wrestle with issues of morality or meaning. They instead stick to what they "need to know" -- that which will be on the exam. Such students are numerous, and as a result students' own religious faith (or lack of it) faces little challenge. Indeed, many university curricula are constructed to reward this type of intellectual disengagement... *What is not contested, then, cannot be lost.* Faith simply remains in the background of students' lives as a part of who they are, but not a part they talk about much with their peers or professors.
[emphasis added]

All this is unsurprising given how little youths know about their religions in the first place:

[W]hile higher education opens up new worlds for students who apply themselves, it can, but does not often, create skepticism about old (religious) worlds, or at least not among most American young people, in part because students themselves do not perceive a great deal of competition between higher education and faith, and also because very many young Americans are so undersocialized in their religious faith (before college begins) that they would have difficulty recognizing faith-challenging material when it appears.^{xliii}

None of this shows that education is *inherently* religiously impotent. Perhaps heavy-handed parochial or atheistic education would spur widespread conversion or apostasy. Actually-existing education's religious effects are however mixed and weak.

Marriage and divorce. Since the 1940s, lifelong marriage retreated as education advanced.^{xliv} Could the reason be that schools sap belief in traditional values in favor of bohemian permissiveness? Unlikely. Despite broad trends, the link between education, marriage, and divorce is tenuous.

In the modern United States, *getting* married is slightly more common for male college grads, but slightly less common for female college grads. *Being* married is more common for all college grads, because both male and female college grads are now less likely to divorce. Yet on closer look, the patterns blur. Americans who start college but fail to finish are *less* likely to marry and *more* likely to divorce than Americans who avoid college altogether. American women with advanced degrees are *less* likely to be married than American women who stop after the B.A.^{xlv} Looking back in time or around the world makes the story blurrier still. Until recent decades, educated American women tended to stay single.^{xlvi} Internationally, the well-educated are less likely to marry in some countries, but more likely to marry in others; the same holds for divorce.^{xlvii}

How much of education's apparent effect is genuine? Evidence is thin, but researchers who try to statistically isolate education's effects usually find that – at least in the modern United States – education truly encourages marriage and marital stability.^{xlviii} In the General Social Survey, the estimated effects are small but solid – at least for the last two decades. Correcting for demographics, intelligence, church attendance, and era, each year of education raises the chance of being married by 0.7 percentage-points, and reduces the chance of being divorced by 0.3 percentage-points.^{xlix}

Overall, then, friends of traditional marriage have little to fear from education. While its effect is uneven, time in school now seems to make Americans less bohemian, not more. Why would this be so? As usual, peer effects are the go-to answer. Humans care far more about what their “social equals” are doing today than what their teachers said or insinuated years ago. Consistent with this story, social class fully accounts for education's effects on marriage and divorce in modern America.^l Staying in school gets individuals into the elite club, which in turn helps them get married and avoid divorce. When everyone stays in school longer, however, the elite club jacks up its membership requirements, leaving the overall state of marriage unchanged.

Fertility. Educated people have fewer kids. Few demographic laws are more strictly enforced. This law doesn't just fit the modern United States.^{li} It fits nearly every country, whether “modern” or “developing.”^{lii} And it fits year after year, at least since 1900 or so.^{liii} Fertility gaps are big: Averaging over the world, low-education women outbreed high-education women by about one-third.^{liv} Nation-by-nation, disparities of a full child or more are common.^{lv} This demographic law even fits tolerably across countries and over time: High-education countries are less fertile than low-education countries, and countries' fertility erodes as education advances.

In principle, education could be a mask for income, intelligence, status, democratization, or modernization. When statistically challenged, though, education stays strong.^{lvi} To illustrate, take the United States from 1972 to 2012. During this era, a year of education seems to cut Americans' fertility by .12 children. After statistically correcting for income, intelligence, demographics, and a time trend, a year of education still seems to prevent .10 births.^{lvii} While education cools fertility for both sexes, it cools women's more. In married couples, wife's education matters three or four times as much as husband's education.^{lviii}

Does education sway child-bearing via leadership or peer effects? The leadership story is straightforward: Almost all schools – even schools with celibacy-only sex education – explicitly urge students to *delay* child-bearing. And most schools at least insinuate that high-powered careers are better than big families. Peer effects make sense, too: Look at the Baby Boom. Globally, the mix remains unclear.^{lix} At least in the modern United States, however, peer effects seem weak. Even though social class fully explains education's effects on marriage and divorce, social class explains *none* of education's effect on fertility. Dropouts who climb into the upper class still breed like dropouts; Ph.D.s who stumble into the lower class still breed like Ph.D.s.

When schools prompt their students to have fewer kids, then, they're plausibly prompting society to have fewer kids, too. Education leads society toward a less populous future. Out of all the educational consequences we've scrutinized, this is the most impressive. The key question: Are these consequences impressively *good* or impressively *bad*?

If you're convinced that every country on Earth is overpopulated, education's anti-natal effect is a strong point in its favor. Anyone who accepts the dangers of low fertility, however, should tremble. Almost all developed countries are below replacement fertility. Germany, Japan, and Russia's populations are already falling. Many other lands will join them in coming decades. Even worse,

education doesn't just sap overall population. It targets the educational elite, because the people most inclined to linger in school restrict their child-bearing the most. Whatever weight you put on human capital versus signaling, or nature versus nurture, this is demographically perverse. The flip side, happily, is that countries can cheaply arrest their demographic troubles. Indeed, the cost is less than nothing: Governments can apparently make babies with budget cuts.

Broadening Horizons

I've been griping about curricula since kindergarten. Whenever teachers gave "stupid" assignments, I voiced my malcontent to teachers and parents alike. Their standard response: Even the "stupidest" assignments serve the higher purpose of broadening horizons. The world is rich with possibilities, yet most students are poor in curiosity. Teachers have a sacred duty to make closed-minded youths sample this cornucopia. Academic "tasting menus" don't just enrich students emotionally. They enrich students vocationally by exposing them to overlooked career paths.

In hindsight, the theory of my teachers and parents was sound. Kids *are* closed-minded, and schools *can* help them by nudging them to try new things. Unfortunately, educators misapply this noble theory. Rhetoric aside, educators are at least as narrow-minded as kids. Most of the items on the academic tasting menu have the same stale flavor – unsurprising when you remember that teachers typically teach whatever they were taught. When schools decry "narrow-mindedness," their real goal is to replace students' narrowness with their own.

Think about what passes for "broadening students' horizons." Teachers expose students to an ossified list of subjects: music, art, poetry, drama, foreign language, history, government, dance, sports. Some kids respond eagerly, especially to music and sports. Yet the greater their excitement, the greater their ultimate disappointment: Almost no one grows up to be a violinist,

painter, poet, actor, historian, politician, ballet dancer, or professional athlete. More importantly, all the kids who respond eagerly to *none* of these time-honored subjects must wait until college for the mandatory “broadening” to relent.

What’s the alternative? For starters, give students numerous and diverse options. Instead of making students study yet another American poem, expose them to Japanese graphic novels. Rather than forcing kids to perform one more play, show them a few films from the 1980s. When you run out of ideas, assign a random Wikipedia article. (I just perused the entry on the Geelvink imperial pigeon). If you want to help kids discover what emotionally “clicks” for them, repeated trial and error beats academic tradition cold. Anyone who objects that reading Japanese comic books and watching old movies is “useless” should check their double standard. How are comic books and movies any *more* useless than poems and plays?

All else equal, of course, exposing students to plausible careers is better than esposing them to mere hobbies. To live the adage “Do what you love, and you’ll never work a day in your life,” students have to know what lovable jobs are available. Give students numerous, diverse, yet *realistic* options. Start with the Bureau of Labor Statistics’ figures on “employment by major occupational group” and “occupations with the most job growth.”^x Expose boys to nursing. Introduce strong math students to insurance. Tell upper middle class kids what plumbers and electricians do – and how much they earn. See how many students try Python programming if it fulfills their foreign language requirement. When you run out of ideas, have students check out an unfamiliar job from Bureau of Labor Statistics’ *Occupational Outlook Handbook*.^{xi}

I doubt schools will try any of these reforms. But their curricular conservatism teaches us a sad truth about actually-existing education: “Broadening horizons” is a slogan educators use to trump students’ sensible doubts. If educators really wanted to broaden students’ horizons, curricula

would give students a tour of all the world has to offer – not a tour of what the educators were forced to learn when they were students.

The Merit of Play

Rather than give children 30 minutes to while away the time as they please, he said, it makes more sense to teach them a skill, like dancing or gymnastics.

– *New York Times* on Atlanta schools superintendant Dr. Benjamin Canada^{lxii}

Education can be glorious. At its best, to quote Roman philosopher Lucretius, it is a “voyage in mind throughout infinity.”^{lxiii} But education is not the *sole* glorious experience. Since students only have so many hours each day, even the finest education risks crowding out competing experiences of greater worth.

What could possibly outshine the wonders of education? It is tempting to focus on prestigious activities like writing a killer app or training for the Olympics. Students’ most relevant competing experience, though, is *play* – savoring the joys of youth. The more time and effort students devote to their studies, the less remains for care-free exploration of their world. Recall the classic back-to-school essay, “What I Did During My Summer Vacation.” Some kids fritter away their free months watching reality t.v. in a lonely basement. But plenty of others bond with grandparents or cousins, pick up an interest in seashells, play Dungeons and Dragons with their best friends, or tour the country. If kids spent more time in school, some of this enrichment would clearly be lost. If kids spent *less* time in school, can there be any doubt that *more* of this enrichment would be gained?

Psychologist Peter Gray could well be the world’s greatest spokesman for the merit of free play. Kids have more fun and learn vital lessons when adults give them their space. Gray:

“Playing well and having fun are more important than winning” is a line often used by Little League coaches after a loss, rarely after a win. But with spectators watching, with a trophy on the line, and with so much attention paid to the score, one has to wonder how many of the players believe that line, and how many secretly think that Vince Lombardi had it right. The view that “winning is the only thing” becomes even more prominent as one moves up to high school and then to college sports...

In informal sports, playing well and having fun really are more important than winning. Everyone knows that; you don't have to try to convince anyone with a lecture. And you can play regardless of your level of skill. The whole point of an informal game is to have fun and stretch your skills, sometimes in new and creative ways that would be disallowed or jeered in a formal game... If you are a better player than the others, these are ways to self-handicap, which make the game more interesting for everyone. In a formal game, where winning matters, you could never do such things; you would be accused of betraying your team.^{lxiv}

The lesson isn't that all play and no school are best for kids. The lesson is that champions of academic soulcraft shouldn't *fixate* on education. Instead, they should seek out what *mix* of school and play is best for the soul. Unfortunately, thanks to the high status of education and the low status of play, we tend to compare school at its best to play at its worst: Another hour of Angry Birds can't compete with a guest lecture on literature from the teacher Robin Williams played in *Dead Poets Society*. The smart way to discover the best mix of school and play, though, is to compare school and play as they really are. Both fall very short of their promise, but it's unclear which falls shorter.

Still, there's little reason to favor a dominant role for education over play – and in our society, education dominates children's days. School and study time has been high and growing for

decades. According to leading studies of 6-12 year-olds' schedules, weekly school and study time rose from about 31 hours in 1981 to 37 hours in 1997 and 2003. Playtime is small by comparison, about 10 hours a week. This counts computer games, but excludes t.v. time, which fell from over 18 hours in 1981 to 14 hours in 2003.^{lxv} Outdoor play has atrophied over the last generation: 70% of mothers say they played outside every day when they were kids, while only 31% of their children do the same.^{lxvi} Only a small minority of elementary schools have abolished recess, but one major study found that 20% of school districts cut recess during the first five years of the No Child Left Behind Act. Virtually no district made recess longer.^{lxvii}

Longer school days do serve one socially useful function: They warehouse kids so both their parents can work. But more hours *in* school needn't mean more hours *of* school. Schools could have used kids' extra campus hours to expand recess. Indeed, if they wanted kids to keep some independence, they could have offered an array of fun yet frugal options in lieu of extra class time. My pet cause: Keep the school library open so studious and intellectually curious kids have a tranquil place for free reading. Until college, every school I ever attended had a well-stocked library that was almost never open to the student body. Free play takes many forms. Why not deploy a couple teachers' aids to keep the peace, and turn the library into a bookworms' sanctuary?

For college kids, you may recall, playtime is now longer than ever.^{lxviii} The college workload slimmed down as the K-12 workload bulked up. Most critics of modern education take this as a tragic fall in standards. Once you accept the merit of play, the rise of Leisure College, USA becomes a blessing in disguise. College gives students ample time for care-free exploration of their world – time they rarely had in childhood. Plenty of undergrads fritter away their opportunity in a drunken stupor. Yet others sample a wide range of fascinating options, acquiring passions that last a lifetime. My undergraduate years at UC Berkeley were my favorites precisely because

classes were so undemanding. Every day was packed with ample hours for play, and play I did. I read philosophy, listened to opera, wargamed with my friends, and argued politics with strangers past midnight. These experiences changed me forever. I owe my soul to lax academic standards.

The Cynical Idealist

Economists are a cynical bunch. Most are tone-deaf to the humanist thesis that education enriches the soul. They studiously measure education's career benefits. They grant education has consumption benefits. Yet most balk at claims about education's intrinsic worth. When humanists face my calculations of education's selfish and social returns, they assume I'm being a typical cynical economist, oblivious to the transformative ideals so many educators hold dear.

I am an economist and I am a cynic, but I'm not a typical cynical economist. I'm a cynical idealist. I embrace the ideal of transformative education. I believe wholeheartedly in the life of the mind. What I'm cynical about is *people*.

I'm cynical about students. The vast majority are philistines. The best teachers in the world couldn't inspire them with sincere and lasting love of ideas and culture. I'm cynical about teachers. The vast majority are uninspiring; they can't even convince *themselves* to love ideas and culture, much less their students. I'm cynical about "deciders" – the school officials who control what students study. The vast majority think they've done their job as long as students obey. Deciders barely care if students inwardly transform for life as long as they outwardly submit until graduation.

Anyone who searches their memory will find noble exceptions to these sad rules. I know plenty of eager students and passionate educators, and know of a few wise deciders. They're the salt of the earth. Still, my forty years in the education industry – many at the "best schools in the

world” – leave no doubt that eager students, passionate educators, and wise deciders are hopelessly outnumbered. Meritorious education survives, but does not thrive.

I don't hate education. Rather I love education too much to accept our Orwellian substitute. What's Orwellian about the status quo? Most fundamentally, the idea of compulsory enlightenment. Educators routinely defend compulsion on the ground that few students *want* to explore ideas and culture. They're right, but forget a deeper truth: Eager students are part and parcel of intrinsically valuable education. Mandatory study of ideas and culture ruins the journey.

Even if you bite the end-justifies-the-means bullet, compulsory enlightenment yields little enlightenment. For all their Orwellian self-congratulation, schools are unconvincing. Under auspicious conditions, they fail to make either high culture or liberal politics noticeably more popular. Regimentation may be a good way to mold external behavior, but it's a bad way to win hearts and minds – and a terrible way to foster thoughtful commitment. As Stanford education professor David Labaree remarks, “Motivating volunteers to engage in human improvement is very difficult, as any psychotherapist can confirm, but motivating conscripts is quite another thing altogether. And it is conscripts that teachers face every day in the classroom.”^{lxix}

Even top students respond to incentivized soulcraft by gaming the system, not reforming their priorities. British universities base admissions on academic performance, not overall merit. American universities use a “balanced” approach. When British professor Greg Clark began teaching at Stanford University, his elite American students looked like better human beings than their British counterparts. He soon learned Americans' superiority was fake:

In my second year as an assistant professor at Stanford University, I was assigned the task of mentoring six freshmen. Each appeared on paper to have an incredible range of interests for an eighteen-year-old: chess club, debate club, history club, running team,

volunteering with homeless shelters. I soon discovered that these supposed interests were just an artifact of the U.S. college admission process, adopted to flesh out the application forms and discarded as soon as they have worked their magic.^{lxx}

Still, humanists should not despair. The savior of transformative education has arrived: the internet, the Merit Machine. Though online education isn't poised to put brick and mortar schools out of business, it already beats traditional education in the quest for enlightenment. The internet enlightens the money-poor. Out-of-pocket cost is normally zero. The internet enlightens the time-poor. Commuting cost is normally zero, too. The internet enlightens the intellectually isolated. Search engines and ratings mark the most promising autodidactic paths. Cyberspace is full of junk, yet finding top-notch content is child's play.

Many idealists object that the internet only provides enlightenment for those who seek it. They're right, but petulant to ask for more. Enlightenment is a state of mind, not a skill. State of mind, unlike skill, is easily faked. When schools require enlightenment, students predictably respond by feigning interest in ideas and culture. This in turn gives educators a false sense of accomplishment.

When enlightenment is optional, in contrast, educators' failure to transform their students is undeniable. Cynics may lose whatever hope they had left, but cynical idealists will wonder, "How can we do better?" The obvious responses are better pedagogy and better marketing. This isn't wishful thinking: Online education, broadly defined, refines pedagogy and marketing every day. Educators' less obvious response is broadening the audience. Most humans interested in abstract ideas and high culture are working adults. Instead of lamenting youthful apathy, passionate educators should redirect their energy to humans who are *ready* for enlightenment.

There is little money in blogging, podcasting, or uploading lectures to Youtube. But if, like me, you love education to the depths of your soul, such efforts are their own reward.

ⁱ Cites

ⁱⁱ X, Malcolm. 1964. *The Autobiography of Malcolm X*. NY: Ballantine, pp.174-6.

ⁱⁱⁱ Waley, Arthur, translator. 2005. *The Analects of Confucius*. NY: Routledge, p.187.

^{iv} Pinker, Steven. September 4, 2014. "The Trouble With Harvard: The Ivy League is Broken and Only Standardized Tests Can Fix It." *The New Republic*.

^v Self-cite

^{vi} <http://www.internetworldstats.com/stats.htm>

^{vii} See generally Carey 2015a.

^{viii} Bowen and Bok 1998, p.xxii.

^{ix} Cites on peer effects; who acknowledges zero-sumness?

^x Fish, Stanley. January 6, 2008. "Will the Humanities Save Us?" *New York Times*.

^{xi} U.S. Bureau of Labor Statistics. 2013. "Consumer Expenditures in 2011." *BLS Reports #1042*, pp.2-3.

URL http://www.bls.gov/opub/reports/cex/consumer_expenditures2011.pdf

^{xii} United States Census Bureau. 2011. "Average Annual Expenditures of All Consumer Units by Selected Major Types of Expenditure." *Statistical Abstract of the United States 2012*, Table 684. URL <http://www.census.gov/compendia/statab/2012/tables/12s0684.pdf>

^{xiii} U.S. Bureau of Labor Statistics. 2013, *ibid*, p.3.

^{xiv} http://econlog.econlib.org/archives/2014/07/what_to_learn_f_1.html

^{xv} Angel, Amanda. September 28, 2011. "Top Five Classical Record Holders." WQXR. URL <http://www.wqxr.org#!/story/161365-top-five-classical-record-holders/>

^{xvi} http://en.wikipedia.org/wiki/List_of_best-selling_albums

^{xvii} Nielsen. "2014 Nielsen Music U.S. Report," p.2. URL <http://www.nielsen.com/content/dam/corporate/us/en/public%20factsheets/Soundscan/nielsen-2014-year-end-music-report-us.pdf>

^{xviii} Music and Copyright's Blog. July 15, 2014. "Pop still the biggest music genre, but retail sales slide 7.6% in 2013." URL <https://musicandcopyright.wordpress.com/2014/07/15/pop-still-the-biggest-music-genre-but-retail-sales-slide-7-6-in-2013/>

^{xix} Moe, Terry. *Special Interest: Teachers Unions and America's Public Schools*, pp.84-87. Unfortunately, to the best of my knowledge this is the only recent systematic data on K-12 teachers' politics.

^{xx} Gross and Simmons. 2007. "The Social and Political Views of American Professors," unpub. ms., p.31-32.

^{xxi} Rothman, Stanley, S. Robert Lichter, and Neil Nevitte. 2005. "Politics and Professional Advancement Among College Faculty." *The Forum* 3, pp.5-6.

^{xxii} Cardiff, Christopher, and Daniel Klein. 2005. "Faculty Partisan Affiliations in All Disciplines: A Voter-Registration Study." *Critical Review* 17, p.243. Gross and Simmons similarly report that the ratio to self-reported liberals to conservatives is lowest at community colleges, and highest at four-year liberals arts and elite Ph.D.-granting colleges.

^{xxiii} Gross and Simmons 2007, p.33, Rothman et al. 2005, p.6. For a good survey of the literature, see Klein, Daniel, and Charlotta Stern. 2009. "By the Numbers: The Ideological Profile of Professors." In Maranto, Robert, Richard Redding, and Fredrick Hess, eds. *The Politically Correct University: Problems, Scope, and Reforms*. Washington, DC: American Enterprise Institute, pp.15-37.

^{xxiv} Gross and Simmons 2007, p.41.

^{xxv} Zipp, John, and Rudy Fenwick. 2006. "Is the Academy a Liberal Hegemony? The Political Orientations and Educational Values of Professors." *Public Opinion Quarterly* 70, pp.304-26; Gross and Simmons 2007. Rothman et al. is a notable exception; their liberal/conservative ratios are about as high as their Democrat/Republican ratios.

^{xxvi} Results from regressing GSS variable identifier POLVIEWS on a constant and years of education.

^{xxvii} The main problem with the simple approach: The well-educated are richer, and the rich are more conservative. As a result, income conceals some of education's effect. If you regress POLVIEWS on a constant, years of education, and log family income, a year of education makes you .028 units more liberal – double the estimate from the simple approach. Further correcting for race, sex, age, and year, a year of education makes you .024 units more liberal.

^{xxviii} Results from regressing GSS variable identifier PARTYID on a constant and years of education, excluding respondents who support third parties.

^{xxix} If you regress PARTYID on a constant, years of education, log family income, race, sex, age, and year, a year of education makes you .029 units more Republican.

^{xxx} See e.g. Coenders, Marcel, and Peer Sheepers. 2003. "The Effect of Education on Nationalism and Ethnic Exclusionism: An International Comparison." *Political Psychology* 24, pp.313-43; Weakliem, David. 2002. "The Effects of Education on Political Opinions: An International Study." *International Journal of Public Opinion* 13, pp.141-57; Nie, Norman, Jane Junn, and Kenneth Stehlik-Barry. 1996. *Education and Democratic Citizenship in America*, Chicago: University of Chicago Press; Golebiowska, Ewa. 1995. "Individual Value Priorities, Education, and Political Tolerance." *Political Behavior* 17, pp.23-48; and Case, Charles, and Andrew Greeley. 1990. "Attitudes Toward Racial Equality." *Humboldt Journal of Social Relations* 16, pp.67-94.

^{xxxi} Nie et al. 1996; Bobo, Lawrence, and Frederick Licari. 1989. "Education and Political Tolerance: Testing the Effects of Cognitive Sophistication and Target Group Affect." *Public Opinion Quarterly* 53, pp.285-308.

^{xxxii} Kingston, Paul, Ryan Hubbard, Brent Lapp, Paul Schroder, and Julia Wilson. 2003. "Why Education Matters." *Sociology of Education* 76, pp.53-70.

^{xxxiii} Caplan, Bryan. 2007. *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*. Princeton, NJ: Princeton University Press, pp.22-93; Weakliem 2002; Caplan, Bryan. 2001. "What Makes People Think Like Economists? Evidence on Economic Cognition from the Survey of Americans and Economists on the Economy." *Journal of Law and Economics* 44(2), pp.395-426. Althaus, Scott. 2003. *Collective Preferences in Democratic Politics*. Cambridge: Cambridge University Press, pp.97-144 similarly finds that, all else equal, better-informed people are more economically conservative.

^{xxxiv} Miller, Steven, and Bryan Caplan. 2010. "Intelligence Makes People Think Like Economists: Evidence from the General Social Survey." *Intelligence* 38, pp.636-47, plus supplementary calculations from the authors.

^{xxxv} Measuring effects issue-by-issue neatly explains education's puzzlingly small impact on ideology and party. Since education simultaneously increases social liberalism *and* economic conservatism, its effect on "liberalism" is ambiguous. And while their social liberalism makes the well-educated more Democratic, their economic conservatism makes them more Republican, leaving partisanship nearly untouched.

^{xxxvi} For overviews of the research and some basic results, see e.g. Burden, Barry. 2009. "The Dynamic Effect of Education on Voter Turnout." *Electoral Studies* 28, pp.540-9; Nagler, Jonathan. 1991. "The Effect of Registration Laws and Education on U.S. Voter Turnout." *American Political Science Review* 85, pp.1393-405; Powell, G. Bingham. 1986. "American Voter Turnout in Comparative Perspective." *American Political Science Review* 80, pp.17-43.

^{xxxvii} The most notable naysayers: Kam, Cindy, and Carl Palmer. 2008. "Reconsidering the Effects of Education on Political Participation." *Journal of Politics* 70, pp.612-31 finds that after fully accounting for "preadult experiences and influences in place during the senior year of high school," higher education has no effect on turnout; Tenn, Steven. 2007. "The Effect of Education on Voter Turnout." *Political Analysis* 15, pp.446-64 reports that immediately after gaining an extra year of education, individuals are no more likely to vote than they were in the previous year. Sonderheimer, Rachel, and Donald Green. 2010. "Using Experiments to Estimate the Effects of Education on Voter Turnout." *American Journal of Political Science* 54, pp.174-89 examines three sets of experimental evidence on education and turnout.

^{xxxviii} Burden 2009 reviews the contrast between micro- and macro-level evidence, and summarizes the top contending "offsetting factors."

^{xxxix} The leading defenses of the relative education theory are Tenn, Steven. 2005. "An Alternative Measure of Relative Education to Explain Voter Turnout." *Journal of Politics* 67, pp.271-82; and Nie et al. 1996.

^{xi} Glaeser, Edward, and Bruce Sacerdote. 2008. "Education and Religion." *Journal of Human Capital* 2, pp.188-215; Iannaccone, Lawrence. 1998. "Introduction to the Economics of Religion." *Journal of Economic Literature* 36, pp.1470-74.

^{xii} In the GSS, I regressed GOD and ATTEND on years of education, the log of real family income, cognitive ability (WORDSUM), social class (CLASS), age, age squared, race, gender, and year.

^{xiii} Zuckerman, Miron, Jordan Silberman, and Judith Hall. 2013. "The Relation Between Intelligence and Religiosity: A Meta-Analysis and Some Proposed Explanations." *Personality and Social Psychology Review* 17, pp.325-354, after reviewing a large research literature, concludes that intelligence consistently reduces religiosity, especially religious belief. Education, in contrast, has no clear effect on religiosity after correcting for intelligence. Meisenberg, Gerhard, Heiner Rindermann, Hardik Patel, and Michael Woodley. 2012. "Is It Smart to Believe in God? The Relationship of Religiosity with Education and Intelligence." *Temas em Psicologia* 20, pp.110-3, finds a large negative effect of intelligence – but no clear effect of education – on religiosity. McCleary, Rachel, and Robert Barro. 2006. "Religion and Political Economy in an International Panel." *Journal for the Scientific Study of Religion* 45, pp.149-75, actually finds that, at the global level, education seems to increase *both* religious belief and behavior. Both studies find that former Communist countries are markedly less religious than one would expect given their other traits.

^{xiii} Uecker, Regnerus, and Vaaler 2007, pp.1683.

^{xiv} See Ono 2009 and Torr 2011.

^{xlv} See Schoen and Cheng 2006, pp.5-6; Isen and Stevenson 2010, pp.111-24, Lefgren and McIntyre 2006, pp.793-5; and Torr 2011.

^{xlvi} See Goldstein and Kenny 2001, pp.512-6, and Torr 2011, pp.8-9.

^{xlvii} Härkönen and Dronkers 2006; Kalmijn 2013.

^{xlviii} Heaton and Blake 1999, Lefgren and McIntyre 2006, Martin 2004, Ono 2009, and Torr 2011 estimate education's effect on diverse measures of marital status in the modern United States, variously controlling for demographics, time trends, age at marriage, marital duration, number of children, family background, and income.

^{xlix} In the GSS, I regressed dummy variables for currently married and currently divorced on age, age squared, year, race, sex, vocabulary scores, and church attendance, limiting the sample to 1994-2012. Running the same regression on GSS data for 1972-1992 reveals no effect of education on marriage or divorce.

^l After adding social class to the previous GSS regressions, education's effects on marriage and divorce are approximately zero.

^{li} Moore and Ellis 2014; Isen and Stevenson 2010, pp.129-32.

^{lii} Balbo, Billari, and Mills 2013; Meisenberg 2008

^{liii} Skirbekk 2008

^{liv} Skirbekk, p.161.

^{lv} Lutz and KC 2011, p.590.

^{lvi} See generally Meisenberg 2008 and Skirrbek 2008.

^{lvii} The initial results come from regressing number of children (GSS variable identifier CHILDS) on years of education. The corrected results come from regressing number of child on years of education, vocabulary test score, log real family income, age, age squared, race, and sex. Controlling for spousal education cuts the effect of a year of respondents' education from -.10 children to -.06 children.

^{lviii} Results from adding spousal education to the preceding regression, then separately analyzing male and female GSS responses.

^{lix} See especially Basu 2002.

^{lx} United States Bureau of Labor Statistics 2013a, 2013b.

^{lxi} United States Bureau of Labor Statistics 2014.

^{lxii} Johnson 1998

^{lxiii} Lucretius 1997, p.5

^{lxiv} Gray 2013, p.162-3.

^{lxv} Hofferth and Sandberg 2001, p.206; Hofferth 2009, pp.17-18.

^{lxvi} Clements 2004, p.72.

^{lxvii} Center on Educational Policy 2007, p.7.

^{lxviii} Babcock and Marks 2011, 2010.

^{lxix} Labaree, *Someone Has to Fail*, pp.137-8.

^{lxx} Clark 2014, p.280.