

Annotation and the power of teaching a process

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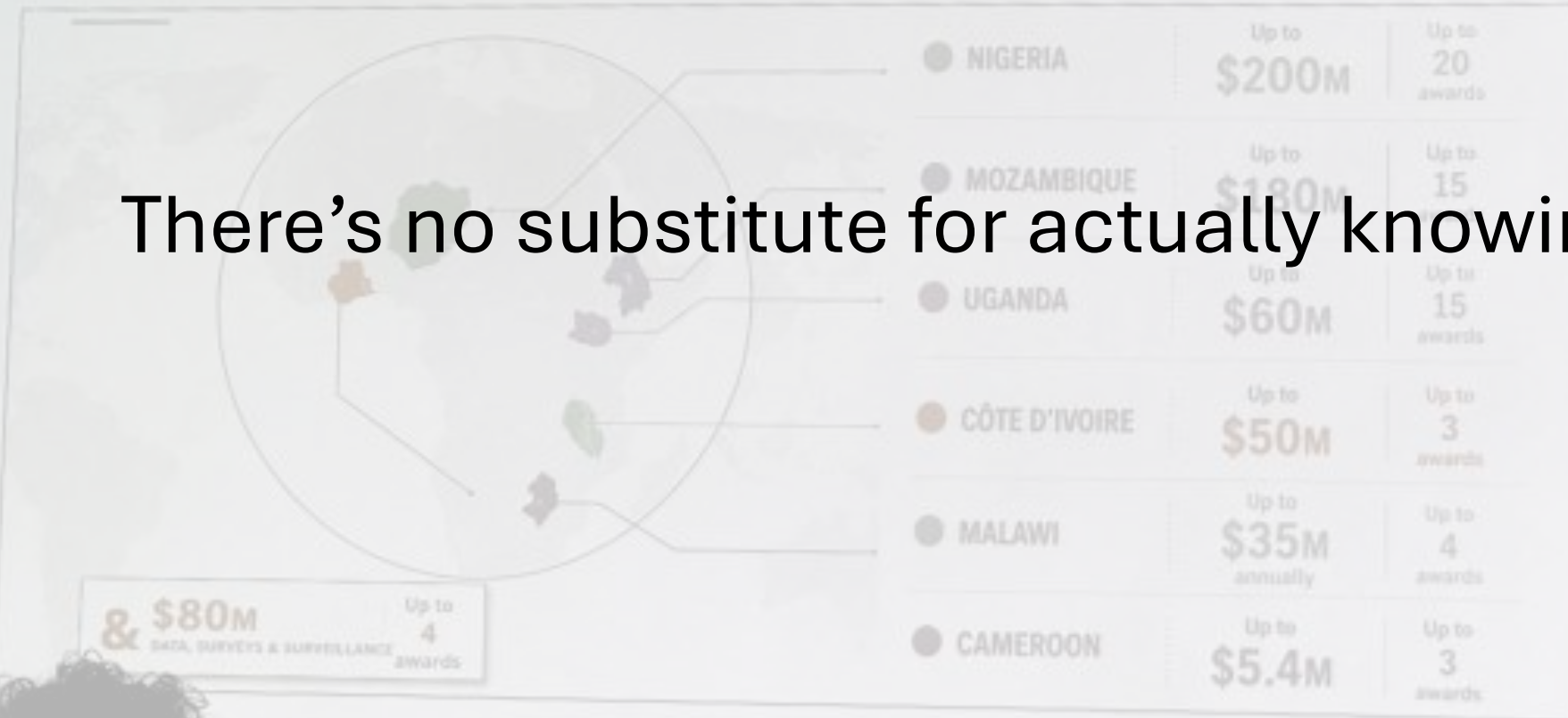
Hartwick College

Regional perspectives on AI:

A cross-campus symposium

SUNY Oneonta, August 14, 2026

Current APS Funding Opportunities



Note: This is the second round of awards

There's no substitute for actually knowing stuff!

Why I wrote this

- “While the debate on whether feudalism can be applied to India’s early economic history isn’t the most exciting theme, the sheer amount of work and nit-picking that went into it will have it logged in my memory.”
- “Having never been a huge reader in general, let alone one who takes the time to annotate, this class has progressed me in both of those aspects. I hope to be able to continue utilizing these habits into my future so I can be the most successful self I can be.”

Outline

- My teaching goals
- The approach
- Results
- Why box out AI?
- Why does this work?
- Plans for Fall 2026

My goals

- Understand something about the world
 - New to you
 - Or better than you already understood it
- Retain some of that understanding

The approach – annotation itself

- Write on the physical text
 - Content – Write words pointing at what in this particular passage is worth holding onto
 - Reaction – Write words capturing your thinking
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 - Agreement (Be specific)
 - Disagreement (Why?)
 - Implications (Does this imply ...?)
 - Connections (This is like ...)

in service of firms' profit maximizing. Naked prejudice certainly played a role—prejudice on the part of male workers, employers, and customers. Male workers, for example, fearing competition, tried to bar women from their occupations.

From today's perspective, the most surprising thing about the transformation of the role of women in the economy is how long it took. This despite the fact that after World War II, the birth rate had fallen; a large clerical and retail sector, in which physical strength was completely irrelevant, had emerged; and female education had taken hold. Barriers to women's employment persisted, such as jobs that assumed workers must work full time; pervasive discrimination; social attitudes that deemed certain occupations inappropriate for women; and personnel policies that restricted or even prohibited the employment of married women.

In the long run, it took action on the part of the federal government to erode the framework of restrictions and customs that kept women's economic roles from expanding. The action came in the form of the 1964 Civil Rights Act, which prohibited discrimination in employment on the basis of race, color, religion, national origin, or *sex*. When the House Rules Committee chair during the debates over the bill, Howard Smith (D-VA), proposed the amendment adding "sex" to the list of protected categories, he was at least half-joking, and it was not liberal Democrats but southern Democrats and Republicans who approved it, 168–133. Courts decided that the "sex" part of the prohibition could not have been intended to stand on an equal footing with the others, and did not require that possible discrimination be scrutinized as strictly as in cases where race, color, or religion was at issue. Nevertheless, it was subject to more scrutiny than "here we just thought up this reason." Thus the legal environment matured.²³ And so Claudia Goldin could conclude her book on the gender gap by pointing to the possibility of a future near death of gender discrimination. Encouraged by "the convergence between men and women in the percentage graduating from college," she

wrote that "we can forecast the future by observing the experiences of young cohorts today, and these experiences give us ample ground for optimism."²⁴

But surely, even in the Agrarian Age, a shift to a society with less male supremacy would have been a positive-sum change. Women as equal participants in society, rather than just chattels—classified as only a rung above slaves and cattle—could have done, and contributed, much more than they were able to do and contribute under the conditions of male supremacy that existed. Optimistic economists like me have a strong bias toward believing that people in groups will become more inclusive, will find ways to share, will become, collectively, more productive, and then will distribute the fruits of that productivity to make their social order more sustainable. Productivity depends on the division of labor. And if you invite more people into your tent, your division of labor can be finer and hence more productive. But apparently that is not how people saw it in the Agrarian Age or for many years thereafter.

The underpinnings of male supremacy did begin to erode before 1870. But it was over the long twentieth century that these underpinnings dissolved more completely. Reductions in infant mortality, the advancing average age of marriage, and the increasing costs of child-rearing all contributed to a decrease in fertility. The number of years the typical woman spent eating for two fell from twenty down to four as better sanitation, much better nutrition, and more knowledge about disease made many pregnancies less necessary for leaving surviving descendants, and as birth control technology made it easier to plan families. And, after exploding in the Industrial Age, the rate of population growth in the industrial core slowed drastically. The population explosion turned out to be a relatively short-run thing. Humanity appears to be rapidly moving toward zero long-run population growth.

The path of within-the-household technological advance also worked to the benefit of the typical woman over the course of

An optimist on inclusion
[reference to the others]

Maynard Keynes had seen, and were just as eager to open and crawl through it. Indeed, the government programs that Eisenhower pointed to in his letter and their analogues in other advanced industrial countries have been remarkably successful in uniting political coalitions. As Eisenhower put it, "Should any political party attempt to abolish social security, unemployment insurance, and eliminate labor laws and farm programs, you would not hear of that party again in our political history."¹² Voters, in other words, distrusted politicians who sought to cut these programs back, and tended to find taxes earmarked to support social insurance programs less distasteful than other taxes. Outside of the United States, right-of-center parties have seldom made any serious attempt to take a stand against social democracy.

Eisenhower's vision was a consensus, not in the sense that overwhelming majorities agreed with it in their hearts of hearts, but in the sense that overwhelming majorities believed that it would be impolitic to call for a return to Calvin Coolidge's or Herbert Hoover's America.

The result was big government and then some. Federal spending under Eisenhower was 18 percent of GDP—twice what it had been in peacetime even at the height of the New Deal. And state and local government spending raised total government spending to over 30 percent. In pre-New Deal 1931, federal spending had been just 3.5 percent of GDP, and a full half of all federal employees were in the Post Office. By 1962, the federal government directly employed some 5,354,000 workers. And that was in a nation of some 180 million people. In 2010, that number was down to 4,443,000—with a population of over 300 million. This very large flow of government cash immune to the vagaries of the business cycle enabled vigorous and profitable private initiative. And high taxes, not high borrowings, paid for big government: federal deficits averaged less than 1 percent of GDP from 1950 to 1970.

Here's a policy world
in a sentence

Although there was no major reshuffling of class and wealth, median incomes steadily rose, creating a strong middle class. Cars, houses, appliances, and good schools had previously been reserved for the top 10 percent—by 1970, they became the property of, or at least within the grasp of, the majority.

Federal government efforts to promote home building and homeownership by making mortgage financing more flexible actually began under Herbert Hoover, who in August 1932 signed the Federal Home Loan Bank Act to provide government credit for mortgages on houses. It set out what was to become the United States' approach to government promotion and assistance for housing. Instead of directly providing housing (which became the norm in Europe), the government would offer substantial support for the financing of the private development and ownership of houses. The Home Owners' Loan Corporation, created around the same time, financed over one million mortgages between August 1933 and August 1935, and set in place what would become the enduring mechanisms of US mortgage financing: long terms, fixed rates, low down payments, and amortization—backstopped by a government guarantee, which was necessary to persuade banks that it was good business to lend at a fixed rate for thirty years to borrowers who always had the option to pay off their loan at any instant.

Single-family houses on lots of even one-fifth or one-tenth of an acre meant automobiles. At scale, the older model, of suburbs connected to urban centers by streetcars or commuter trains, would not work. What took their place were the stupendous, omnipresent circulatory systems of limited-access highways. The National Interstate and Defense Highways Act of 1956 called for forty-one thousand miles of high-speed highways with the federal government paying 90 percent of the costs. Transportation money was even more sharply skewed to the suburbs (and away from the needs of the cities) than Federal Housing Administration insurance: only about 1 percent of

Does this approach preserve more
push and do less to
put housing where it's needed?

Relative compensation is not based solely on exogenous, objective "contributions to output"

math speak

It's this phrase is true, a whole theory of development can be built on it

or rather, it raises the question of why development is so hard

SLOUCHING TOWARDS UTOPIA

true utopia. High taxes to fight wars had fallen most heavily upon the rich, who had also seen their wealth substantially reduced by the Great Depression. In the United States, an enormous demand for workers to build capacity for the war had driven up wages—and compressed them, too. The wages of the “unskilled” rose more than the wages of the “skilled,” both because the War Labor Board decreed it so and because those running the factories were under immense pressure to get the job done, and it turned out to be not that difficult to teach skills if you really needed to. And in the aftermath of World War II, strong unions everywhere made it economically risky for bosses to claim or boards to approve extraordinary compensation packages for high executives. Growth was faster than ever before, unemployment was low, incomes were not too unequally distributed—at least if you were a white guy who had been born in the United States or some other country of the global north—and the boom-bust business cycle was very moderate. It was closer to material utopia for white guys in the global north than ever before, and rapidly getting closer still.

But still, this was only true for white guys. For everyone else? In most places, for most people, it's true that things were better than in the times of their predecessors. As the Nigerian novelist Chinua Achebe wrote, putting himself in the place of his colonized Igbo ancestors, “The white man had indeed brought a lunatic religion, but he had also built a trading store and for the first time palm-oil and kernel became things of great price, and much money flowed into Umofia.”¹ But close to utopia? Not so much. And yet, although huge gaps remained between the white guys who were full citizens of the global north and other guys who were not, the derivative was in the right direction: things did get somewhat better for those who were not.

W. Arthur Lewis was born on the British-ruled island of Saint Lucia in 1915. He was a gifted student who finished high school at the age of fourteen. He wanted to become an engineer, but, as

[An underdeveloped country's situation is not just that they haven't yet developed. Inclusion They have been changed, and the world around them has changed.]

he later wrote, “This seemed pointless since neither the government nor the white firms would employ a black engineer.”² He decided to go into business administration and won a scholarship that enabled him to become the first African-heritage student at the London School of Economics in 1933. The economists at the LSE recognized immense talent. In 1953 he was promoted to full professor at the University of Manchester and was considered perhaps the leading development economist in the world. In 1959 he was appointed vice chancellor of the University of the West Indies and returned to the Americas. But Lewis did not see his success as in any way validating the system. He was a strident advocate for reparations and always sought to bring the issue of “underdevelopment” to the forefront. Underdevelopment, he said, was not a lack of economic change but rather a form of economic change—one imposed on the global south by how the market economy had globalized.³

For a long, long time, reaching back into human history, it was the case that a person could have social power only if he was male, and even then only if he was special—from the right tribe, the right caste, the right lineage, or the right social order, or had enough property, or enough education. This was how people expected it would always be—unless, as Aristotle theorized, humans obtained the fantasy technologies of the Golden Age, by which he meant something akin to utopia. To quote Aristotle, “Chief workmen would not want servants, nor masters slaves,” once “every instrument could accomplish its own work, obeying or anticipating the will of others, like the [blacksmithing] statues of Daedalos, or the three-wheeled catering serving-carts of Hephaistos.”⁴ Until then, Malthusian demographic pressure along with an anemic pace of invention would keep productivity low. If some were to have the leisure to, as John Adams put it, study philosophy, painting, poetry, and music, others—most—would have to be degraded and deprived of social power, and a good chunk of what they produced would be taken from them.

A stark contrast to the “brain model” in which we just went along and things will catch up

Part of the solution to this has been helping fossil fuels

The approach – annotation itself

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 - Connections (This is like ...)
- Practice piece



Perspectives: Past, Present, and Future, by Patrick Wyman

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Crixus, the Spartacus Rebellion, and Resistance to Slavery

PATRICK WYMAN
DEC 31, 2025

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The coals of the little cookfire glowed white-hot in the dark night, illuminating a lump of clothing that had been left on the ground, abandoned by its previous owner. Crixus picked it up: a red cloak, the garb of a Roman soldier who was now either dead somewhere in the remains of this camp, or off running for his life. The woollen fabric served nicely as a rag to clean the blood from the edge of Crixus's curved sword. Perhaps, he thought, some of that blood belonged to the man who had been wearing the cloak up until a few minutes ago.

Wyman (2025)

Thanks for reading Perspectives: Past, Present, and Future, by Patrick Wyman! Subscribe for free to receive new posts and support my work

The approach - assessment

- Periodic small-group meetings (in lieu of class)
 - Assess “density” of annotations
 - Sample for quality
 - Discuss the reading

The approach - writing

- A paragraph responding to some aspect of the reading
 - Open-book, with their annotations
 - No devices
 - Write by hand, on paper
- (Originally aimed for a paragraph summarizing the reading
 - Too ambitious
 - Plays too much to LLMs' strengths)

Individual projects

- Choose a scholarly paper
 1. Annotations, outline, identify “side quest”
 - Meet to review, discuss
 - Looking for outline being grounded in annotations
 2. Learn more about “side quest”
 - Meet to review, discuss
 - Clarify thinking
 3. Outline essay
 4. Draft essay; Slide outline
 5. Revised essay; Complete slides
 6. Present

Results

- Epigraph (above)
- Student evaluations
- Engaged class discussions
- Presentations show real understanding of paper
- Colleagues' observations

Student evaluations

- “Coming into the course, I was skeptical about what the focus of the course would entail. The way that the course was structured enabled my own critical thinking more than the average course. The only thing I would change is making the out-of-class Book Review and writing more frequently to help with time management from the students’ end.”
- “For a Senior, involved in several positions and classes, it was too much ‘homework’ outside of the classroom, but overall was a good class and a good professor”

Why box out AI?

- Importance of on-board knowledge
 - Reading (Cabell and Hwang, 2020)
 - Critical thinking, problem-solving (Surma et al., 2025)
 - Attention and/or repetition to put things in long-term memory (Loewenstein and Wojtowicz, 2025)
- AI interferes with that
 - Field experience needed for evaluation, including of AI output (Mollick, in Acemoglu et al., 2026a)
 - Maintain human practice of strategic judgment, not farm it out (Mahroum 2026)
 - Knowledge collapse (Acemoglu et al., 2026b)

Why does this work?

- Observable process
- Battle for attention
- Reading prompts as ‘teach to the text’
- Why not just take notes?
 - “Memory palace” (e.g., Ondřej 2025)
 - Policing function

Why does this work?

- Process, not product
 - Point is not your essay, but “production of collective knowledge in a social environment” (Seybold 2026)

Process rules, master of product.
The product serves the master.
When I follow process, the product is certain.
Process-not-product.
Process-not-product.
The only way forward.

Wilkinson (2025)

Plans for Fall, 2026

- Teaching “Economic Development”
- Lean in to annotation
 - Articles
 - Maybe also class slides

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