

BUILDING SYSTEMS INTO THE HISTORY/SOCIAL STUDIES CURRICULA: SOME PRELIMINARY THOUGHTS

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A favorite bumper sticker of mine reads “History happens.” But does it? Or did it? According to the Bradley Commission’s 1989 Report on Historical Education, young Americans are, on an unparalleled scale, “historically illiterate.” To some degree, their ignorance of the past reflects a larger cultural indifference which imagines that “our” world, governed by unprecedented rates of technological invention and change, is altogether detached from an obsolete and irrelevant past. But that ignorance—and I speak here as a student and teacher of history who rejects this premise—is also rooted in the pedagogic shortcomings in the current “system” of historical education. It is to this latter issue that I’d like to proffer some thoughts on using “systems thinking” and dynamic modeling to improve levels of historical literacy.

STEP ONE: HOW DID WE GET TO WHERE WE ARE TODAY? RECONSTRUCTING THE “SYSTEMS”

It is a rather interesting phenomena that teachers of history or social studies rarely if ever see themselves as players within history. Few, I’ve found, fully understand the historical evolution and purposes of the “systems” which govern how and what they teach. Daily teaching is predicated upon a simple positive feedback loop which argues that the more history one is taught, the more one learns; knowledge compounds as students desire to learn more. Let’s examine how pedagogic systems rooted in history have wreaked havoc with this notion of compounding historical knowledge.

SYSTEM #1: THE SYSTEM OF CULTURAL HOMOGENIZATION

Begin with the recognition that the decision in the 1880s to reorganize American education and replace the classical core (Greek, Latin, Ethics, etc.) with a new curriculum emphasizing modern language, science, and American history was inextricably linked to the Industrial Revolution which followed the Civil War. In the heady atmosphere of unprecedented invention and the corporatization of America by self-proclaimed “Captains of Industry,” this great industrial leviathan magnetically drew a flood of rural transplants and foreign immigrants into America’s burgeoning metropolises to fuel the machine and to search for streets they’d been promised were strewn with riches.

*In this context of industrial and social transformation, the teaching of American history was designed to impose homogeneity and order on a heterogeneous population of immigrants and urban transplants while training them to adapt to the discipline imposed by a new industrialized workplace. The system combined four basic ingredients: (a) **the teacher**, (b) **the text**, (c) **the artificial definition of discrete time periods within American history** (i.e., the Colonial era, the Revolutionary Era, the Early National Period) and, (d) **the substitution of a mythical for a “real” past.***

Consider how the system worked: Operating within a rigid social system which assembled students in rows and demanded strict obedience, history was transmitted via the teacher armed with the great tome or common bible referred to as “the text.” The text fused all the information together with a singularly authoritarian narrative line. American history was ingeniously compartmentalized, divided into a series of discrete periods or events, each functioning in some linear fashion for purposes of illustrating sequential progress. American history could be understood as an assembly line, through which the discrete contributions of prominent individuals in the past culminated in the glories of the present moment. This

was an image suited for the new industrial order. Students were to see themselves as the benefactors of this past while at the same time being prepared to enter a working world where loyalty, passivity, and an adherence to the discipline of industrial time reigned supreme.

Thus, classroom history emphasized the inviolability of the teacher, the text, and the singular causal force relationship between American values and progress. Memorization of particular facts and dates thus formed the pedagogical basis for indoctrinating all students with a common heritage while concomitantly inculcating them with essential skills which they required to function as modern workers within a newly industrialized setting.

So, too, the ambiguities of American history were exorcised via the substitution of myth for fact. Thus, by way of illustration, the celebration of Thanksgiving (also an 1890s “invention”) became the archetypal “creation” story to which all immigrants could subscribe. The common birth of America was followed with a series of unassailable facts, great men and events whose brave actions had maintained the American experiment on solid footing.

Admittedly, we have modified much of this basic system, and I shall address this momentarily. Yet is it not true that the system of teaching history in the public schools retains much from this era? Consider, for instance, the degree to which participants remain captive to a pedagogy which favors passive acquiescence to texts, to singular causality, and mythology. And why, now as then, do students legitimately bemoan the fact that the most recent past—that which clearly has the most bearing upon the present—too often is sacrificed at the alter of the eternal excuse, “because we spent too much time on the early events, we’ll be unable to proceed beyond, say, the second world war?” From the vantage point of “the system,” the answer is clear: an American history designed to be unambiguous inevitably is most effective when it speaks to a distant past. The fragility of the imagery runs afoul of the rifts which permeate modern times. Subsequently, the “system” prefers not to tackle the most recent and most relevant past.

SYSTEM #2: TOWARD GREATER EFFICIENCY—THE CASE FOR “SOCIAL STUDIES”

Recognize that today’s “system” also rests on a secondary—and intentionally corrective—foundation which originated in the post-World War I era. The causes of change were multiple: a spirit of disgruntlement arising out of Woodrow Wilson’s failed crusade to remake the world in America’s image combined with a growing academic belief in the inviolability of science led to the promotion of a more utilitarian approach to teaching about the past. “Social studies” meant that history could be joined together with civics, geography, sociology and the “problems of democracy” to speak to the “organization and development of human society” with a new “social efficiency.”

The concept of social studies has been further enlarged to address the issue of inclusively. As an outgrowth of the social movements of the 1960s and 1970s, pressures have grown to acknowledge those who have traditionally been slighted in the telling of America’s story. Given a society which has increasingly viewed itself as fragmented into divergent and competing interest groups, history has become a vehicle through which to follow the interplay between victims and victimizers back in time. Though disparate individuals and social groups occupy the same time and same general place, their stories are related only in that each vied for power with one another.

Over time, the phenomenon which the historian Hazel Hertzberg called “the balknization of the history curriculum”—a burgeoning fragmentation involving discrete topics—has joined with an intensifying demand for greater inclusion of other cultural perspective. Concomitantly, textbook companies have increasingly sought to develop texts which antagonize the fewest possible purchasers. What this means, as Francis Fitzgerald has wonderfully described in *America Revised*, is that even those advertised as “thematic” histories do not make the obvious connections between events. As there is no link between the reconstruction of the South and the civil-rights movement, so there is none between Watergate and Vietnam. Because the texts cannot identify the actors in history, they cannot make these connections. Events—wars, political disputes, judicial decisions—simply appear, like Athena out of the head of Zeus. And history is just one damn thing after another. It is in fact not history at all.”

SYSTEM #3: THE GROWING FRACTURE BETWEEN THOSE WHO DO AND THOSE WHO TEACH HISTORY

During the last twenty-five years, academic historians (resident in their proverbial ivory towers) have contributed to a burgeoning historical literature, a literature punctuated by myriad methods, materials, and, above all, an abundance of interpretations or explanations. Individual behaviors have been explained by everything from cultural prejudices to environmental circumstance, and events by an equally large array of economic, political, social and religious impulses. While impressive in its intellectual scope, the voluminous literature has reached such proportions that it is fully impossible for even the professional historian to stay abreast of it.

And so pre-college educators have, by necessity, traveled an independent route in developing their own teaching. History at the pre-college level embodies the worst of all worlds: wherein commercial texts prey upon teachers' misgivings about their own knowledge to present "the facts" in a politically correct and innocuous way. The only bridge between past and present resides in the fractured manner in which interest groups seek self-enrichment. The meaning of history has been irrevocably altered in the aftermath of the multicultural explosions beginning in the 1960s and continuing into the present. History has been enlarged to incorporate new players—women, immigrants, and others generally ignored in the traditional telling of the "American story." Inclusion of these peoples and their disparate experiences, though, has fractured the singular line of progress which has always been woven through history. Now, we see interest groups playing throughout history. Small wonder, then, that the past merely serves as a backdrop for explaining the splintered and confused nature of our present. And equally logical, given the disengagement of history from the present controversies whose roots lie within the past, small wonder that students increasingly "turn off" from history altogether.

STEP TWO: FINDING SYSTEMS IN HISTORY—NEW APPROACHES TO TEACHING

It would naturally follow that our emphasis upon a particularized and fragmented past renders it extremely difficult to identify "systems" which operate both within the past and present. Rest assured, there are many. Very briefly, let me suggest some illustrative systems which better allow students to understand some important dynamics which shaped the past.

ILLUSTRATION #1: REVISITING THE ANCIENT PAST

For the first 990,000 years of human existence on this planet (beginning in one million b.c., when *Homo erectus* first appeared on this planet, and continuing until 10,000 b.c.), archaeologists tell us that the human population increased from 125,000 to 6 million. During the next 10,000 years, that 6 million rose to 133 million, more than one hundred times the earlier rate of growth.

Why? The answer rests with the "discovery" of agriculture. This "system" signaled a "revolution" in human history. At its simplest level, fewer people could produce more food. What did that mean? Recent excavations of ancient Jericho (circa 7000 b.c.) tell us that agriculture allowed people to congregate in significantly larger and more dense units, known as cities (Jericho had about 3500 residents). Because farmers could generate surplus food, they could feed non-farmers. And non-farmers, in turn, could generate non-food items for exchange. Within a relatively brief moment in history, we see planted (sorry, couldn't resist) the basic structures for trade and social improvement. Yet, we also see some "negative feedbacks": with Jericho residents acquiring more material comforts than their neighbors, we see the construction of thick stone walls around the city, the rise of political leadership, religious structures, and ultimately, the formation of armies, all serving to protect Jericho inhabitants.

In the millennia which follow, we see rapid population growth emanating from the spread of agriculture. We also see the rise of city-states competing for finite resources, which, in turn, give rise to empires, all rooted in the basic human desire to acquire, and all benefiting from increasingly large and more technologically fitted armies: Sumeria, Babylonia, Assyria, Egypt, Greece, Rome—all stand in historical testimonial to the human struggle to meet basic needs and, for some, to generate greater comforts. Empire

wields a two-edged sword, as the struggle to acquire is bolstered by strength, invention, and ingenuity, while the struggle to maintain is predicated on compounding needs.

ILLUSTRATION #2: COLONIAL AMERICA

There are really several key systems here whose influence proves extremely important. One, of course, is the “system” of population growth. From the initial planting of a white European presence (which in turn, spreads disease throughout the native populations) on the coastal shores, the story of Colonial America is one of exponential population growth. Fueling this growth are a multiplicity of important factors, among them a relative abundance of resources, low population densities, an agrarian economy, and a magnetic attraction for Europe’s overflow. And, in turn, population growth then serves as a vehicle for landed expansionism, occupational specialization, and commercial opportunity. Yet there were limits to the system: increasing demands upon finite land resources in New England towns reduce productivity and dictate changes in cultural norms (marriage age, size of families), while also triggering urban migration and the eventual planting of a permanent impoverished class within Boston and other cities.

Recent scholarship reveals that this latter situation formed one of the foundations for Revolutionary demands for change. What else was “wrong” with the British mercantilist “system?” Though “taxation without Representation” serves as a convenient rallying cry for explaining in simple, linear terms what happened (Why don’t we revolt, then?), the realities were far more complex: exchange rates involving American raw materials and English finished goods increasingly bolstered American debt. Rural discontent arising from land scarcities and British restrictive frontier policies allowed “dispossessed” individuals there as in the cities to embrace radicalism. So, too, British heavy-handedness in taxation reflected an increasingly bureaucratic government unresponsive to the “common Englishman.”

Perhaps most fascinating from an explicitly “systems” vantage point were the conscious efforts on the part of the Constitutional Framers to structure a government which addressed the immediate needs of nationhood while concomitantly anticipating the future. Small wonder—given that these men were so well versed in the workings of the ancient world—hat their constructs would be first and foremost rooted in the lessons of the past. Fundamental concerns over the propensity of power to corrupt dictated the inclusion of multiple checks and balances between legislative, executive, and judicial branches. Equally interesting was Madison’s insistence, in Federalist 10, that the unparalleled size of the American Republic would render it impossible for disparate factions to coalesce and impose tyranny. Finally, the key structure of a national bank paying interest would bolster faith in government and stabilize the value of the money supply.

ILLUSTRATION #3: NINETEENTH CENTURY AMERICA—INVENTION AND INDUSTRIAL REVOLUTION

The spirit of nationalism provided a favorable climate for expansionism: invention joined with a “transportation revolution” (beginning with toll roads, and gaining momentum with canals, steamboats, and railroads) to bolster regional economic production and interregional exchange. But progress had costs: Northerners and Midwesterners, fearful that the South’s growing appetite for new western lands would jeopardize their own future needs, sought legislative recourse. Southerners, economically and, more importantly, culturally captive to the demands of “King Cotton,” saw no recourse other than insurrection.

Integral to Northern victory in the Civil War was the industrial leviathan. The invention of the Bessemer process for steel, the construction of an intercontinental railroad and the harnessing of electrical power, gave rise to unparalleled productivity. The alteration of agricultural technologies permitted unprecedented levels of urbanization, which used corporate structures and assembly lines to produce economies of scale.

Yet again, the “system” often overshot its mark, as trusts sought to overcome competitive realities, and great Depressions (such as that in 1893) revealed that Americans could now produce in excess of their domestic demands. As the great Admiral Alfred Thayer Mahan advised Teddy Roosevelt, security dictated that America construct a great navy with which to protect foreign markets for its exports and ready supplies of cheap imports. Thus, began “America’s rise to globalism.”

Summary: These are but a few of the “systematic” elements which abound within American history, elements involving population growth, technological change, and vital resources, to name just a few. These are the bases upon which so much of the economic, social, and political systems are formed. And, in turn, these are the building blocks upon which individual events and behaviors can then be understood.

STEP #3: MODELING IN HISTORY

Recognizing recurring patterns within the past provides a valuable lesson for bridging past and present. Yet, having said that, I believe in the verity of Jay Forrester’s observation, which deserves quoting in its entirety:

“Systems thinking appears to be thinking about systems, talking about the characteristics of systems, acknowledging that systems are important, discussing some of the insights from system archetypes, and relating the experiences people have with systems. Systems thinking can be a door opener and a source of incentive to go deeper into the study of systems. But I believe that systems thinking has almost no chance [of changing] the mental models that students will use in their future decision making. . . . On the other hand, system dynamics modeling is learning by doing. It is learning by being surprised by the mistakes one makes. System dynamics modeling is a participative activity in which one learns by trial and error and practice. I believe that immersion in such active learning can change mental models.”

My experiences in teaching students how to model convince me that history is an exceptional place for changing how students think. My first endeavor, during the spring of 1991, to assist a small group of students in developing a model to study subsistence agriculture in Vermont during the late 18th and early 19th century, illuminated two critical strengths which model building has over traditional learning. I’ll not dwell on the details, as these have been published in *Historical Methods* magazine. I would point out that in building the model, students were obliged to develop a common language and logic and to think long and hard about the critical “systems” which govern agricultural production and consumption. Equally exciting for me as an historian was their ability to understand and work with multiple factors of causality. Food production, for instance, was influenced by the amount of land in production, the quality, the size of one’s labor force, the demands for consumption, and the uncertainty of nature. Recognizing how some farmers succeeded while others failed was for all the students a new awakening into the multidimensionality of the past. Discovering the “leverage points” within the system—those elements which the farmer could hope to change in order to improve his situation—allowed us to “reshape” history. And, most impressively, students were able to extrapolate from Vermont’s experience to understand other aspects of agricultural history and of the agricultural present and future.

While this experience was gratifying, I have benefited tremendously over the last two years through my collaboration with a colleague, John Heinbokel, a biologist. Our first effort, entitled *Plagues and People*, commenced with a relatively simple model of disease dissemination that drew upon historical epidemics to develop the historical contexts within which these operated, and to better understand the current AIDS epidemic in terms of cultural as well as biological factors.

Our current project, entitled *Population Dynamics and the Human Experience*, is doubtless the most exciting and ambitious project of all. We are identifying myriad structures which influence how, where, and why human populations have grown over the course of history; and then look at the role of human population growth as it has effected economic, political, and social systems, past and present.

At the risk of invalidating my assertions about easy accessibility, let me present a few “generic” mapped models which might serve as starting points for getting social studies teachers “hooked” on modeling.

As has been already illustrated in my previous remarks, the most critical system shaping human history has to be population. What factors generate growth? Historically, we can address high birth rates, lower marriage age and immigration, to name just a few. And what of the outflow of populations? Factors

influencing death are critical (medical care, disease, wars, to name a few), as is out-migration. This limited number of causal factors (see Figure 1) permits analysis of patterns of everything from Colonial New England town growth to the impact of a cataclysmic event on some population (the Civil War, for instance, on the South) to changing global demographics emanating from improvements in medical care over the last century.

Yet another valuable model involves food production. Again, as Figure 2 suggests, students can better understand the historical impact of food production in shaping the size and character of human populations, in understanding how and when technologies have changed, and in understanding what distinguishes long from short-term food crises.

Systems of production and exchange of goods are admittedly more complex but not impossible to follow in a model (see Figure 3). Principles of supply and demand, at the heart of this system, connect with a multiplicity of historical issues, among them fluctuating demands for varying types of labor, circumstances surrounding technological change and the degree of profitability attached to various economic pursuits at varying points in time.

To date, my own exploration of possibilities has only scratched the surface. Still, I have every reason to believe, to paraphrase a remark proffered at last year's Concord conference by Ron Zaraza from Portland's impressive CC-STADUS project, while math and science people "think" more easily about systems, the systems worth studying ultimately are social, cultural, and historically rooted.

Conclusion

My hope for the future is that academic "doers" can join with teachers in changing the face of historical education. As a "pinheaded" academic, I know that I can help teachers by sharing my knowledge of the abundant materials which will allow us to build accurate historical models. There is an incredible amount of literature out there, which deals with everything from historical population growth to food production, labor forces to technological innovation. In effect, we have more than enough raw material with which to keep modelers busy for a very, very, long time.

In turn,, we need those teachers to join us in experimentation. I have every confidence that the use of systems thinking and modeling will accord the study of history its rightful place as a critical component for inculcating critical thinking skills within our students. More than that, understanding how and why history has unfolded in the manner in which it has, replete with recurring patterns, will better enable students to learn from the past when thinking about the present and future.

Recognize that our society's present historical complacency draws upon the misnomer, best articulated in Aldous Huxley's *Brave New World* and George Orwell's *1984*, that only totalitarian regimes wage "campaigns against the Past," to ban the teaching of history or to cavalierly rewrite the past to conform to political exigencies. Let us collectively join forces to see that historical literacy is revived and reinvigorated with a new spirit of purpose.

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