

Journey into Learning

(2021 Memoir by Howard Brady)

It's been over fifty years, now. Almost fifty-two years since I stood on the causeway that linked Cape Canaveral and the Merritt Island Launch Annex and watched Apollo 11 thunder into space. Half a century since, shortly after Apollo 11, I was laid off from my Cape tech supervisor job working for the RCA Missile Test Project. And half a century since I began an intellectual journey with my brother, Marion.

He'd been contacted by editors from publisher Prentice-Hall, who were looking for assistance with textbooks for elementary social studies they were publishing. The original authors of the series, titled *Man in Action*, had prepared kindergarten through second- or perhaps third-grade textbooks and other material already published and distributed. I'm not sure of the facts here; unimportant memories fade. At any rate, the series authors were supposed to produce materials up through sixth grade, but had run dry. Prentice-Hall was looking for help to protect their investment in the series.

Marion's innovative article, "A New Social Studies," published (1966) in the most prestigious American education journal, *Phi Delta Kappan*,¹ was the trigger for Prentice-Hall's interest and everything that followed, a "hinge of change" for our lives.

I was still working for RCA when Marion involved me, in the spring of 1969. He passed along copies of the *Man in Action* elementary materials Prentice-Hall had produced, along with a couple of thick tomes that summarized the work of major sociologists and anthropologists. I was headed for a temporary assignment in Trinidad for a month, and used my spare time there to begin to educate myself on social science, elementary social studies and education. I wasn't totally unprepared—years of serious reading helped.

The *Man in Action* books were supposedly based on the complex and esoteric sociological theories of Talcott Parsons. As near as we could tell, any link between the elementary books and Parson's sociological theories was nearly nonexistent, and certainly unimportant. Marion and I put together our review, and some suggestions for continuing the series, and flew up to New Jersey for a weekend to meet with the Prentice-Hall editors, at a hotel in Saddle Brook. The editors' questions seemed brutal—all about "scope and sequence," "paradigms" and a great deal more, and I thought the exercise was a failure on our part. Marion assured me that we'd done fine.

The ultimate decision by the editors was that the problems and delay in producing additional *Man in Action*² materials would be too great, and they'd just let the series die. I'm not sure now whether it was the two of us or the P-H guys who suggested going ahead and producing materials for middle school or junior high school adolescents. We signed contracts, were paid decent wages as advances on royalties, and began seven years of work to produce courses for world cultures and American history.

¹ <https://www.marionbrady.com/articles/1966-NewSocStudies-KappanOct.pdf>

² The gender-biased name would have become a problem, of course.

Marion was the educator; he'd taught for 17 years at three high schools, including the demonstration school on the campus of Florida State University. At FSU he'd also taught some university-level methods classes. He was a curriculum supervisor for Brevard County, Florida's school system, (my own county, fortuitously) when the textbook project began. I was something of a science nerd, and had spent most of my working days to that point as a tech writer supporting electronic and photographic equipment. Bringing me into the textbook project was a bit of nepotism, perhaps, but I was determined to carry my weight.

Marion quit his Brevard County job, and (lucky timing!), RCA lost part of their government contract, resulting in a major layoff that included my job, giving me severance pay. We jumped into the textbook project, beginning with the world cultures book.

Active learning

Educational change was in the air, and much of the innovation was positive. The best of these changes was what was then called "discovery" or "inquiry" learning.³

Traditional classroom instruction passes along pre-processed second-hand information via textbook and teacher talk; learners are expected to store this information in memory long enough to pass an exam. Most "knowledge" learned this way is soon forgotten, unless it turns out to be immediately useful. A textbook for engine repair is worthless unless engines and tools are at hand to reinforce and supplement what the textbook says. What is supposed to be an ancient Chinese proverb explains: "Tell me and I'll forget, show me and I'll remember; involve me and I'll comprehend."

Involve implies learning via hands-on and learner-centered activities. Prentice-Hall was on board for this change; they'd just published a science program that was largely involve-the-learner inquiry activities. "Inquiry" learning moves learners beyond passive sitting and listening or reading, into active engagement with what is being learned: *investigation*. This change pays huge dividends—increased learner motivation, development of enhanced thinking skills beyond mere memory, and deeper, more permanent understanding of what is being learned. It's an old insight—John Dewey and other educators were advocating this long ago.

Marion pointed out the main problem with traditional textbooks, in a passage in one of our later publications:

"What's handed to the young in the typical textbook is a collection of conclusions. When there's an inference to be drawn, the author draws it. If there's a significant relationship to be noted, the author points it out. If a generalization seems appropriate, the author generalizes. There are no loose ends, no problems, situations, dilemmas, difficulties, or incomplete analyses. The textbook is as refined

³ The technical term now being used is "constructivism." We prefer "active learning."

as the author is capable of making it—but the *author*, not the student, does the thinking.

“It’s a great deal like handing a kid a crossword puzzle with all the squares filled in.”⁴

Much of what is learned outside of school is learned actively. Even in school, most people have experienced active learning here and there. When I was in junior high, as part of an introduction to trigonometry, my math teacher suggested a project: “How can you use trig to find out the height of the flagpole in front of the school?” With my father’s help, I built a simple surveying instrument on a square of plywood, using a protractor, a cheap dime-store level and a pivoting pointer. A long tape measure set the baseline; some awkward squatting followed, to look along the pointer to the top of the pole, finally giving me the angle needed to do the calculation. I don’t remember the flagpole height, but I’ve never forgotten the usefulness of sines, cosines and tangents. This kind of learning is intense and permanent.

Active learning gives learners intellectually-demanding puzzles, problems, anomalies, situations, difficulties, and so on, and learning comes not secondhand from reading or listening but from *doing*, from wrestling with the puzzle, the problem, the difficulty, for however long it takes.

Creating learning experiences

The support given us by Prentice-Hall was phenomenal. Through their college book division, they had access to a large group of scholar/authors, and they soon lined up a network of anthropologists to help provide material for the world cultures course. They also found teachers nationwide to test the materials we were producing. Once pilot teaching started, twice a year Prentice-Hall paid for substitute teachers, and brought the pilot teachers who’d been using our materials together for a week. We’d meet, generally in a major city or resort, and they gave us feedback on what worked, what failed, and which activities needed improvement. Prentice-Hall picked up the tab for everything.

We focused on active learning, but most anthropologists initially assumed we were writing a typical “tell them what you want them to know” textbook. Our first requests for materials led them to send along a bunch of pre-processed conclusions similar to those in most textbooks, usually some version of material from their doctoral dissertations.

We explained that we needed unprocessed data—uninterpreted descriptions of experiences, situations, interactions, and the like—which the learners could analyze themselves. In retrospect, we should have done a better job of describing what we needed. Some of the anthropologists “got it,” and gave us useable material, some never quite understood.

To illustrate the difference, here’s an excerpt from a typical traditional textbook:

⁴ *Investigating American History*, p. 11. <https://www.marionbrady.com/documents/AHHandbook.pdf>

“The Bedouin think of themselves as the only true Arabs. They do not call themselves Bedouin unless they want to emphasize how free and good their way of life is. It is, they believe, much better than the life ‘they’ lead.

“‘They’ are the farmers and townspeople. The Bedouin think they are soft because they have given up the hardships of desert life for the comforts of settled homes. Bedouin look down on these people for choosing to work in the fields or the market.”⁵

This is rather typical textbook exposition, but—why? Detailed information on the Bedouin goes on for many pages in this book for middle-school-aged learners, but without a doubt the information they’d read would soon be forgotten. The focus of the unit is simply “learning about the black-tent people, a traditional society.” For the most part, the information is useless to the learner, so remembering it is unessential. No overarching general principles are being learned. For contrast, here’s a passage from our textbook, *Idea and Action in World Cultures*:

“We observed, one day, a loud and violent quarrel between a man and his sister-in-law. Within a short time, everyone in the neighborhood was gathered around watching with interest, many grinning.

“The sympathies of the onlookers were first with one, then with the other. However, no one interfered with the screaming and threats until a bottle was thrown. Then the group quickly separated the two quarrelers. The sister-in-law made plans to move out of the neighborhood.

“Tempers gradually cooled down. Three weeks later, when the two met on a path, the sister-in-law said, ‘Good morning,’ and the man responded politely.

“When we asked him about this, he said, ‘She said good morning to me. Who am I not to answer her?’”⁶

Note the difference between this and the previous textbook passage. The first is generalized conclusions; the second describes events that happened at a particular time and place. *Any conclusions to be drawn must be drawn by the learner.*

The second excerpt is from our textbook unit on social control. We don’t expect a learner to remember this passage—not even long enough to pass a next-day quiz. The kids analyze the passage to build their understanding of deviance control—who does it, who is controlled, how it’s done, and how it differs from society to society. The difference in the two textbook excerpts may seem subtle, but it’s certainly important.

Active learning and analytical thinking are enabled by the richness and complexity of reality as the main learning resource. However, if the reality to be investigated is distant in time or space, primary sources—“residues” of reality—are the second-best source of

⁵ Marwyn S. Garbarino & Rachel R. Sady, *People & Cultures*, 1975, Rand McNally & Company, p. 113

⁶ Marion Brady & Howard L. Brady, *Idea and Action in World Cultures*, 1977, Englewood Cliffs, N.J., Prentice-Hall, p. 224

learning; the anthropologist's description of an argument, for example. The main data for analysis in both the world cultures and American history books were primary sources.

Similar support by scholars was supplied by Prentice-Hall for the American history text, with outstanding university-level historians assisting in finding primary sources and developing course material.

Our central role in creating activities was to generate the questions that turned each piece of reality-based data into a puzzle to be solved, with the solution contributing to the learner's understanding of important principles.

History textbook contents are soon forgotten by most kids; a very few may have their imagination captured by some aspect of the subject, but most dislike the subject. The old, standard approach to try to offset this was to make the subject more dramatic. "Make history come alive," was the common phrase.







Active learning gave us a different approach. Instead of making history come alive, we preferred to "make the learner come alive," to analyze historical primary sources. For example:

LEARNING ABOUT
A SOURCE OF
AMERICAN VALUES
USING EXPOSITION

What were the Puritans like? Many of their ways of acting grew out of their religious beliefs. They felt that all people were basically evil, and that only a strict observance of God's laws as presented in the Bible could keep this evil tendency under control. Attendance at Church

LEARNING ABOUT A
SOURCE OF
AMERICAN VALUES
USING "RESIDUE"

Below is an "alphabet of lessons for youth" as it was taught to Puritan children in the *New England Primer*. What seem to be important Puritan beliefs?

	In Adam's Fall We finned all.
	Thy Life to mend, This Book attend.
	The Cat doth play, And after slay.
	A Dog will bite A Thief at Night.
	An Eagle' flight Is out of fight.
	The idle Fool Is whipt at School.

One really significant difference between passive and active learning is in the range of thinking processes each kind of learning requires. Traditional passive learning is largely an exercise in recall, with a bit of application thrown in here and there. (E.g., “In the following sentences, identify the verbs and indicate if each is transitive or intransitive.”)

Active learning, on the other hand, can evoke a full range of thought processes: inferring, hypothesizing, categorizing, comparing, contrasting, correlating, describing, abstracting, recalling, extrapolating, applying, predicting, sequencing, relating, integrating, synthesizing, generalizing, interpreting, translating, empathizing, valuing, visioning, inferring, imagining, intuiting... (an incomplete list).

A science-based example we’ve used is another illustration of the differences between passive and active learning:

Learning about weather using second-hand information, passively (textbook):

In much of the central and eastern United States, cold fronts recur every few days throughout the late fall and winter, sweeping down from Canada. The cold fronts advance toward the southeast, but the wind along the front blows from the southwest, parallel to the front. Initially, this wind will bring in warm air from the south, so the first sign of a cold front may actually be unusually *warm* weather.

The barometric pressure will drop as the front approaches. The cold front will usually be accompanied with clouds and precipitation, rain or snow, moving from the south or southwest along the front. Once the heavier clouds and most of the precipitation passes, the wind shifts around to the northwest, and the temperature begins dropping. The weather clears, and the barometric pressure rises.

Learning about weather using reality, actively:

A cold front is approaching. With the other members of your team, observe and record data for wind speed, wind direction, temperature, barometric pressure, clouds, precipitation, and any other important weather characteristics you can find over the next couple of days. Once you’ve gathered the information, prepare a report with descriptions, graphs and photos that show your results.

This also illustrates another major principle for our educational materials: The division of education into separate subjects—science, social studies, language arts, math—is a distortion of reality. Because conventional learning is fragmented into separate subjects, learners fail to see the systemic relationships that are the essence of reality.

Understanding anything important to human existence and well-being requires something beyond what is learned in school—citizens need to know the relationships and interactions that create their natural, social, political and technological environments.⁷ Active learning helps eliminate subject division, and moves learners toward the kinds of comprehension needed for intelligent, mature citizenship.

⁷ Eminent scholars agree: <https://www.marionbrady.com/documents/QuotesFragmentation.pdf>

Making sense of water pollution in a local river, for example, requires understanding of chemistry, biology and hydrology, but also a grasp of politics, economics, and local history, along with the interplay between these six (and more) subjects. That understanding simply isn't developed in traditional schools where these subjects are treated separately (or not at all). Activities like "investigate and report on the cold front" described above merge math and language arts skills with earth science. Active learning activities are ideal for team teaching.

Analytical concepts

Besides active learning, our other main concern was with big, essential ideas that could sort out and make sense of the complex world in which we live. In a newspaper op-ed piece, Marion told the story of one small section of the world cultures course:⁸

"In human affairs, nothing is more powerful than assumptions. Thirty years ago, in an orange grove on what was then the south edge of Orlando, I was given a vivid example of this fact... (A brief discussion of our textbook project followed.)

"Ordinarily, textbooks inundate students with thousands of "equal sized" facts, touching on each one briefly and then moving on. These new books would have to focus on a relatively few, very powerful ideas of permanent usefulness that organized and made sense of many seemingly random facts. And they would have to hammer on those ideas from so many angles with so many different kinds of activities there could be no doubt they had become a natural part of the students' way of looking at the world.

"I told executives I'd need some help, and they agreed to put my younger brother on the contract.

"The first task was to choose the "big" ideas that would organize the two books. Some of those that made the final cut were patterns, polarization, motivation, autonomy, habitat, social control, system change, and values.

"It was in pursuit of instructional materials for the big idea of values and belief systems that took us into a little farmhouse in the orange grove south of Orlando.

"We had written to several dozen anthropologists in various parts of the world describing the kinds of materials we had in mind. One of those letters went to an anthropologist in Korea, a Jesuit brother⁹ who was teaching mathematics in a small rural school. He told us he thought he might be able to help, that it just happened that his parents lived near Orlando, and that he was coming home in a few weeks for the Christmas holidays. We could, he said, sit and talk directly.

⁸ "Assumptions teach lesson about school reforms," *Orlando Sentinel*, December 22, 2000. Reprinted in <https://www.marionbrady.com/documents/EdHighways.pdf> pp. 119-120.

⁹ William E. Biernatzki, S. J., Ph.D.

“We wrote back, thanking him for his offer and telling him to set the place, day, and time, and we’d be there.

“Out of a Christmas holiday evening came his detailed description of an elaborate, three-day funeral ceremony for a village elder in rural Korea. The description appeared pretty much verbatim in our world cultures textbook.

“Tacked on to the end of his account was a short, two-sentence paragraph: “If a child dies, no funeral is held. The father simply puts the body in a straw bag and, possibly accompanied by one or two male relatives or other men, buries it in some isolated place with no ceremony.”

“How could this be?!” startled students would exclaim when they read the sentences. “These are terrible, insensitive people!”

“With that, dialogue among the students about differing belief systems would begin in earnest. Eventually, they’d see that underlying what to them was an unacceptable way of behaving was a deep-seated Korean assumption, an assumption that humanness isn’t a given but a learned and earned quality, that babies are born only with the potential to *become* human. Because infants have barely started on the journey toward humanness, the sorrow accompanying their loss, in the traditional Korean view, was much less than it would later be.

“In human affairs, nothing is more powerful than assumptions.”

In our textbook, the activity had additional descriptions of Korean behavior that reinforced the suggestion of a high degree of respect for older people. We had the kids plot, on a graph with a horizontal scale of ages zero to 90, the assumed value of human beings as they aged, in both Korean and American societies. In the classes where this was used, perceptive learners that were plotting the values for Americans, asked, “Male or female?” They recognized that the value American society places on humans as their age changes differs by sex. Two different curves were needed on the graph.¹⁰

The main emphasis of the entire unit (which had additional information on two other societies) was the significance of shared ideas, values and assumptions, which differ from society to society. As Marion said, “...nothing is more powerful than assumptions.”

Analytical concepts for world cultures

Marion also said, “The first task was to choose the “big” ideas that would organize the two books.” He’d laid the foundation in that 1966 *Kappan* article, in which he pointed to the close relationship between a society’s patterns of action and the main shared ideas and values that helped create those patterns. His insights had been developed from his study of the works of “configurational” anthropologists, particularly Robert Redfield, and in a graduate-level summer course at Stetson University given by historian David

¹⁰ This activity is included in our present courses, *Introduction to Systems* and *Investigating World Cultures*. See <https://www.marionbrady.com/IntroSystems/3Societies.pdf> pp. 4 & 5, and <https://www.marionbrady.com/cultures/O6SharedIdeas.pdf> pp. 3ff.

M. Potter, author of *People of Plenty*, a book suggesting experiential roots for the character of Americans.

We began with these first two organizing concepts: patterns of action, and the driving force for those patterns—shared ideas/assumptions/values, sometimes called “worldview.” Those two concepts—powerful themes—have remained at the core of everything we’ve done since then. If we look at any society (including our own), a dozen or so shared ideas collectively create the significant patterns in that society.¹¹

The influence of these two powerful concepts led us to name our Prentice-Hall textbooks: *Idea and Action in World Cultures*, and *Idea and Action in American History*.

The organizing concepts for the world cultures textbook were, in sequence: **human patterns, habitat, values, social control, learning, technology, status, and outsiders**. These eight key foci divided up a school year into reasonable units of study, and gave a comprehensive set of tools for investigating the many societies used as data.

We didn’t expect learners to remember any particular information about Koreans, Israeli kibbutzniks, Samoans, or any other of the many societies investigated in the course. This information would have been of little use to most of them, and would have been quickly forgotten in any case. On the other hand, the eight central concepts, when investigated in depth, were permanent tools for understanding, e.g.:

- Humans create much of the habitat they inhabit. The habitat they’ve created, in turn, affects their actions in important ways.
- Social controls come in two versions—those “external controls” imposed by others, and internal, learned ways of managing one’s own behavior.
- An important part of learning in most societies is a “rite of passage” that young people experience in the process of becoming adult members.

Evaluation

The conventional wisdom concerning testing, particularly for science and social studies, assumes that testing is easy. All you need to do is ask if they remember the main exports of Chile, or the various kinds of igneous rock, for example—information from textbooks.

If, instead, we’ve expected learners to comprehend some fundamental principles such as those listed above, testing is different. To determine if they understand links between habitat and human action patterns, we’d show or describe an unfamiliar habitat not studied in school, and ask them to infer the probable relationships between that habitat and the ways of acting of the people who live there. Or, perhaps, we’d describe a society’s most significant ways of acting, and ask learners to figure out what kind of habitat might “fit” that action pattern.

¹¹ See <https://www.marionbrady.com/documents/AHHandbook.pdf>, Appendix B: Shared Ideas in American Society.

This form of evaluation digs much deeper and requires far more complex thinking than simple recall, but this type of evaluation also demands more of the teacher using it. Instead of grading simply based on right and wrong answers, the teacher must evaluate the *quality* of thought and expression the learner has used. That's largely subjective, but much more meaningful than a simple memory test.



<http://incogman.net/wp-content/uploads/2008/12/african-village-aerial-shot.jpg>

Teachers with reasonable training can handle the task, but a machine-scored, fill-in-the-oval, commercial standardized test simply can't do testing of this kind. This is one of many reasons to reject the use of standardized tests in our schools.

Analytical concepts for history

The history book presented data in chronological order, with rather conventional divisions into eras. Potential sales required the books to meet expectations of the textbook committees, of course, so they had to look somewhat ordinary. That wasn't a problem for us. We divided American history into seven major periods, but also assigned an organizing concept—a description of a characteristic or process that was historically significant—to each period. Those organizing concepts were the real focus of learning, the historical data's role was to provide evidence of the concepts.

1. Exploration and colonization: *Motivation* (i.e. shared ideas)
2. Revolution and new government: *Value conflict*
3. North, South, West: *Cultural differences*
4. Civil War: *Polarization* (The unit dealt almost entirely with changing pre-Civil War actions/ideas, not the events of the war.)
5. Growth and reform: *Autonomy* (More on this later)
6. Native Americans and newcomers: *Cultural interaction*
7. War, depression, prosperity: *System change*

Consulting historians who'd been college-book authors for Prentice-Hall suggested some, but not all of the historical primary sources we used. Marion and I, at one point, drove a couple of hours north to St. Augustine to look for material. In the city's small historical library, the librarian had laid out a copy of the *Hispanic-American Historical Review* from November 1921, which was open to an English translation of "Ordinances Concerning the Laying Out of New Towns;" ordinances issued by Spanish monarch Philip II in 1573, for use in the western hemisphere's "New Spain." Some college

students had made an appointment to come by, and the librarian had set out the book for them.

This was a lucky find for us; we copied the ordinances, knowing we'd found some educational gold. On the way home, Marion asked, "What are we going to do with this stuff?" I answered, "It's obvious. We'll have the kids design a town that follows the ordinances." We included 19 ordinances; here's a typical one:

Royal Ordinance 112: If the town is on the seacoast, the main plaza should be at the ship landing place. If the town lies inland, the plaza should be in the middle of the town. The plaza must be a rectangle, with the long side equal to one and one-half times the width. This is the best shape for fiestas, especially those in which horses are used.¹²

Finding these ordinances resulted in what has almost certainly been our single most successful activity. Thousands of learners all over the United States (and some elsewhere) have designed Spanish colonial towns—and then inferred Spanish shared ideas that motivated their colonization; ideas about important institutions, the role of status hierarchy and attitude toward indigenous people in the colonies founded by Spain in the New World.

The first unit's focus on motivating shared ideas also let us use the *New England Primer* "Alphabet of Lessons for Youth" as shown in the "residue" example on page five. Content analysis by learners identifies repeated themes that seem remarkable by present-day standards. No primer given to American children learning to read these days would make multiple references to death like these:

"As runs the *Glass*, man's life doth pass."
"Time cuts down all, both great and small."
"Xerxes the great did die, and so must you and I."
"Youth forward slips, Death soonest nips."

The second unit of the history book, with the organizing concept of "value conflict," developed the theme of the emotional loading of some shared ideas when they are violated. Colonial Americans had built a society that was largely self-sufficient, and in the process developed the assumption that there should be no difference in rights between people who lived in the colonies and people back in England. That's the focus of the most famous words ever written by Thomas Jefferson: "...all men are created equal..."

The English violated this idea, triggering American anger. On the other hand, the English shared the idea that the authority of English government was supreme. Disrespect for that authority generated anger on the other side. So:

"...the embattled farmers stood, and fired the shot heard round the world."

Our focus on powerful concepts rather than historical facts was breaking new ground. Other American history textbooks published about the same time used primary sources,

¹² See <https://www.marionbrady.com/documents/AHHandbook.pdf>, pp. 4-6

but they used them to “tell the story of America’s past,” the traditional goal of history books. And, as with any book of this sort, this focus passed along myriad “facts to be remembered” (short term) to kids.

The next unit in our history text highlighted the regional differences that had developed in the U.S.—differences of growing importance. The expanding cultural changes were enhanced by new technology: The cotton gin, spinning machine, power loom, canals, railroads, steamboats, and McCormick’s reaper. Changes in technology are, of course, important triggers of social change. Eli Whitney’s cotton gin was a major driver for the expansion of cotton growth in the south, increasing the demand and price for slaves. But Whitney’s development of the “American system” of precision manufacturing that allowed interchangeable parts, first applied to firearms by northern factories, was an important reason for the effectiveness of Union troops during the Civil War.

The theme of “polarization” was a natural fit for the events that led to the Civil War. It was easy to find historical sources that illustrated the escalating changes in ideas, actions and feelings on both sides as sectional differences and hostility grew in the years before the war:

A Model of Polarization			
	Ideas	Actions	Feelings
Toward/about out-group: (“Them”)	Stereotyping, enmity and hostility assumed	Retribution, preemptive attack, boundary building	Dislike, fear, prejudice, anger
Toward/about in-group: (“Us”)	Ideology, adoption of symbols	Unification, cohesion, demonstrations, defensive mobilization, pamphleteering	<i>Esprit de corps</i> , patriotism, “brotherhood”
General response:	Simplified ideas, selective perception	“Defensive” actions	Increasing arousal of emotions

When polarization occurs, each side takes action that it considers to be “defensive.” An army poised at a border to repel an invasion looks just like an army preparing to invade.

This table suggests another important aspect of learning in the way we suggest—the importance of hierarchical expansion of concepts. Each major concept subsumes a cluster of sub-concepts, each of which, in turn, may subsume...well, you get the idea; it’s a *tree*. Hierarchical conceptual structure provides the organization necessary to avoid mental chaos.

“Polarization” was a near-perfect example of a concept suitable for a unit’s focus—it is obviously important historically, and applies to a wide variety of contexts besides the situations leading to war—management/labor disputes and present-day politics, for example. Learners who recognize and understand the changes involved in polarization are better equipped to resist its adverse effects.

In choosing to downplay memory work and historical “facts,” along with keeping the focus on important processes of historical change and using active learning, an interesting side effect seemed to be that the kids actually ended up remembering more history than those exposed to conventional history textbooks. Part of the reason for failure of conventional textbooks was pointed out a century ago (1916) by British mathematician and philosopher Alfred North Whitehead: “We tend to teach too much.”

One of the tasks in creating any history book is answering the questions, “What do I include, and what do I leave out?” The number of facts and events of the past is essentially infinite, so these questions are central. Half-seriously we proposed the Brady Law: *The amount a kid learns from a textbook is inversely proportional to its weight.*

Autonomy

When we considered the period after the Civil War, those questions of what to include or leave out were central. A great deal was happening in the years 1865-1900, and we needed another organizing concept of historical significance to make sense of it all.

After the Civil War, industry and railroads expanded rapidly. In the early years of the United States, the population was predominately rural, but now more and more people lived in cities and worked in factories. Those who stayed on the farm discovered that the railroads opened new markets for them, and new farm machinery allowed farmers to grow ever-larger crops of wheat or corn for these new and distant markets.

New factories divided up the manufacturing tasks for shoes or railroad cars into tiny repetitive steps. Each task could be easily learned by a worker in an hour, or at most a day or two, a major advantage that provided jobs for inexperienced, untrained workers.

It was the era of reconstruction in the South, where the occupying force of Northern victors gave some freed slaves new power (temporarily). It was also the period of great westward expansion. This expansion had begun before the war, but now the entire western U.S. was ripe for development.

Immigrants were flooding into American seaports in ever-greater numbers, some taking jobs in city factories, some plying skilled trades as craftsmen, others moving west to farm.

One pattern that we noticed in this hodge-podge of historical change was the formation of groups—labor unions, for example.

The period after the Civil War had a dark side. Those living on an 1840 family farm could survive and thrive so long as the weather was reasonable and they remained healthy. But workers in an 1875 factory or a mine owned by a “robber baron” were treated like machinery to be exploited, with few benefits. The tasks were kept simple, so women and even children could do them, for a pittance. Working conditions were often dirty and dangerous. In the frequent low points of business cycles, the factories shut down and the workers were idle and unpaid.

The rich men who owned factories, railroads, mines, and oil companies believed that they were benefitting society when their ways of using labor made life difficult for the workers. “Survival of the fittest” was a phrase those industrial magnates used to describe their version of human society, well before it was applied to Darwin’s account of how new species developed. Workers were helpless to do anything about their poor pay and working conditions. Finally, however, their situation became so difficult that they began organizing unions to gain power.

Those rural farmers who depended on the railroads to ship their wheat, corn or livestock to market were at the mercy of those railroads and their owners. Shipping charges were set to maximize rail profits, with minimal concern for the well-being of the farmers. Farmers in the Midwest, to counter the economic domination of the railroads, began the Grange Movement, banding together to influence state politics, and state laws helped control railroad freight rates. Later these farmers were one force behind the Populist Party, influencing national politics and policy as well.

In the South, the freed slaves given positions of power lost those positions as soon as Northern politicians lost interest. Many ended up as sharecropping farmers on land owned by white men, with conditions only slightly improved from pre-war slavery. “Jim Crow” laws soon institutionalized their low-caste status, and segregation became standard. Black people were subjugated to the point that often there was little they could do, but eventually they also organized to gain civil rights—forming the National Association for the Advancement of Colored People (NAACP), for example.

To an increasing extent, women understood that American society at the time treated them as second-class citizens, with many restrictions on their freedom. Women were not allowed to vote. Women’s rights conventions and the suffrage movement began in this period.

These events suggested an important pattern to us: In this changing America, *many people lacked control of their own fate*. The need for **Autonomy**, and the stress when it was missing, was a trigger for group formation. When we looked at this period (and others), *wherever we saw people organizing groups, almost always it was because they were attempting to increase their autonomy*.

The actions these groups took also formed autonomy-related patterns. Besides increasing their influence in politics, the groups used *economic pressure* to gain power. Labor unions could and did strike, and other groups called for boycotts of businesses. These groups also publicized their problems and goals, to attempt to influence public opinion, so *opinion appeal* was another element of response to inadequate autonomy.

Actions by groups to gain autonomy weren’t always benign. Anger accompanied strikes, and those who felt they lacked autonomy would sometimes react with either individual or group *violence*. This was another possible outcome of a lack of autonomy.

Some groups lacking autonomy tended to find *scapegoats* to blame for their problems, particularly if their problems were caused by economic distress. The American

Protective Association formed in 1887, and soon had over a million members. The group blamed Catholic immigrants from southern and eastern Europe for the problems of American society and its workers. In the South, white workers organized to threaten boycotts, preventing employers from employing Black people—more scapegoating. Blaming immigrants or those of other races for one’s own misfortunes is an often-repeated pattern in human society, continuing into the present, with unfortunate results.¹³

Another phenomenon that accompanies both polarization and reaction to lack of autonomy is *selective perception*—subconsciously noting only those actions and events which reinforce expectations, and failing to note anything that might refute those expectations. Our history textbook focused on selective perception in one section of the second unit—a look at primary sources that depicted the “Boston Massacre”—as a side effect of aroused emotions due to value conflict.

The urban neighborhood tavern became an institution during the second half of the 19th century, providing temporary respite for factory workers’ problems. Alcohol consumption was a form of *escape*—another reaction to thwarted autonomy.¹⁴ Escape took other forms in this period, as well. The entertaining and best-selling stories written by Horatio Alger gave hope that merit would be rewarded with financial success. Actual physical escape—movement of Black people from the south to northern cities, for example—was another reaction.

Some Americans became convinced that alcohol was the main source of society’s problems. This view had an element of truth, of course, but was also, in part, another example of scapegoating. The temperance movement, largely led by women, became an important force.

In the West, the Native Americans were displaced, their tribal lands were stolen, they signed treaties that were soon broken, and eventually they were herded onto reservations, with nearly-complete destruction of their cultures. A “messiah” figure named Wovoka began spreading the false promise of the benefits of the “ghost dance”—a magical return to conditions before the whites came on the scene; open prairie with herds of bison, with total freedom for indigenous people. This idea spread rapidly among the various Native tribes; the white people in power felt threatened, and responded with violence at Wounded Knee and elsewhere.

This pointed to another reaction to a lack of autonomy, when all other hope was lost: *other-worldliness*; religion, superstition, magic, or other supernatural intervention.

¹³ Following World War I, the effects of adverse economic conditions in Germany made the German people willing to accept Hitler’s scapegoating of the Jews, probably the most horrible example of the effects of lack of autonomy in human history.

¹⁴ It’s no accident that the present opioid epidemic is worst where economic distress is greatest. See <https://www.drugabuse.gov/about-nida/noras-blog/2017/10/addressing-opioid-crisis-means-confronting-socioeconomic-disparities>

Eventually we included primary sources that pointed to nine reactions to the stress created by loss or lack of autonomy: **Group formation, opinion appeal, economic pressure, violence, scapegoating, escape, other-worldliness, over-conformity, and stasis.**

Over-conformity and stasis occur when a dominant group is so powerful that the people they control have little chance of improving their status. “Stockholm syndrome” is one example of over-conformity when autonomy is missing, and African-Americans point to “Uncle Tom” behavior as another example.

In the years since we put together the American history course, we’ve noted other evidence of reaction to loss of autonomy, for example:

“What...convinces a person to believe in conspiracy theories?

“According to a pair of new studies published in the journal *Applied Cognitive Psychology*, conspiracy theorists—and there are a lot more of them than you may think—tend to have one thing in common: they feel a lack of control over their lives.”^{15 16}

The next unit in the American history course gave special attention to the conflicts between the dominant society and the flood of immigrants coming from eastern and southern Europe, and the conflict of whites against Native Americans in the west. Cultural conflict and destruction are amply illustrated by historical events in this period. In many ways, this was an extension of the previous unit, because lack of autonomy and its effects were all too apparent in these events.

System change

The focus of the final unit was actually the focus of the entire textbook: Societies are systems, and in a system, a change in one part creates changes elsewhere.

As the 20th century developed, a growing population of the U.S., along with new markets around the world, created demand for more goods. Automobiles became ubiquitous, along with many other new products of technology, with enormous effects. Manufacturing and demand for raw goods exploded.

Growth and health of this enormous and interlocked economic machine depended on re-investment of the wealth it was generating. The stock market was an increasingly important and efficient machine for this process. However, the level of re-investment depended on the expectations of the investors. These expectations could rise or fall quickly; the stock market allowed the expectations to turn into self-fulfilling prophecies. Optimism led to demand for more stock. Rising stock prices created more optimism, driving prices to dizzying heights. Eventually, nervous investors anticipated the bursting

¹⁵ Mandy Oaklander, “Here’s Why People Believe in Conspiracy Theories,” *Time* Newsletter Brief, August 14, 2015 <http://time.com/3997033/conspiracy-theories/?xid=newsletter-brief>

¹⁶ Other examples of the significance of autonomy to working conditions, health, learning, and more: <https://www.marionbrady.com/americanhistory/AutonomyQuotes.pdf>

of the bubble and an economic downturn, and started selling instead of buying. Stock prices fell abruptly, and, sure enough, the downturn happened. The market was designed to respond quickly, but this gave the economic system built-in instability, and the Great Depression was the unfortunate result.

System is almost certainly the biggest, most important organizing concept of all. It was implicit in Marion's first *Kappan* article, in the changes he called "sociocultural drifts." Societal changes grew out of various change factors, such as new technology, climate change (drought has destroyed civilizations for millennia), and population growth and movement. Patterns of action and shared ideas tend to resist change, but eventually do respond to changes in demographics, technology and setting.

Coda

By and large, the teachers that piloted each textbook were sold. We were told, "I'll never again teach the way I used to." One teacher, in a school system where learners were divided into three "phase" levels of supposed learning ability, said, "I can't tell any difference between my phase 1 and phase 3 kids."

The two textbooks were published by Prentice-Hall in late 1976, with a 1977 copyright. Unfortunately, their publication coincided with a "back to basics" trend in education, led by non-educators—politicians and philanthropists. (Unfortunately, almost everyone thinks they are experts in education.) Book sales were disappointing.

Another problem, in retrospect, was that the books were "too different." Each unit began with developing the main organizing concept in the here-and-now "micro" world of the learner before moving to the world cultures or American history section of the unit. Then each unit returned to the here-and-now, but in a broader, "macro" context to apply the organizing concept. So, our new elements were (1) active learning throughout, (2) a focus on organizing concepts rather than traditional content, (3) that "micro/macro" structure. The Prentice-Hall sales force could handle one major change, but not three—it was just too complicated for them.

The agents that have controlled American education in the last half-century have continued to be non-educators, particularly corporate interests that see profit opportunities, often aided by state and national government. The main result has been a major reduction in the autonomy of teachers and students. The call for "accountability" has led to standardization and scripting of learning. But every kid is different, and standardization is limiting. The ideal result of education would build on their differing talents and inclinations to help each of them maximize their potential for creativity and humanness.

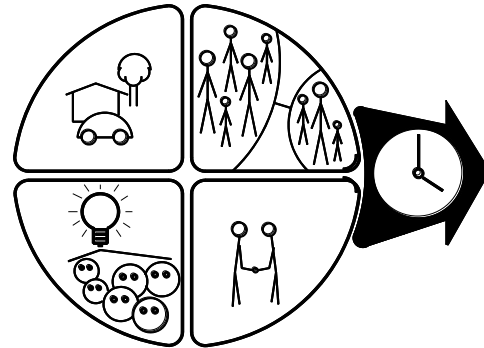
We haven't given up. Prentice-Hall passed along the copyrights to the textbooks to us, and we've continued to develop our system-based ideas, now covering not just social studies, but general education. Our system model expanded so it can be applied to non-human systems, with five organizing concepts that fit any system, anywhere:

General system organizing concepts:	Social system organizing concepts:
Environment	Setting, including tools/technology
Components	Demographics, including subgroups
Interactions	Patterns of action
Driving force	Shared Ideas
Relationships between the above four, indicated by changes across time	Relationships between the above four, indicated by changes across time

These organizing concepts are mainly “question generators,” suggesting what to look for in investigating any system. Each concept may be expanded hierarchically, to any degree of elaboration or precision that may be needed.

Incidentally, that list of general system concepts ought to be a central tool of every science class, giving a way to organize the hodge-podge of information ordinarily thrown at kids. Atoms,

viruses, beetles, cellphones, diesel engines and galaxies are all systems. Asking and investigating system questions are the key to comprehension: What are the components? How do they fit together and interact? How is the system related to its environment? What is the source of energy that drives it? What changes are occurring, and how do changes affect the relationships between the system elements?



On Marion’s website, we now offer new versions of the world cultures and American history courses, which are built upon and expanded from materials developed in the Prentice-Hall books. We’ve simplified the structure. Instead of introducing concepts in the learner’s “micro” world, we’ve moved directly into data that fit within the traditional course content. At the end of each unit, however, we still expect learners to apply the conceptual focus to “here and now.” Relevance of learning is essential.

We have also added courses introducing general systems theory, world history, and civic systems. Marion and I collaborated on the *Introduction to Systems* course; the other four courses are largely my adaptations and expansion of the Prentice-Hall materials, and my translation and modifications of a Spanish-language course for world history prepared by Argentine teacher Ignacio Carral, which he based on our American history materials. The recently-completed civics course adapted existing systems material, and I added investigations to make it conform to expectations for study of government, public infrastructure, and economics. Marion, of course, edited and suggested changes to all the material. Primary sources available on the Internet makes development of course materials a far easier task from the one we faced fifty years ago.

The five courses are available at www.marionbrady.com. All are available free of charge to teachers for use with their own learners. With no advertising, about 2500 files for these courses per month are being downloaded. ##