You’ve probably lined dominoes up in a row, knocked the first one against the second, then watched the whole row fall down.

Human societies are a little like dominoes. If something important changes, such as environment or demographics, changes are certain to occur in ways of acting or other characteristics of the society. These changes, in turn, will probably trigger other changes.

In a very important way, however, societies are different from the domino chain reaction. Each domino usually affects just one other domino. But in societies, one change can trigger many other changes. For example, when a new shopping center is built (a change in environment), it will usually cause important changes in local property values, jobs, shopping habits, traffic flow, police and fire protection needs, taxes, and so on.

The field of study called “General Systems Theory” (GST) deals with interrelationships and changes like these. In any system, if you change one part, changes in other parts are certain to happen. You’ve actually been studying parts of GST all through this course. The Model you’ve been using is a system description model. You’ll be introduced to other elements of GST as you move through this material. However, in this unit you’ll mainly focus on the ideas and patterns closely related to America’s economic system.
Investigation: Modeling Economic Change

Some economic system main “elements” are listed below in random order. Note that these are part of the big Model you’ve been using.

<table>
<thead>
<tr>
<th>Shared Ideas/Attitudes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Expectations about future (better or worse)</td>
</tr>
<tr>
<td>– Attitude toward money (spend or save)</td>
</tr>
</tbody>
</table>

**Patterns of Action: Increased or decreased**—

- Unemployment
- Salaries and wages
- Buying goods and services
- Prices of goods and services
- Startup of new businesses
- Manufacturing
- Money borrowing
- Interest rates on loans
- Building construction
- Equipment buying by industry
- Advertising

This investigation is challenging. *Work with others, and take your time.*

1. The list above has 13 bulleted items, each of which will change in important ways over time. *Copy each item on a slip of paper or small “Post-It Note®.”*

2. *For each item, identify one or more other listed items that would, in turn, change if this item changes. For example, if manufacturing increases, what effects would this have on unemployment? Use words (for example, “better,” “spend”) for changes in ideas, up or down arrows [↑ or ↓] for action patterns to show increases or decrease, and arrows between blocks [→] to show relationships.*

3. *For each item, try to identify one or more other listed items that, if changed, would affect this one.*

4. *Check to determine if the changes you’ve identified are true for changes in both directions—for example if manufacturing decreases, would this also affect unemployment?*

5. *Make a flow chart that combines as many of the elements as possible into a single system diagram (boxes and arrows) that shows effects of changes. This may take several days. Working with the data in the next two investigations should help.*

You may wish to add other items not on the list to your model.
Note that it’s typical in a model like the one you’re constructing for a cause to have more than one effect. This is called “multiple causation.” One effect may also have more than one cause.

In your flow chart, look for “loops” or “circles” of changes. For example, more sales of goods will generally trigger increased production, leading to increases in the number of workers, who in turn will buy more goods. This is called “cumulative causation.”

Sometimes increases in one system element will cause decreases in another. (In math terms, they are “inversely related.”) For example, raising the price of an item will usually reduce its sales, because fewer people will buy the item when its price goes up. Thus, price and quantity of sales are inversely related. (Of course, quantity of sales may be affected by other conditions besides price.)

*Remember that your model must deal with change in two directions. Prices (and everything else) sometimes go up, sometimes down. Set up your model so you can work with both directions of change.*

### Investigation: Economic Conditions in the 1920s

Data in this investigation and the next one depict two very different decades of American history. *Use the economic system flow chart you’re constructing to identify the prevailing economic ideas and patterns of action.*
In 1918, immediately after World War I ended, returning soldiers had trouble finding jobs. Other economic problems brought on by the war continued for a time. Beginning about 1920, however, conditions changed.

An auto ad from about 1927:
This real estate ad appeared in the *New York Times* on May 23, 1926:

**PHILADELPHIA’S SESQUI-CENTENNIAL COMMENCES**

**CAMDEN BRIDGE OPENS**

*JUNE 1st*

**THE NEW SIXTY MILLION DOLLAR PENNSYLVANIA STATION**

in Philadelphia is under construction and the

**PROPOSED BROAD ST., BRIDGE TO GREATER CAMDEN**

near “CROWN POINT GARDENS” is under way

**THESE ARE AMONG THE TOWERING FACTORS**

that assure real estate profits for buyers of “CROWN POINT GARDENS”

**THE CAMDEN BRIDGE to PHILADELPHIA** not alone connects two large cities, but it also connects two of the largest States of our Country, Pennsylvania and New Jersey.

Camden Bridge is no longer a thing of the future or something you have to wait five or ten years for. It is here today, connects the great cities of Philadelphia and Camden and ready for its official opening July 4th.

Broad St. proposed bridge is under way and will cross to Red Bank Road, Greater Camden, only a few blocks of the 2,490 improved “Crown Point Gardens” lots, bringing this property within a couple of miles of the heart of Philadelphia’s business centre.
Parts of two speeches by President Calvin Coolidge:

1927

Members of the Congress: It is good to report that for the fourth straight year the state of the United States in general is good. We are at peace. The country as a whole is prosperous. Wages are at their highest, and jobs are plentiful. Some parts of agriculture and industry have slowed, and some places have suffered from storm and flood. These losses, however, have been absorbed without hurting our great economic structure. Interest rates for industry, agriculture, and government have been reduced. Savers and investors are providing money for new construction in industry and public works. The purchasing power of farmers has increased. If the people keep confidence in themselves, in each other, and in America, a comfortable prosperity will continue.

1928

No Congress of the United States has ever faced a brighter time. Here at home there is peace and contentment. Relations between management and wage earner are good. We enjoy freedom from industrial strife, and the highest record of years of prosperity.

The following headlines appeared in the New York Times on July 1, 1928:

MID-YEAR OUTLOOK FOR BUSINESS BRIGHT
Conditions Essentially Sound With Improvement Over Last Year in Many Sections

BUILDING OPERATIONS GAIN
Expected to Make a New High Record This Fall—Automobile Output Expands

AGRICULTURAL PRICES RISE
Brisk Competition in Most Lines Fosters Mergers, Cutting Production Costs

What attitude toward the future is suggested by this data? What action patterns are described? What other action patterns are likely in these conditions?
Based on the data in this investigation, make changes in your flow chart that might improve it.

Keywords for Internet/library investigation: “Roaring ‘20s,” Black migration to cities, Model T Ford, early radio broadcasting.
Investigation: Economic Conditions in the 1930s

You’ve identified economic conditions and attitudes during the 1920s. This 1930s activity is similar. By comparing the two, you’ll be able to identify the major changes occurring during the two decades.

_When you made your economics flow chart, you indicated the direction of changes in each element (increase or decrease). If every direction of change is reversed (increase becomes decrease, and vice-versa) is your chart still accurate? Check it by analyzing the following data._

From “Flowing On,” an article by John L. Dove:

It was Monday morning, December 12, 1932, and the snow was silently falling on the streets of Columbia, South Carolina. The clang and swish of trolley cars went on as usual. There, too, was the roar of truck and auto traffic. Men, women, and children walked. In fact, there was an unusual amount of walking. Many walked because they could not ride; they were jobless.

At the office of the big Congaree furniture store on Main Street, it was, indeed, blue Monday. The reception extended the job seeker there was as bleak as the day. Figuratively speaking, the manager needed help; someone with ability to keep the big electric sign, just above the entrance to the building, flashing the name, C-O-N-G-A-R-E-E.

Manager Bason of the Congaree was in a blue and ugly mood that morning. He had cut to the bone the store’s overhead expense. The services of a number of collectors and one or more office workers had been discontinued. Salaries had been cut, and he had even begun to practice economy with the heating and lighting in the big three-story building. Just a small light here and there shined down upon the modern and expensive suites of furniture—fine merchandise—that the home owners would not or could not buy, even at bargain prices.

“Bam, bam, bam!” Manager Bason’s big fist pounded on the desk before him, as he talked intently to the three bill collectors who stood nearby thumbing through stacks of bills. “We’ve got over $100,000 worth of merchandise out on credit accounts among the people of Columbia, and yet our income is insufficient to meet our obligations. Unless you three men can collect $20,000 and place it on this desk by January 1, you’ll be as jobless as rabbits after a big snow storm. I tell you that because January 1, 1933, is the very last day the Congaree’s creditors have agreed to wait for their money.” The excited manager then turned to Jake Philpot, pointed a finger toward the street and said: “Philpot, go out there and bear down until that amount comes into this store.”

When Jake Philpot reached the sidewalk with his bulging stack of unpaid bills, he felt the chill of wet snow flakes on his face. He paused just long enough to view the traffic on the street. “Tramp, tramp, tramp,” came the noise of shoe heels pounding the wet sloppy sidewalks. He knew only too well that many of those walkers were hunting for jobs. But Jake Philpot had a real job, and he had to be on his way.

(Continued)
He opened the door of his battered car parked against the curb, tossed his billfold on the seat, climbed in, started the motor, and was off. He drove on and on through the falling snow, until he reached the big Pacific Mill village on the outskirts of the city. He stopped his motor on Whaley Street, the main thoroughfare in the mill village. There, again, he found men and women walking, and with worried looks on their faces. The only noise around that long five-story building was the maddening “tramp, tramp” of shuffling feet. The mill had suspended its operation indefinitely.

News articles in 1931 reported raids on grocery stores in a few American cities. Mobs of unemployed, hungry and desperate men and women broke down doors and windows. From an article by Francis Donovan about workers in Connecticut:

“They put us on four days a week,” he says. “But I wasn’t surprised. The tube mill is slow. They’re always slow this time of year. Don’t ask me why, I don’t know. I been working down there fifteen years. And the only year they weren’t slow in January was the year the N.R.A. went in.

“What do you think is the cause of all this unemployment? They laid off some of the fellas they hired last November. Why? Too many machines. Too much production. Ten years ago, if we straightened twelve thousand feet of half inch or three quarter inch stock it was a good night’s work. Now we got to straighten forty-five thousand.

“You’re a sensible fella, I can tell you that and you can see where I’m right. You can’t tell some of them. Too many machines. They got ten million unemployed today, ain’t they? All right. Ten years from now they’ll have twenty million unemployed.

“Some fellas will try to tell you that these machines make work. They give work to the lads that make ‘em. All right. But for every one they make work for, they throw ten out of work.

“I was over through Willimantic a little while ago. There’s the American Thread Company over there. Ten years ago they employed thousands. Now they employ maybe five hundred. Why? They got machines workin’ where they used to have men. They built a big addition to their factory. It’s standin’ idle. A waste of money. Somebody’s holdin’ the bag for it.

“Where’s it goin’ to end? Maybe they ought to shut down the patent office for a while.”

The period from 1930 until the start of World War II (December 1941) came to be known as the Great Depression.
Headlines from the *New York Times*, January 1, 1931:

**THOUSANDS FAIL TO APPLY FOR 1931 AUTO PLATES**
Nassau [County, N.Y] Finds Luxury Cars Were Not Relicensed

**SHARP DROP IN 1930 IN FOREIGN TRADE**
Export Total at $3,850,000,000, Off 26%; Imports $3,050,000,000, Down 31%

**CONSTRUCTION DROP 30 PERCENT IN 1930**

Applying for a job in San Francisco, 1931:

I’d get up at five in the morning and head for the waterfront. Outside the Spreckles Sugar Refinery, outside the gates, there would be a thousand men. You know dang well there’s only three or four jobs. The guy would come out with two little Pinkerton cops: “I need two guys for the bull gang. Two guys to go into the hole.” A thousand men would fight like a pack of Alaskan dogs to get through there. Only four of us would get through. I was too young a punk.

We were a gentle crowd. These were fathers, 80 percent of them. They had held jobs and didn’t want to kick society to pieces. They just wanted to go to work and they just couldn’t understand. There was a mysterious thing. You watched the papers, you listened to rumors, you’d get work somebody’s gonna build a building.

So the next morning you get up at five o’clock and you dash over there. You got a big tip. There’s 3000 men there, carpenters, cement men, guys who know machinery and everything else. These fellas always had faith that the job was gonna mature, somehow. More and more men were after fewer and fewer jobs. So San Francisco just ground to a halt. Nothing was moving.

*Test your economic system diagram: What effect would this situation have on wages being paid? On sales of goods and services? On attitudes about the future?*
Unemployed family from the Rio Grande Valley, Texas, camped on a river bottom near Holtville, California. Drought in the central states brought on the “dust bowl.” Many farmers migrated to California. (Photo by Dorothea Lange.)
Use your model to predict some of the probable and possible consequences of the changes described here.

Compare this data with the earlier data for the 1920s:

**NATIONAL SPENDING PATTERNS**
(in millions of dollars)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>FOOD</th>
<th>CLOTHING</th>
<th>RENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>19,535</td>
<td>9,685</td>
<td>11,197</td>
</tr>
<tr>
<td>1930</td>
<td>17,964</td>
<td>8,322</td>
<td>10,779</td>
</tr>
<tr>
<td>1931</td>
<td>14,731</td>
<td>7,145</td>
<td>10,055</td>
</tr>
<tr>
<td>1932</td>
<td>11,382</td>
<td>5,228</td>
<td>8,824</td>
</tr>
<tr>
<td>1933</td>
<td>11,524</td>
<td>4,784</td>
<td>7,727</td>
</tr>
</tbody>
</table>

**ECONOMIC CONDITIONS 1929-1933**

**AVERAGE WEEKLY WAGES OF FACTORY WORKERS**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>WAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>$20.80</td>
</tr>
<tr>
<td>1930</td>
<td>$20.90</td>
</tr>
<tr>
<td>1931</td>
<td>$20.97</td>
</tr>
<tr>
<td>1932</td>
<td>$17.95</td>
</tr>
<tr>
<td>1933</td>
<td>$16.73</td>
</tr>
</tbody>
</table>

**PERCENT UNEMPLOYMENT**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>0%</td>
</tr>
<tr>
<td>1930</td>
<td>8%</td>
</tr>
<tr>
<td>1931</td>
<td>6%</td>
</tr>
<tr>
<td>1932</td>
<td>8%</td>
</tr>
<tr>
<td>1933</td>
<td>11%</td>
</tr>
</tbody>
</table>

**GROSS NATIONAL PRODUCT**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>DOLLARS (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>118</td>
</tr>
<tr>
<td>1930</td>
<td>110</td>
</tr>
<tr>
<td>1931</td>
<td>108</td>
</tr>
<tr>
<td>1932</td>
<td>102</td>
</tr>
<tr>
<td>1933</td>
<td>98</td>
</tr>
</tbody>
</table>

**AVERAGE PRICE OF FOOD PRODUCTS**

- Bread (1 lb.)
- Eggs (1 doz.)
- Bacon (1 lb.)
- Milk (1 qt.)
- Sugar (5 lbs.)

**Keywords for Internet/library investigation:** 1929 stock market crash; Great Depression; bank failures; Dust Bowl.
Investigation: Effects of the New Deal

President Franklin D. Roosevelt, coming into office in 1933, asked Congress to set up a group of programs he called the New Deal. Major New Deal programs are summarized below.

*Use your economic system model to predict the effects of each New Deal program. Then analyze the changes in economic conditions from 1933 to 1939, using the data on pages 14 and 15.*

**Civilian Conservation Corps (CCC):** Unemployed young men were hired to work on conservation projects. Altogether, about three million people were hired by the CCC. Their work consisted of activities such as planting trees, fighting forest fires, building roads and dams, and opening forest trails.

**Federal Deposit Insurance Corporation (FDIC):** The FDIC was established by the government to protect bank depositors. As originally set up, it guaranteed that if a bank was unable to return all or part of the money which people had deposited in it, the FDIC would pay whatever money was owed, up to 5,000 dollars.

**Public Works Administration (PWA):** The PWA was founded to provide work for the unemployed. People were hired to build bridges, schools, courthouses, dams, and similar projects.

**National Recovery Administration (NRA):** The NRA was founded to enforce codes of fair practice for business and industry. These codes set minimum wages and maximum hours for workers. The codes protected the rights of workers to join unions. NRA codes also set standards of quality and prevented excessive competitive price-cutting. The NRA was declared unconstitutional by the Supreme Court in 1935.

**Tennessee Valley Authority (TVA):** The Tennessee Valley Authority was created by Congress to develop the resources of the Tennessee River Valley. Dams were built to control floods, improve navigation on the Tennessee River, and create electrical power. New forests were planted, and cheap fertilizers were developed to improve farm output.

**Works Progress Administration (WPA):** The WPA was created in 1935. It provided jobs building highways, streets, bridges, parks and other projects. It also created work for unemployed artists, writers, actors, and musicians. The WPA provided jobs for about eight and one-half million people.

**Social Security:** The federal social security program was established in 1935. It provided for federal payments to the aged. Under this act employers and employees paid a percentage of the worker's income to the federal government. In return, when the worker reached retirement age, the government furnished monthly income payments. The 1935 law also provided aid to the blind and to dependent children, and set up an unemployment insurance system on a state-by-state basis.

(Continued)
As the above data shows, economic conditions improved under the New Deal. However, it’s difficult to say how much of the improvement was due to New Deal programs. Some economic problems remained up until after the beginning of World War II in December 1941.

**Under wartime conditions, everyone wanting to work could find a job. What economic problems might this situation create? Use your flow chart to predict wartime changes.**
January 1938: Line of men inside a division office of the State Employment Service office at San Francisco, California, waiting to register for benefits on one of the first days the office was open. They received from six to fifteen dollars a week for up to sixteen weeks. The federal unemployment census showed almost ten million out of work. Twenty-two states began paying unemployment compensation.

This photograph and the earlier one in this unit were taken by Dorothea Lange. The federal government put unemployed photographers to work documenting conditions in the United States. The superb collection of photographs they made has become famous. Writers, artists and others with special skills were also put to work by the government.

*Identify relationships between economic conditions and autonomy. (See Investigating American History, p. 57.) Which reactions to loss of autonomy probably occurred during the depression? (Some reactions are described in the data in this unit.)*

*How might changes in setting/environment (e.g. resources) and demographics (population change or movement) affect your economic system diagram?*
Follow-Up: Recent Economic Changes

Economic cycles continue today, with changes in levels of unemployment, prices, ideas about the future, and other system elements of you’ve been studying.

*From the Internet or from library sources such as almanacs, collect data for economic conditions over the past ten years, up to the present. Information is readily available.*

*Based on the information you’ve collected, identify and note directions of economic changes.*

*Collect the first section of your local newspaper for a week, and analyze the news to determine how much space is being given to economic conditions as compared to other kinds of news.*

Acknowledgements/Sources:

Notes for Teachers and Mentors:

From the standpoint of impact on later U.S. history, the Great Depression’s influence rivals that of World War II and its aftermath. Those who experienced the Depression found their attitudes toward money and spending permanently altered.

This unit explores economic systems theory. Learners who worked through the optional unit on Colonial Exchange Patterns were introduced to the subject, but that unit isn’t a necessary precursor to this one. However, the material on system change in unit 11 of Investigating American History (see https://www.marionbrady.com/AHH.asp) is an important precursor, covering the fundamentals of diagraming systemic relationships.

Using the material in this unit will contribute to learner’s system analytical skills in important ways. This is a challenge, and will take time, collaboration and a great deal of thought to work through. As with much of the material associated with Investigating American History, the systems approach to understanding change, along with the basic economic concepts investigated here appear nowhere in the traditional public school curriculum, yet are essential knowledge.

Vocabulary: Depending on their background, some learners may have trouble with some economic terms that may not be part of their normal vocabulary, such as “goods.” Do a quick check before beginning the first investigation, and, if necessary, clarify terminology.

Some economic relationships may be difficult for learners to identify. For example, the relationship between economic optimism and employment levels or wages/salaries may not be immediately apparent—the link is largely indirect, through increased spending and demand for goods (i.e. “buying goods and services,” in the bulleted list). In responding to this demand, producers will increase production, which usually will increase hiring and employment levels. If fewer workers are available, producers must raise wages and salaries to attract an increased labor force.

An accurate economic system diagram will include significant feedback loops. For a simple example, low unemployment, with many workers making money, will increase demand for goods, which leads producers to look for even more workers.

Of course, every feedback loop of this type can work in the opposite direction, and the change in direction can come abruptly, and often painfully, as the material in this unit shows.

The material on the Florida land boom (Investigating American History, Part 11) dovetails well with the data in this unit.

Note: Outstanding primary sources for the Depression are available from the Library of Congress. Photographs taken by those hired by the Farm Security Administration; along with narratives and accounts collected by writers working for the WPA, are available free via Internet. See: http://www.loc.gov/library/libarch-digital.html