

"Ignorance lies at the bottom of all human knowledge, and the deeper we penetrate the nearer we come to it—for what do we truly know, or what can we clearly affirm of any one of those important things upon which all our reasonings must of necessity be built, time and space, life and death, matter and mind."

—Colton

2 *The Search Begins*

In September of 1929, just a few weeks before the world we knew disappeared in miles of ticker tape and crashing stock prices, I was hired by the Department of Commerce as Chief of Industrial Marketing. Later I became the Chief of Current Statistics too. Finally I was promoted to Chief Economic Analyst. Talk about being where the action is. Let me tell you, *I was there!*

In 1931, as a heartbroken President Hoover watched the country he loved falling apart before his eyes, I was assigned the task of discovering why a prosperous and growing nation had been reduced to a frightened mass of humanity selling apples on street corners and waiting in line for bowls of watery soup. Why did depressions happen? As liaison officer with economists both inside and outside the government, it was my task to find the answers.

I consulted many economists—and nearly everyone had a different theory to explain our economic sickness. It was almost as if you were ill and one doctor said you had gout, the next said you had cancer, a third diagnosed your trouble as leprosy, and a fourth said you had athlete's foot! If doctors disagreed about illnesses in this way, you would not have much faith in doctors. Economists disagreeing as radically as they did, I lost faith in economists, for none of them knew the answer.

Cycles Enter My Life

Then one day I met *him* who *knew* he didn't know the answer. His name was Chapin Hoskins, the Managing Editor of *Forbes*. He too had despaired of learning from economists why depressions happen. But he reasoned logically that if he couldn't discover "why," perhaps he could at least learn "how." He began to study the *behavior* of prices, production, and other measures of economic activity.

In the course of his studies Hoskins noticed that every three months there was a slight upsurge in the bank debits of certain cities. In these cities, every three months, checks totaling larger amounts were drawn. He had discovered a cycle!

Before we proceed let me be sure you understand the word. "Cycle" comes from a Greek word for "circle." Actually, the word cycle means "coming around again to the place of beginning." It does not, by itself, imply that there is a regular period of time before it returns to the place where it started. When there is such a fairly regular period of time, the correct word to use is "rhythm," from another Greek word meaning "measured time." As we mentioned, the tides are rhythmic; your heartbeat is rhythmic; so is your breathing. A cycle, when we refer to one, will usually mean a cycle with rhythm (see Figure 1).

Getting back to our friend Hoskins: He didn't know "why" bank debits had this three-month cycle. He didn't need to know

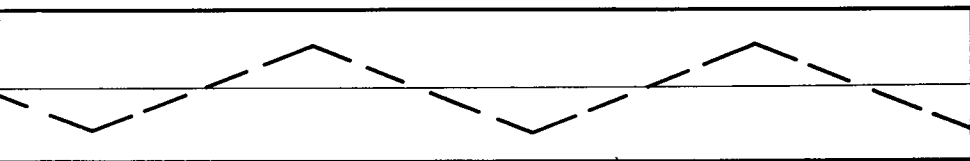


Fig. 1. Diagram of a Cycle

A cycle comes back to the place where it started. A rhythmic cycle comes back at reasonably regular time intervals.

why. Every three months it happened. It was worth taking into account as a probability in trying to assess the future.

Presently Hoskins observed that in some instances every third one of his three-month upsurges in bank debits was larger. He had discovered a nine-month cycle. Some things had this nine-month cycle without having the three-month cycle. His interest increased when he discovered that there were even longer cycles. The most important of these seemed to be about forty-one months in length. This pattern was so regular and had repeated itself so many times that it did not seem to him to be the result of chance. His study of behavior was becoming even more fruitful than he had dreamed, for he had discovered the possibility of predicting when things would be high, when they would turn downward, when they would be low, and when they would turn upward again!

Hoskins accumulated a great quantity of data. Then he began to make forecasts based on his observances. These forecasts came true. The possibility had become an actuality! Here, indeed, was something of importance.

In those days, even as now, you could find hundreds of individuals willing to help you select "hot" stocks, tell you how the stock market would act next month, and even read tomorrow's Dow-Jones closing averages in tea leaves—all for a fee, of course. Men of good sense laughed at them then, just as they do now.

But no one laughed at Chapin Hoskins, for this genius, a member of the Board of Directors of the American Management Association, had impeccable credentials. Westinghouse Electric's Executive Vice-President was also a member of the board. He followed closely the forecasts made by his brother board member, and finally he engaged Hoskins on a two-year retainer to teach Westinghouse all that he knew about cycles. Furthermore, he assigned his chief designing engineer to Hoskins and hired two professors from Cornell to review the Hoskins techniques. Something was finally being done about cycles.

In 1937, on the strength of his contract with Westinghouse, Hoskins started up in business as an analyst for industrial companies. I joined him as an associate. My job was to go out and sell firms on the benefits we could provide by helping them to forecast their future sales, production, cost of raw materials, etc., through

the application of the cycle theory. I would sell the accounts; Hoskins would do the forecasting. The arrangement reminded me of the story of the hod carrier. The hod carrier said that he had a fine job; all he had to do was to carry bricks up six stories and the man up there did all the work.

Chapin Hoskins and I started in business on March 1, 1937. I'll never forget our first day together. I had just purchased a few shares of stock and mentioned it to Hoskins along with my hope that I would reap great profits when the stock went higher.

"It won't go any higher," he said. "Sell everything you have at once. We are within a week of the top. If I had just a little more courage, I'd go short with everything I've got."

Sure enough, within a week the market did reach a top and the disastrous decline of 1937-38 had begun.

Later that year, in August, the market started upward again. I was in the office of a famous investment counselor, a man who handled millions of dollars for his clients. I heard him tell one of them, "The decline is over. Buy heavily." I knew from what Hoskins had taught me about cycles that the worst part of the decline was still ahead. I tried to convince the counselor of this but he wouldn't listen. I've often wondered if he didn't later wish he had! From August 1937 to April 1938 the Dow-Jones Industrials fell from 184 to 113, a decline of 39 percent.

Chapin Hoskins and I succeeded. Eventually we had more business than Hoskins could handle. Our clients included such large companies as Botany Worsted, Consolidated Edison, and Lehman Brothers. Soon I began to do some of the research, counseling, and forecasting, and my interest in cycles reached a new height. I began to spend more and more time at the libraries, reading everything I could find on the subject.

The Meeting at Matamek

One memorable library visit set my future course irrevocably on the trail of the great cycle mystery. I came across a transcript by Professor Ellsworth Huntington of Yale University of a conference that had been held in 1931 in Matamek, Quebec, on the north shore of the Gulf of St. Lawrence.

About the time when I had been anxiously interviewing economists to discover the cause of our Great Depression a Boston financier named Copley Amory had organized an international conference on biological cycles that was held at his summer estate in Matamek. Twenty-five of the world's leading biologists assembled to compare notes about cycles in wildlife. As I read the transcript of their findings, a strange excitement took hold of me, for I learned a fact known to every sportsman, namely, that game is sometimes plentiful and sometimes scarce. But what impressed me was that the periods of abundance, and of scarcity, often came at amazingly regular time intervals. Cycles!

The Search Party Is Formed

I discovered something else on that fateful day when the transcript of the Matamek Conference came to my attention. I learned of the cycle work that had been done by C. N. Anderson of the Bell Telephone Laboratories. Anderson had discovered that sunspots act as if they were influenced by a variety of cyclic forces similar to those that Hoskins and I had been discovering in business figures and also to those that the biologists had discussed at Matamek. Cycles in business! Cycles in wildlife! Cycles on the sun! And, in many instances, these cycles *had the same length and went up and down together*. Now here was something basic, something fundamental, something more profound than I could envision. For if two or ten or a hundred separate and seemingly unrelated things fluctuated in cycles of identical wavelength and turned at about the same time, it was unlikely that they were as unrelated as might first be supposed. Either some of them were causing the others to behave that way, or *something hitherto unknown and unsuspected* was causing all of them to go up and down together. Do you see the mystery, the excitement? A detective story on a cosmic scale!

I saw at once that we were confronted with a basic scientific problem that could be solved only by linking together economics, biology, and astronomy—and perhaps several other sciences as well. The problem had to be attacked on a broad front.

I set to work at once. On October 23, 1940, I organized the

Foundation for the Study of Cycles. I wrote to Copley Amory, the chairman of the committee of biologists, and to Ellsworth Huntington. Mr. Amory came to see me and was as surprised to learn about the economic and astronomical cycles as I had been to learn about the biological ones. He agreed that the problem needed to be attacked as a whole. He approved of the idea of a Foundation for the Study of Cycles and agreed to become chairman of our board of directors.

Mr. Amory and I then reorganized the permanent committee set up at Matamek; its members were elected as the board of directors of the Foundation.*

Mr. Amory presented the Foundation with a check for \$500, and we were afloat. I was "hired" as the director, and it has been my privilege, with the help of our members, to keep the Foundation afloat for the past thirty years. The Foundation for the Study of Cycles is now affiliated with the University of Pittsburgh, and its headquarters are located at 124 South Highland Avenue, Pittsburgh, Pennsylvania. In this book you will learn of our successes, our failures, our hopes, our doubts, our frustrations, and our progress.

Putting the Pieces Together

Suppose that one day while digging in your back yard you came across some bits of stone that were so regularly shaped that they could not easily have been formed that way by chance. Suppose,

* The original board of directors consisted of the following persons:

UNITED STATES OF AMERICA: Charles Greeley Abbot, Secretary, Smithsonian Institution; George Baekeland, the Bakelite Corporation; The Hon. William Cameron Forbes, Chairman of the Board of Trustees, Carnegie Institution of Washington; Hon. Alanson Bigelow Houghton, Chairman, Corning Glass Works, Chairman, Institute for Advanced Study, Princeton University; Ellsworth Huntington, Professor of Geography and Climatology, Yale University; Wesley Clair Mitchell, Director, National Bureau of Economic Research, Professor of Economics, Columbia University; Harlow Shapley, Director of the Observatory, Harvard University; and Copley Amory, Chairman of the Foundation.

CANADA: Hon. Charles Camsell, Commissioner of the Northwest Territories, Canadian Government; Frank Cyril James, Principal and Vice Chancellor, McGill University.

GREAT BRITAIN: Hon. Patrick Ashley Cooper, Governor, the Hudson's Bay Company; Charles Sutherland Elton, Director, Bureau of Animal Population, Oxford University; Julian Sorrell Huxley, Secretary, Zoological Society of London.

further, that some of these pieces fitted together as if forming part of a larger pattern.

You would be quite excited, wouldn't you? "I have stumbled across some magnificent old mosaic," you might say.

Every evening, weather permitting, you would be in your yard, digging and screening dirt. You would bring all the little stones into the house, scrub off the dirt, and rinse them carefully. Some pieces you would discard because they were obviously just stones; some pieces would unquestionably be part of the mosaic; others you might not be sure about.

The good pieces and the pieces you could not be sure about you would save. You would put them on a table and you would try to fit them together wherever you could. Some you would place to one side since they would not fit any of the pieces you already had. Soon a pattern would begin to take shape. You would become more and more excited. "What a stupendous discovery!" you would say. "I am really on the track of something big!"

So it is with the study of cycles. We dig them up, scrub them, rinse them, shine them, and put them on the table. Some are so regular that there seems to be no question that they are significant. With others we cannot be so sure. Some fit together with other pieces. Some do not fit at all. And, most exasperating of all, some almost fit—but not quite.

It is impossible to count how many pieces of the cycles mosaic we have found to date. In 1946, when *Life* magazine was planning an article on cycles, their editors asked me to give them a list of all the rhythms I had ever heard about. Although the list I eventually sent them was neither complete nor authoritative (and contained many rhythms that were controversial or unsubstantiated), I managed to itemize 308.

Eighteen years later the Foundation published a catalog listing only the alleged cycles in economics—commodity prices, stock prices, agriculture, building construction, real estate, manufacturing, etc. The catalog contains 1,280 cycles.

Because small keys can unlock great doors, we at the Foundation have treated every hint of a possible cycle with great respect and deference. No "stone" we uncover is tossed aside as irrelevant, for we believe we are assembling far more than a mosaic.

The Five Cathedrals

You may remember the story of the two stonemasons. When asked what they were doing, the first said, "I am surfacing a piece of stone." The second answered, "I am building a cathedral."

Although it has "surfaced" many stones since its birth in 1940, the Foundation for the Study of Cycles believes it is building a cathedral—several of them, in fact.

CATHEDRAL NUMBER ONE—the Advancement of Human Knowledge

We are doing our part toward learning how the universe functions, for we are discovering evidence of hitherto unsuspected forces. Learning how the universe functions is, to my mind, the noblest activity of the human race. It is, literally, reading the word of God.

CATHEDRAL NUMBER TWO—the Elimination of War

There is little hope of eliminating war for yourself, your children, or your grandchildren. But—hopefully—you will have great-grandchildren. It is for them we are building.

Wars come in cycles. That is, the number of international battles tends to pulsate at reasonably regular time intervals. Wars act as if they were stimulated by regularly recurring cyclic forces.

These forces are presumably external to human life, for even when the rhythm of war is disturbed, it returns to the old pattern. And the rhythms are much the same as those we find in animal life and other aspects of nature.

As part of the problem of eliminating war we must understand these rhythmic forces and how they operate. But even before we do, it is of great benefit to know when the next international "situation" can probably be expected.

CATHEDRAL NUMBER THREE—the Elimination of Depressions

Only by understanding the forces that cause depressions can we ever learn to control them. There is a growing mass of evidence

that depressions recur at rhythmic time intervals. So far as they have been studied, all the various aspects of depressions—curtailed production, business failures, unemployment, financial collapse—act as if they are influenced by rhythmic forces, the nature of which is still unknown. Until we learn what these forces are and how they operate any true science of economics is impossible. But until we solve this mystery our limited knowledge of cycles can help throw some light on *probable* future economic fluctuations of a disastrous nature.

CATHEDRAL NUMBER FOUR—the Elimination of Disease

As yet only a small amount of cycle research has been done in this area, so the importance of cycle knowledge in the elimination of disease has not been determined. However, anyone who has suffered from the flu bug in the last few years may be interested to learn that there is evidence that even this little monster visits us in cycles—in spite of the development of “wonder” drugs.

CATHEDRAL NUMBER FIVE—Accurate Weather Forecasting a Year or More in Advance

How wonderful it would be if farmers could know in advance when to expect droughts, late frosts, or rainy harvests. What savings in seed and heartache there would be.

Our foresters would also rejoice in such foreknowledge. So would our mariners, our hydroelectric companies, our flood control experts, our military leaders—even our football, baseball, and racing fans.

Other fields could be named, for there are *thirty-six different aspects of science* where a knowledge of cycles is important. The Foundation’s main purpose is to bring together the stones and rocks from all these various fields and raise an altar to the glory of God . . . and to the benefit of his children.