

# Chapter 1

## Frederick Soddy

In the 1920's Frederick Soddy undertook the first and only scientific investigation of economics and the monetary system. Soddy was “the father of nuclear fission,” winner of the Nobel Prize in chemistry in 1921, discoverer of the existence of isotopes (in general, not of a specific isotope), discoverer of the cause of radioactivity, a professor of chemistry at Oxford University, and a Fellow of England's most prestigious scientific organization, the Royal Society. Without Soddy's discoveries we would never have developed nuclear power. All of these accomplishments pale in comparison to Soddy's economic and monetary discoveries. After winning the Nobel Prize Soddy went on to invent a scientific monetary system and the new science of National Economy—the science of wealth. With these inventions Soddy forever solved the problem of poverty and paved the way to national prosperity. Soddy's inventions and discoveries make it possible for everyone to work less and have more, to forever get out and stay out of debt, and to live better and longer lives. Today, Frederick Soddy is little remembered. When he is remembered, it is for his contributions to chemistry. His greatest achievements are almost completely unknown.

Soddy's investigation is unique. Never before in history and never since has an investigation of the economic and monetary system been undertaken by a scientist of the physical sciences, let alone by an elite Nobel Prize winning scientist, one of the greatest scientists who has ever lived. Soddy set before himself the impossible task of discovering how to eliminate poverty and establish national prosperity—and he succeeded. In Soddy's search, his guiding question was: How can a nation—as opposed to an individual—become wealthy? Soddy's approach to the truth was fearless. He did not accept anything said by economists, banks, and financiers as

true on its face. He started his own independent investigation from the ground up. Feeling that he must reach an understanding of our monetary system, Soddy spent two years studying what its advocates had to say about it. After two years of studying the monetary system he felt he “*could make nothing of it.*” He felt this way until “*one day the truth dawned on me. What I was studying was not a system but a confidence trick.*” With good reason, Soddy concluded the monetary system was a swindle, which depended on keeping people deceived for its successful operation. To replace the current dishonest monetary system, Soddy developed a new scientific monetary system. The end result of his investigation and efforts was the creation of an entirely new science, the science of wealth—National Economy, which explains why we do not produce the things we can make and do need and want, and how a nation, rather than an individual, can be made wealthy.

In his investigation Soddy applied the physical sciences of chemistry and physics to economics. He gave a concrete scientific basis to economics. Soddy separated the subject matter of economics into the psychological—*debt*—and the physical—*wealth*. Soddy set out to discover how the current money system worked and how it *should* work; to discover how production and consumption could be maximized; and to find a physical definition of wealth.

The product of his investigation was National Economy. National Economy is at root a social system and is the social counterpart to scientific discovery. It is the link between science and the human; the system that connects science and the social. Without National Economy we lack the ability to utilize science’s discoveries fully. Soddy’s great discovery was how to fully utilize scientific discoveries for human ends. As of now, we are not producing wealth at even *one-fifth* of our capacity to produce. What good are further scientific discoveries if we are not fully utilizing our current ones? Some discoveries are not used at all and most only partially at best. It is one thing to make a discovery and another to be able to implement it for mankind. Scientists make discoveries and leave it to others to utilize them. Soddy developed the social systems necessary for new advances to be produced, distributed, and used to the maximum extent possible.

Soddy first published his discoveries in 1926 with the release of the book *Wealth, Virtual Wealth, and Debt: The Solution of the Economic Paradox*. This book was followed by *Money Versus Man* in 1931 and *The Role of Money* in 1934. Soddy expected the publication of his discoveries would have a great impact upon society. Soddy believed that since the days of Galileo, freedom of scientific thought and discovery had been won. However, he was to discover that in matters of money, economics, and finance freedom of thought had yet to be won. In these matters we are very much still locked in the dark ages. What today passes for economics is not really a science, and it is completely shielded from any real criticism. It is shielded by silence. The public is carefully guarded from any real knowledge of money, economics, and finance. In Galileo's day scientists were persecuted by the Catholic Church. Today we know persecution only brings attention, so scientists with inconvenient truths are simply ignored. Their discoveries are suppressed by silence.

Over 80 years have passed since Soddy first published his discoveries. Today they remain unknown and unused. Apart from the silence of the press in economic matters, there is a second reason Soddy's ideas never became widely known or popular: they are *extremely* difficult to understand. In this work, Soddy's ideas are for the first time made accessible and clearly explained. In addition, his system, though complete in a rough form, needed much additional refinement and improvement. I have expanded, revised, updated, corrected, stripped away the inessential, and improved the system of National Economy. Further, National Economy is presented and linked to the systems that exist today. Many of the economic events we see today, such as the "mortgage meltdown" and "credit crunch," can be explained by the principles of National Economy. Most importantly, a practical application of National Economy to alleviate many of the ills created by our current monetary system is now possible.

### **National Economy**

There are two kinds of knowledge. The first kind results from the study of nature. This kind of knowledge is real and does not change. This is the kind of knowledge acquired through the studies of physics and chemistry. In this domain humanity does not have any influence on the laws

it is learning. Humanity can only use these laws if it acts in accord with them. You can only harness or dominate nature by obeying natural laws. The second kind of knowledge comes from human conventions such as the law. It is an artificial knowledge created by people and is modified by changes in society.

We have advanced science and technology, but the human systems necessary to fully utilize them have not been advanced with them. We have cutting edge technology alongside a medieval monetary system. It is like having the technical knowledge of how to make cars and having a factory to make them, but being unable to do so because management does not know how to structure work or organize, motivate, and manage people to work together effectively or efficiently. Our civilization today is a scientific civilization, and we are thwarted from attaining anywhere near our full potential by out-of-date human systems.

Any system can have a bottleneck or limiting factor. Simply put, the government, law, monetary system, and economic system have not kept up with scientific advances, and all are now bottlenecks strangling our production and consumption. Right now, we have a massive economic traffic jam. *Production, exchange, and consumption* are the activities of any economic system. Money is the means by which these activities can occur. Specifically money supports processes that enable society to generate equivalencies between these three activities, i.e., translate the relative importance of these three activities against and within each other.

Human activity is required for production, exchange, and consumption. Whenever there are multiple activities, there must be a mechanism by which these activities can interact. Money is the mechanism that allows us to weigh these activities relative to each other. The means of interaction between the three activities is a purely human convention called money. The real nature of money needs to be understood, so we can make use of it rather than be enslaved by it. Production and consumption are both physical. However, the payment and distribution systems are products of the human mind and are changeable. The changeable human system should match and be synchronized with the physically real system.

Economics is comprised of both kinds of knowledge, natural and human. Production and consumption, which are the ultimate foundation of economics, are both physical. They are both wholly governed by natural law. The system of economic exchange and interaction among humans, the money system, is wholly a human convention. Ultimately, these human conventions sit on top of the physical systems for which they create equivalencies. Therefore, it is of the utmost importance that we have a complete and accurate understanding of the physical processes that underlie economics. Equally important is that the human economic conventions be in accord with the underlying physical reality. We have the physical ability to meet all human economic needs and desires. We are not fundamentally limited by our resources or technologies. We have time and time again shown, that as a race, we have the ability to overcome physical constraints. However, clearly all societies of the world have people that suffer from economic hardship. These hardships are imposed by the human economic conventions. Today, the physical processes underlying economics are not fully understood, and the human conventions built on top of these processes are hopelessly out-of-date and not in accord with the physical realities. Human conventions are strangling us economically. Today, in people's thoughts, there is a complete inversion of reality. The human convention of money is thought to be of primary importance, and the underlying physical reality to be of secondary importance.

National Economy is as an attempt to discover the best that an individualistic society can offer economically if it were intelligently administered. National Economy is the science of wealth. The aim of National Economy is to make a nation wealthy, and continuously increase its wealth with time. Through the study of the physical realities underlying economics and of the human system that sits on top of the physical reality, National Economy seeks to develop the human system that will best utilize our potential. National Economy seeks to maximize the amount of production and consumption of a nation up to the limit of physical constraint, rather than the current limits imposed by human convention. In the study of National Economy lies the answer to how all manufacturing that has moved to other countries and all jobs that have been outsourced can be returned to America forever, how real wages can be increased dramatically, and how, at the same time, the people can have more leisure. In

short, the study of National Economy provides the answer to how the nation can be made wealthier.

### The Map

The age we live in is scientific. Daily, the dangers to our scientific civilization grow. Our civilization is in great peril caused by obsolete and false medieval ideas. Original and fearless scientific thought is needed to avert the dangers we face. Economic sufficiency is an essential foundation of all national progress. We have, today, the ability to create a nobler and more humane civilization. This book asserts that we have the capability to completely eliminate poverty, provide excellent medical care to all, increase leisure time, reduce working hours, be wealthier, provide every family with a decent home, afford to live and raise children on a single salary, eliminate the National Debt, eliminate all personal debt, and to produce almost everything we consume here in America. Not only could we do all this, but on top of it we have the capability to produce even more, if for no other purpose than to throw what we produced into a pit. The problems standing in the way of prosperity are an unsound and fraudulent money system and a lack of understanding of the physical reality underlying economics. Nothing could do more to improve the current state of affairs than instituting and maintaining an honest money system.

What normally passes for economics is really the study of chrematistics. Chrematistics is the study of commerce, of wants and demands and of how they exchange for one another. Or simply put the study of buying and selling. It is a distinct and separate study from National Economy. National Economy is concerned with the *production* of wealth by humans to maintain and enrich their lives. For example, chrematistics will be concerned with such questions as, given the current level of demand, what will the price of an orange be if 100 oranges are available? What will the price be if 50 or 200 oranges are available? How many oranges should be made available for sale to maximize profit? Will the cost incurred by advertising be offset by an increase in demand caused by the advertising? Everything in chrematistics is about buying and selling from an individual standpoint, whether the individual is a person or an organization. Chrematistics could also be called Individual Economy. National Economy,

on the other hand, is concerned with maximizing the production and consumption of the nation as a whole, rather than maximizing the profits of an individual. Chrematistics is the study of how the economic pie is divided and of the means to increase an individual or group's share of the pie. National Economy is the study of how to make the biggest and best economic pie.

The goal of National Economy is to make a nation wealthy and to increase the wealth of the nation continuously over time. Accomplishing this aim requires the government to make several changes to the current unsound monetary system. All of these changes are simple. Many of the proposed changes are what the Constitution requires, but are today ignored by the government. To understand what changes need to be made and why the changes are necessary, the reader must know: (1) the fundamental change to society that science has brought about which allows for increased national prosperity, (2) what is preventing this gain from being realized, and (3) how this gain can be realized.