**SECTION THREE: DECENTRALIZATION**  
  
**CHAPTER SEVEN: Decentralization at the Core of Crypto Freedom**  
  
A lot of people automatically dismiss e-currency as a lost cause because of all the companies that failed since the 1990’s. I hope it’s obvious it was only the centrally controlled nature of those systems that doomed them. I think this is the first time we’re trying a decentralized, non-trust-based system.— Satoshi Nakamoto  
  
Despite the incredible success of crypto, the question of whether the free market can establish a viable monetary system still arises. It is often suggested that crypto is workable only because it exists in parallel with fiat with which it is convertible and upon which it rests. Does the institution of money ultimately require trusted third party oversight and the context of the state? (An institution is an established law, practice, or custom within a society.)  
  
The question can be reduced to a more fundamental one. How does any institution within society arise, and how does it decline? The answer lies within the concepts of decentralization and centralization.  
  
**What is Centralization? What is Decentralization?**  
  
Centralization concentrates control of an activity or organization under a single authority in order to coordinate results. In terms of the monetary monopoly, the activity is society; the authority is the state that coordinates the flow of finance with the stated goal of producing an efficient and productive economy. Another term for centralized control of society is “social engineering.” The state applies theories of social science to the management of human beings in order to control their placement and functioning. The social control is intended to achieve a society that is just or effective according to the vision of those in charge.  
  
Not all centralization dismisses individual choice. Private businesses can centralize under one management team to increase profits, for example. When they do so, they are often called corporations. The crucial difference between this scenario and state centralization is that businesses are voluntary, and the individuals involved are free to walk away to join a competitor. With social control, the individuals have no choice. Walking away constitutes breaking the law, and there is no competitor.  
  
Decentralization is the diffusion of power away from a central authority down to its constituent units. In the political arena, this means passing control from a national level down to a local one. Discussion of decentralization usually starts and stops in the political realm, with the power still vested in a coordinating authority. A local government may be better than a remote one because it is more responsive to the community, but the logical end point of decentralization is the individual who is the building block of all society and its most basic constituent unit. This arrangement is both a method and a goal. The method is the empowerment of the individual. The goal is a healthy society in which every member makes his own choices according to his own self-interest.  
  
Centralization is so woven into the fabric of the culture that many people believe it is necessary for society to function. Public schools, central banks, the judiciary, public works, government roads, tariffs…most people cannot envision society through any lens other than centralized state control; it is all they have known and all they have been taught.  
  
Throughout most of history, society has been viewed as the result of someone’s design. The designer might be God, a tribal chief, a monarch, a committee of socialists or communists, a team of experts, or some other entity that was the state misspelled. Society was seen as an artificial construct created and managed by authorities. Society was deemed to be dependent upon a coordinating authority for its law, morality, and prosperity.  
  
In his three-volume work *Law, Legislation and Liberty*, social theorist Friedrich Hayek refers to this position as “constructivist rationalism.” A core constructivist belief is that man can and should consciously invent social institutions such as the law through the application of reason and social science. Hayek argues vigorously against this perspective, claiming that constructivists misunderstand the process by which the institutions of society evolve. Indeed, he believes the constructive approach is antithetical to the real process and hinders social institutions that should evolve rather than follow a blueprint. In a 1974 Nobel Memorial Lecture entitled “[The Pretense of Knowledge](https://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1974/hayek-lecture.html),“ Hayek expresses a basic epistemological objection to constructivism—that is, an objection based on a theory of human knowledge. He states that no committee can predict the evolving choices and unintended outcomes of a mass of people who interact over time. Human preference is too variable, and it changes in ways that thwart all planning.  
  
To recycle a quotation from earlier in the book:  
  
The recognition of the insuperable limits to his knowledge ought indeed to teach the student of society a lesson in humility which should guard him against becoming an accomplice in men’s fatal striving to control society—a striving which makes him not only a tyrant over his fellows, but which may well make him the destroyer of a civilization which no brain has designed but which has grown from the free efforts of millions of individuals.  
  
Hayek’s contemporary, the Ludwig von Mises comes to the same conclusion from a less epistemological and more economic angle in his masterpiece *Human Action.*  
  
Human action originates change. As far as there is human action there is no stability, but ceaseless alteration…The prices of the market are historical facts expressive of a state of affairs that prevailed at a definite instant of the irreversible historical process….In the imaginary and, of course,  
  
unrealizable state of rigidity and stability there are no changes to be measured. In the actual world of permanent change there are no fixed points…  
  
Both Hayek and Mises believe that the knowledge sought by constructivists is unattainable. It is not possible to plan the dynamics of tomorrow based on those of yesterday because people’s preferences and other circumstances are unforeseeable, even by the people involved; guesses are possible, but knowledge is not. Even a small thing, like the price of bread yesterday does not give knowledge of the price of bread tomorrow because it might skyrocket due to a flour shortage or a change in people’s priorities.  
  
Using a static photo of yesterday’s society to engineer the future goes against a basic tenet of human action and human nature: inevitable change. Inevitable change is a fundamentally difference between human beings and the physical objects examined by the hard sciences upon which the constructivists based their social theory. A scientist can learn everything he needs to know to predict the behavior of a rock because the rock is static over time. Water continues to have the same molecular structure, and it continues to be defined by constants such as the law of gravity. But society does not consist of invariable objects. The behavior of human beings is based on altering preferences, emotions, and psychological responses that can be conflicted or hidden even from the people who are acting. Human beings cannot be neatly categorized, stacked, and made to obey the laws of science. Society consists of unpredictable individuals who react to changing circumstances. They are not rocks or water.  
  
There are two ways for social theorists to approach the waywardness of unforeseeable man. They can accept the nature of human beings and work their theories around it, or they can try to change the nature of man to fit their theories.  
  
Constructivists choose the later option, with the new Soviet Man or Soviet Person being one manifestation of their theories. The new Soviet Man was deemed to be the logical evolution of human beings under communist rule. In his book *The Mass Psychology of Fascism* (1933), the German psychoanalyst Wilheim Reich asks, “Will the new socio-economic system reproduce itself in the structure of the people's character? If so, how? Will his traits be inherited by his children? Will he be a free, self-regulating personality? Will the elements of freedom incorporated into the structure of the personality make any authoritarian forms of government unnecessary?”  
  
Human nature, like society, would be reconstructed by those in power. The new Soviet man was an archetype or ideal human being with specific characteristics that would be designed by and evolve out of communism. The new human nature would be shared by all Soviet people irrespective of factors such as differing cultural or ethnic backgrounds. The communist characteristics included selflessness, enthusiasm for communism, physical health, collectivism, and  
  
discipline. There was also to be a new Soviet Woman, the likes of which the world had never seen before—self-sacrificing and devoted to revolutionary ideals.  
  
By contrast, Hayek works dispassionately with human nature as he observes it to be—self-interested and individualistic. He views social engineering as more than merely impossible. It is also tremendously destructive because it is the antithesis of a natural society, and it destroys the liberal institutions that had evolved to serve individuals rather than the state.  
  
Hayek knew first-hand the hideous consequences of central planning. He had witnessed the devastation of classical liberalism by two world wars, but especially by World War I that had shattered the mold of the free market. Wartime government had clamped centralized control over the private sector to ensure the flow of armaments and other “necessary” goods. Money had been drastically inflated and reduced in value to pay for massive military build-ups. War strangled the flow of free trade, which classical liberals thought was a prerequisite to peace between nations, as well as the prosperity of individuals. Hayek watched as the centralizing machine of 20th-century statism destroyed the promise of 19th -century classical liberalism.  
  
In rebuttal to constructivism, Austrian economists describe how institutions in a healthy society arise spontaneously. The descriptions often begin with simplistic models to illustrate a basic principle or point—how a path is forged through a field, for example. One person takes the shortest route across an overgrown field, and his passage leaves a crude trail of trampled grass behind. As a matter of convenience, the next person who crosses the field uses the rough path, which becomes more clearly established as a result. Each person who subsequently crosses contributes to making the path more distinct and easier to walk. No one constructs the path intentionally or as a service to other people; it is simply in each person’s self-interest to use the easiest route across the field. Nevertheless, the self-interested reinforcement of the path benefits everyone who walks the field thereafter.  
  
One of Mises’s earliest works, *Nation, State and Economy* (1919) analyzes how much more complex social phenomena—such as language—were also the unintended consequences of individual interactions. No committee or central authority decided to invent human speech or to publish a dictionary, let alone to design a specific language like English. Without benefit of law, individuals began communicating in order to get what they wanted from each other. The sounds being uttered gradually became more redefined and varied, even as the meanings of specific sounds became more widely recognized. Language evolved.  
  
Hayek develops a similarly sophisticated system of social theory to explain how all of society’s institutions naturally evolve from the bottom up—from the voluntary and unplanned interactions of individuals—rather than from the top down—from experts or the powerful who imposed their will. Natural institutions, Hayek maintains, are the collective but unintended results of human interaction: “the result of human action but not of human design.” Even complex social  
  
phenomena—such as writing, religion, or money—are the unintended consequences of human interaction. The alleged efficiency of government programs paled by comparison, to say the least.  
  
Constructivists counter-argue that an unplanned society is chaotic and wasteful. With sufficient knowledge and a scientific approach, they believed a perfectly efficient society could be engineered. No surpluses, no scarcities, no waste, no unemployment. Stock markets would not crash, and currencies would not fluctuate, except when they were supposed to do so. Society could be constructed so that its members walked in unison toward the same allegedly desirable social goals, just as they had marched in unison as soldiers toward victory in war.  
  
Mises’s answer to constructivists would recast the concept of individualism. **The New Austrian Individualism**  
  
A new conception of individualism arose in response to a theory that accompanied constructivism. Social holism became popular in the early twentieth century. Social holism claims that systems must be viewed as wholes rather than as collections of their parts, and a whole’s dynamic differs from the sum of its parts. In short, the collective is greater than and different from the units that comprise it. A holistic analysis of society usually begins with a study of the collective, not the individual, and it assumes that the behavior of the individual is determined by the collective. Individual behavior is defined by the category or properties of the class that is its context. Society is more than the sum total of the individuals who constitute it.  
  
Austrian economists claim the opposite. Society results from and it is explained by the behavior of the individuals who collectively *are* society. Society has no independent existence apart from its individual members, all of whom act on their self-interest. Self-interest is not equivalent to selfishness, however, as traditionally selfless acts—giving to charity, helping a neighbor, sacrificing for family—are frequently viewed by individuals as behavior that enriches life. In what seems like a paradox to some, traditionally selfless acts are often undertaken as a matter of self-interest.  
  
Marxists accuse those who reduce society to individuals of being atomistic; that is, they are said to splinter society into unconnected and isolated units so that society does not truly exist. In response, some Marxists go so far as to assert that it is the individual, and not society, who is the true abstraction. That is, individuals do not exist without a surrounding society that defines them and constructs them. Mises observed of this position, “The notion of an individual, say the critics, is an empty abstraction. Real man is necessarily always a member of a social whole.”  
  
Karl Marx argues a point similar to this by using a Robinson Crusoe scenario, which is a popular way to construct an argument about human nature from its absolute basics—man in isolation. An individual who is born and abandoned on a desert island, Marx contends, will be more of a potential human being than an  
  
actual one. (Some socialists, like Hegel, argue that man himself was an abstraction.) Marx makes a distinction between "human nature in general" and "human nature as modified" by historical periods of epochs. Two types of human drives exist: ones that are fixed like hunger, and ones that "owe their origin to certain social structures and certain conditions of production and communication." Marx’s point is that, beyond inherent characteristics like instinct, human nature is a social construct defined by social context; society creates the humanity of its individual members. This meant society could construct what Marx considers to be the right type of humanity—like the new Soviet man—if the institutions of society are thoroughly oriented toward achieving this goal.  
  
Classical liberals argue the opposite. A person raised in isolation will still be a realized human being with human characteristics far beyond a drive for the basic needs of survival. For example, Crusoe will have a scale of preferences that economists call marginal utility, and he will act to achieve the highest one first; he will get water to drink before water to bathe in. He will have curiosity and an ability to feel sorrow. Without social interaction, huge parts of his potential will never develop, of course, but this does not make him less human or make him lack an individual will and personality. Collectives offer incentives for specific behaviors, but they do not define humanity. Human beings and their innate nature define collectives. Under Mises’s analysis, this simple argument evolves into a sweeping new approach to individualism.  
  
As a general social theory, individualism means the advocacy of individual freedom as opposed to the power of a collective, especially the state. As a personal matter, it means people make their own peaceful choices and take responsibility for them. Although an individualist is sometimes characterized as a loner, the opposite is usually true because human beings are social animals who crave interaction almost as much as they do food and shelter. Cooperation and trade are the realization of individualism because they allows the individual to express preferences and satisfy needs. “Once it has been perceived that the division of labour is the essence of society,” Mises observes, “nothing remains of the antithesis between individual and society. The contradiction between individual principle and social principle disappears.”  
  
A core concept of Mises’s philosophy of individualism is “praxeology”—a word meaning “deed or action,” which derives from ancient Greek. Its modern meaning is “the study of human action, based on the belief that human behavior is purposeful as opposed to unintentional or reflexive like blinking.” Except for reflexive behavior, people act because it is in their self-interest to do so, if only to remove what Mises calls “felt uneasiness.” It is true both of shifting in a chair to relieve an aching muscle and of investing in the stock market to provide for retirement. All human action is individual, purposeful, and self-interested.  
  
Mises then delineates the theory most associated with him. His masterpiece *Human Action* describes methodological individualism:  
  
First we must realize that all actions are performed by individuals… If we scrutinize the meaning of the various actions performed by individuals we must necessarily learn everything about the actions of the collective whole. A social collective has no existence or reality outside of the individual members’ actions. For example, the individuals who comprised a family interacted with each other within a specific context and sum of those individual interactions was what constituted the abstraction ‘family’.  
  
Mises uses the nonideological or neutral concept of methodological individualism to describe the basic nature of human action, as well as to deconstruct the abstraction of the state. If only individuals act, then everything the state does or is can be reduced to actions taken by the individuals who collectively constitute the state. In a famous example, Mises explains, “The hangman, not the state, executes a criminal. It is the meaning of those concerned that discerns in the hangman’s action an action of the state.” Individuals who look at the hangman see the state only because they have accepted the abstraction called “the state” to provide a framework in which to understand his behavior. Without the context of the state, the hangman would be viewed as a murderer rather than as an instrument of justice.  
  
Mises readily admits that the hangman acts in relationship to other individuals such as judges who also constitute the state; the hangman is part of the penal system. He may also act under duress because a refusal to execute a criminal could cause dismissal and hardship for his family. But praxeology is concerned only with an individual’s behavior, which is the starting point for and the only observable proof of individual preference. Praxeology does not address the social or psychological influences upon human action; that is for another field of study to do. Mises simply states that all actions are initiated by and carried out through individuals who act to advance their own self-interest. Otherwise explained: It is not the state but the individual executioner who raises the deadly axe. It is *his* arm, and he cannot escape responsibility for the actions he chooses to take. (Of course, this does not exonerate other individuals involved, again such as judges.)  
  
If only individuals act, then collective behavior is nothing more than the sum total of the actions and interactions of the individual members. It is common to speak of collectives or abstractions as though they were separate entities that are more important than their members. It is common to speak of them as though they acted and thought as a group. When a man is arrested, for example, the news reports that he was picked up by the police department. In reality, the man was picked up by an individual policeman after an individual judge had signed a warrant. When a battle occurs, the newspaper reports a military advance when individual soldiers were the ones who actually advanced. Groups do not act or think. Individuals do, and sometimes they choose to obey a central authority, which gives the impression of collective thought.  
  
Methodological individualism sounds antisocial to some. The impression could be bolstered by Mises’s use of a Robinson Crusoe framework as well—man in isolation—to explain praxeology. This use does not suggest that human beings are  
  
antisocial, however. Quite the opposite. The Crusoe thought experiment is meant only to remove the complicating factor of interpersonal relations while pursuing the question “what is human action qua human action?” It is similar to a scientist returning to fundamental principles in order to understand a dynamic. The Crusoe conclusions are then applied to the real world of society.  
  
[*Human Action*](https://mises.org/library/human-action-0/html) [explains](https://mises.org/wire/mises-individual-within-society) :  
  
If praxeology speaks of the solitary individual, acting on his own behalf only and independent of fellow men, it does so for the sake of a better comprehension of the problems of social cooperation. We do not assert that such isolated autarkic human beings have ever lived and that the social stage of man’s nonhuman ancestors and the emergence of the primitive social bonds were effected in the same process. Man appeared on the scene of earthly events as a social being. The isolated asocial man is a fictitious construction. (Note: Autarky is the characteristic of self-sufficiency.)  
  
Society increases individualism because it moves human beings further from the animal level, allowing each person to reach his potential and to achieve goals that are impossible in isolation. Interaction is also a survival mechanism. Jointly- produced wealth can be far more abundant than privately-produced wealth, for example, which leaves everyone involved richer and more likely to thrive. It is precisely this sort of cooperation that led mankind to dominate the planet. Human beings are profoundly social and the rewards of society are immense.  
  
Mises argues that collectives—such as family or society—are invaluable abstractions that allow people to understand and to describe their interactions with other individuals. Collectives provide the specific context in which to make sense of individual action and shifting group dynamics. He explains, “Methodological individualism, far from contesting the significance of such collective wholes, considers it as one of its main tasks to describe and to analyze their becoming and their disappearing, their changing structures, and their operation. And it chooses the only method fitted to solve this problem satisfactorily.” Individualism is the key to understanding collectives. It is decentralization applied to real and everyday life.  
  
And, yet, if only individuals act, how can collective institutions arise? The answer returns to the concept of spontaneous order advanced by Hayek, among others.  
  
**Spontaneous Order in Economic Production**  
  
The analysis so far has focused on how institutions and society can arise— arguably, how a healthy system *must* arise—as a function of the free market and free association. The dynamic is easy enough to describe with reference to an isolated tribe. But can the framework of individualism be expanded from a local level to a global one to provide for mechanisms like international trade where individuals most often do not know each other nor interact directly?  
  
On the local level, cooperation is usually intentional. Farmers sell produce to local markets; a team of programmers design the latest, greatest app; a hospital coordinates staff schedules, with doctors consulting with patients; truck drivers deliver goods to a given address; a start-up business contracts with a marketing expert. These are intentional and direct contacts within the limited context of one society.  
  
How can individuals in foreign countries who do not know each and do not even speak the same language hope to cooperate in the creation of anything? Isn’t an overriding authority necessary for the coordination of strangers in global trade? If so, then the overriding authority—that is, government—is also required domestically because all modern nations live or die on global trade. A requirement for centralization reintroduces the state as a powerful policeman of the economy.  
  
Global trade does not require oversight. It may seem paradoxical to say that strangers will unknowingly cooperate to mutual benefit because it is in their own self-interest to do so. But that’s what happens. The cooperation is not aimed at creating society or institutions. Each participant aims at enriching himself.  
  
[“I, Pencil”](http://oll.libertyfund.org/titles/read-i-pencil-my-family-tree-as-told-to-leonard-e-read-dec-1958) is a brief essay by Leonard Read, founder of the Foundation for Economic Education. It is a tale told from the perspective of a pencil that chronicles its own creation. The saga begins with the harvesting, mining, and forming of raw materials in far away lands, including cedar, glue, wax, graphite, lacquer, and pumice. Foreign workers meet quotas for the variety of businesses for which they labor in order to make money to feed their families. They may not know the final destination or purpose of the raw materials; they may not care.  
  
The crews of foreign ships transport the materials to a destination where dock workers unload the containers, and truckers convey them to a pencil-making factory. Individuals in a crew and on the dock are probably indifferent to or ignorant of the cargo contents because they are paid the same wages whatever the shipment. Up to this point, everyone involved in the prepencil manufacturing cares nothing about pencils themselves; they do not even know the part they play in the manufacturing process. Their purpose is to earn a living, pure and simple.  
  
The raw material arrives at a pencil factory, where self-conscious cooperation toward creating the pencil may begin. Although pencil factories today are probably automated, this does not mitigate the human cooperation necessary to produce a pencil. Even automated factories require management oversight, equipment providers, repairmen, janitors, investors, and an array of other individuals to produce one pencil. This does not mean these people know each other, however, nor do they necessarily care about pencils. They want to profit through wages or returns.  
  
The end product of a multitude of strangers who act solely in their isolated self- interest is a pencil.  
  
In his introduction to “I, Pencil,” the Nobel-winning economist Milton Friedman writes:  
  
None of the thousands of persons involved in producing the pencil performed his task because he wanted a pencil. Some among them never saw a pencil and would not know what it is for. Each saw his work as a way to get the goods and services he wanted—goods and services we produced in order to get the pencil we wanted. Every time we go to the store and buy a pencil, we are exchanging a little bit of our services for the infinitesimal amount of services that each of the thousands contributed toward producing the pencil.  
  
It is even more astounding that the pencil was ever produced. No one sitting in a central office gave orders to these thousands of people. No military police enforced the orders that were not given. These people live in many lands, speak different languages, practice different religions, may even hate one another—yet none of these differences prevented them from cooperating to produce a pencil. How did it happen? Adam Smith gave us the answer two hundred years ago.  
  
Smith’s answer was the “invisible hand.” The term is introduced in the book Smith considered to be his masterpiece, [The Theory of Moral Sentiments](http://www.econlib.org/library/Smith/smMS.html), and it reappears in his subsequent work, [Wealth of Nations](http://www.econlib.org/library/Smith/smWN.html) . The invisible hand refers to the unintended but immense benefits to society that flow from people who act in their own self-interests, especially economic self-interest, in the manner described by “I, Pencil.” Almost invisibly, order arises out of the self-serving actions of individuals who cooperate with others, whether intentionally or not, whether knowingly or not. The natural order declines when voluntary interaction is hindered by government interference. In short, liberty brings civilization and prosperity; power produces conflict and poverty.  
  
“I, Pencil” and the “invisible hand” clarify another confusion that can come from discussions of spontaneous order; namely, the definition of spontaneous order as the “result of human action but not of human design” is a bit ambiguous. Clearly, there is designed order within the chain of activities necessary to make a pencil. The workers who gather the raw materials work for a designed company with a specific goal, as do the ship and dock workers. The factory is a highly-designed machine.  
  
The phrase “the result of human action but not of human design” does not deny that production requires design. “Not of human design” means that no central planner organizes or coordinates the various stages of production. All organization and structure are provided by those individuals who, at various points, independently own, manage, or work for the endeavors that result in a pencil. Without an overseeing authority, they coordinate with each other and function well. Indeed, an overseeing authority would be an obstacle to their efficiency. The phrase “the result of human action but not of human design” seeks to explain how  
  
complex networks can arise out of the apparently unintentional cooperation—a cooperation upon which modern life depends.  
  
“Not of human design” refers to the army of strangers whose self-serving and ostensibly uncoordinated actions deliver a stunning array of goods, with no conscious intention of doing so. They act in their own self-interest. As a result, the average person enjoys a higher living standard today than nobles did in the past, including fruit out of season and a magnificent array of wine to accompany it. The cooperation also binds people together in peace because they have a vested interest in continuing to profit from each other through trade. Multiply this cooperation by the many millions of interactions that create millions of products and services, and the collective dynamic becomes a glue that holds societies together and allows global trade to emerge—trade that is the engine of peace.  
  
So far, spontaneous order has been applied to economics—the bedrock of society. Within spontaneous order, economics is often called catallaxy.