

Chapter 4: Ethics and Economic Progress: Innovation and a Better Life

These revolutions periodically reshape the existing structure of industry by introducing new methods of production—the mechanized factory, the electrified factory, chemical synthesis and the like; new commodities, such as railroad service, motorcars, electrical appliances; new forms of organization—the merger movement ...

Every piece of business strategy acquires its true significance only against the background of that process and within the situation created by it. It must be seen in its role in the **perennial gale of creative destruction**; it cannot be understood irrespective of it or, in fact, on the hypothesis that there is a perennial lull (Schumpeter, J. [1942/2012], *Capitalism, Socialism, and Democracy* [KL 1519–1521, KL 1844–1847]).

I. Introduction: On the Possibility of Progress

The previous two chapters help explain how communities with markets may have emerged in ancient times. Stable patterns of life emerge as rules of conduct emerge, are internalized, and passed on from one generation to the next. Such patterns include more or less peaceful relationships and more or less self-sustaining use of local resources, and at least a subset of “things” over which persons exercise control and are able to transfer that control from one person to another. The latter allows markets to emerge within and among communities, after the problem of fraud has been addressed, and some degree of specialization may emerge both within and among communities.

Some village and urban specialists may be said to reside in commercial societies insofar as they rely upon markets for their necessities as a blacksmith might buy his food from local farmers and his cloth from local millers, and his raw materials from local miners, and so forth. Small organization may emerge to undertake specific market activities such as transport of goods among communities, mining, or large-scale farming. In many cases, stable societies emerged in which the general pattern of life and its connection with the seasons were largely repeated for dozens of generations or more. Such communities were in “equilibrium,” in the sense that patterns of life within them changed little over the course of a century or in some cases dozens of centuries.

Such patterns of community life were commonplace around the world and for on the order of ten thousand years in rural agricultural communities, from roughly the period after settled communities and agriculture emerged until around the seventeenth century. At that point, possibly because of new ideas and norms associated with what many historians refer to as “the enlightenment,” rates of innovation and the extent of commercialization began to expand rapidly in Western Europe, and the centrality of farming in most people’s lives diminished and largely disappeared. The date at which this great acceleration of economic development began can be debated, but that it was far faster than anything previously observed in human history is not debated, nor debatable. Something changed in Western Europe during that period—indeed many things changed.

With the great commercialization, life for many began to depart from its annual cycle linked closely to the seasons. Both individual lives

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and patterns in communities began to resemble a spiral more than a circle, as new products and new modes of production were gradually introduced and lives and patterns of life were adjusted to take account of new possibilities. Urbanization increased and fewer and fewer people worked on farms. There was still agricultural and other patterns linked to the seasons—people had to eat—but every decade or every year was a bit different from the one before, rather than more or less the same as it had been for centuries.

Markets expanded at least in part because shipping became less costly and more reliable. Larger markets for both inputs and final goods increased the usefulness and profitability of team production and specialization, which expanded rapidly. Larger commercial enterprises became commonplace, and supply and sales chains became longer and more complex. And, gradually nearly all persons in the societies that experienced rapid economic development became participants in commercial societies—which is to say persons who depended on commerce for most of their necessities and luxuries.

The “new ways” that emerged over the course of one or two centuries were widely acknowledged to be better than the old, which was surprising to traditionalists and cultural conservatives in every town in village around the world. They had believed that social evolution or divine providence had reached perfection in their community—and that any deviation from the longstanding pattern of life would lead to disaster. This, by the way, could well have been true for most deviations from the productive rules upon which communities rest, given that so many communities lived near the edge of subsistence in earlier times. Instead, ma-

terial comforts proliferated as incomes generally increased new products and mechanical marvels were invented and refined: the steam engine, railroads, telegraph, telephone, phonograph, central heating, bathrooms, electric lights, and so on and so on.

That the “new: could be in some sense “better” was a radical idea and would not have been obvious or tolerated in all communities. The old ways, after all, had stood the tests of time and had been in place for ages, albeit with small adjustments over the centuries. Farmers and their employees became a relatively small minority of the producers in those societies, rather than the most common.

Although chapters 2 and 3 can account for much of the pattern of life that existed before the great acceleration, which was rule bound and reasonably comfortable, but they do not account nearly as well for the great acceleration.

Indeed, many community rules would have been hostile to both capital accumulation and innovation. For example, in most communities local norms would have included “do no harm” principles and maxims, which tend to block rather than support innovation because most economic innovations harm someone. Some market or firm is driven out of business as new ones flourish. Those harmed would naturally oppose the innovators and attempt to block it. Moreover, cultural conservatives would tend to oppose innovations that would tend to undermine the community’s long-standing norms and patterns of life. They would naturally fear an disruption that might take society back to the Hobbesian jungle or undermine their sustainable methods of providing food and other necessities. Subsistence farmers did not produce all that much

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more than needed for their family's survival and anything that undermined their pattern of life could threaten their family's and their community's survival. For all these reasons and others, disruptive forms of economic development would be resisted and widely deemed immoral.

However, it turned out that the cultural conservatives were not entirely right. Not all changes in norms or in patterns of life lead to disaster—even if others may or have done so. Distinguishing among changes for the better (progress) from changes for the worst (retrogression) turned out to be morally, intellectually, and economically important.

Chapter 4 explores how ethical dispositions affect assessments of economic development and how those assessments tend to affect two of the main engines of economic development: capital accumulation and innovation. If chapters 2 and 3 are ethical explanations for the emergence of attractive stable communities and early markets for agricultural products, chapter 4 can be regarded as an ethical explanation for the great acceleration that took place in Western Europe during the eighteenth, nineteenth and twentieth centuries.

At the heart of this acceleration are ideas about the good life and good society. Insofar as a particular series of changes are thought to bring one closer to the good life or move one's community in the direction of the good society, progress can be said to take place. Thus, ethics clearly plays a central role in personal assessments about whether a particular change or series of changes represents progress or retrogression. Insofar as those assessments affect personal decisions to accumulate capital and innovate or not, praise innovators or not, and/or to support pub-

lic policies that suppress or support innovation, such ethical dispositions also affect rates of economic development.

For example, a philosophical perspective that places material comfort at the center of both a good life and a good society is likely to conclude that economic development improves both life and society by increasing what economists call real income in the community of interest. On the other hand, a philosophical perspective that regards material comfort to be a distraction from a good life, rather than an essential feature of one, will be inclined to regard an increase in commerce and real income as either irrelevant or a retrogression, rather than progress. From such perspectives, material comfort may undermine virtue or divert time and energy into activities having little to do with a good life. Among the philosophers surveyed in Part III, Jeremy Bentham, for example, might be assigned to the “more material wealth is always good” category and Thomas More to the second.

In between are a variety of ideas about the good life and society that include times and places for both material comfort and asceticism. A particular development may be good or not, according to how it affects the full range of human interests or virtues as suggested by Amartya Sen (1999). In such cases, there will be tradeoffs that need to be accounted for when determining whether a particular economic development is progress or not.

Perhaps surprisingly, it turns out that progress is itself an ethical concept, rather than a technological one.

One might be tempted to claim, for example, that a new machine is progress if it can do everything that its predecessors can and “more.”

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However, “more” must be desirable or morally acceptable. A new production method that harmed more operators than previously ones would not be regarded as progress unless other benefits more than compensated for this new feature. Self-driving cars may be considered an instance of progress, because they make transportation easier and safer. On the other hand, critics may argue that such vehicles are instances of retrogression, because they undermine the character of drivers by simultaneously removing their responsibility for actions on the road and reducing their competence at the various skills required to drive their vehicles. If in the end, self-driving cars dominate the highways, those that have internalized the first conception of the good life would conclude that progress has occurred. Those that have internalized the second would be inclined to disagree, even if they themselves use self-driving cars.

To say that at least some changes in society are progress is to argue that some changes improve our character or our society. The metrics by which “improvements” are determined tend to be largely ethical in nature, because the principles for assessing merits of individual changes and series of changes tend to be ethical in nature. Has life improved or not? Has society improved or not?

II. A Digression on Equilibrium as Stability

The term equilibrium can be regarded as a reasonable description of a variety of systems at particular points in time, the orbits of the planets, the pattern of life in a stable ecosystem, the process of law making in a stable system of government, the pattern of production and exchange in a market with little innovation, and so forth. Change may take place

within such stable systems, but so gradually that it can be ignored without loss for most purposes of discussion, analysis, and human life—at least in the short run.

Within human social systems, equilibrium is an apt description of patterns of life that largely repeat themselves. Such repetition has long been evident with the agriculturally-linked pattern of life of typical subsistence farmers, the biological cycles of a human life: birth, aging, and death, and, more recently, the season driven inventory cycles of contemporary grocery stores and many other businesses. Indeed, the essential routines of farming-based societies did not change quickly or radically for centuries at a time. They were largely determined by the seasons, climate, and local domesticated crops and animals. Similarly, an individual’s duties within a given community varied systematically with one’s age and sex. Community celebrations tended to be associated with transitions from one season to the next, important religious or military events, and also with the cycles of human life as with birthdays, marriages, and deaths.

Modest improvements in crops and plows did occur during the past several thousand years, but for the most part life on farms went on as before. With respect to urban life, “fashionable” and “practical” food, spices, and clothing varied somewhat as innovations emerged, but the broad outlines of production, exchange, expectations, learning, clothing, shelter, and life itself were—at least from a twenty-first century perspective—surprisingly stable and repetitive. There were shopping streets and manufacturing districts, there was a range of wealth, status, and political authority, but the pattern of life for persons and families at a given level within those rankings was broadly similar to those in the recent and more

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distant past. As a first approximation, such communities were in long run equilibrium, and arguably had been for centuries—ignoring the occasional war, plague, famine, or innovation in fashion.

Stable patterns of life were supported by a stable knowledge base and collection of internalized ethical dispositions. Successive generations learned more or less the same rules and facts of life from their parents and teachers, who passed on the received wisdom of their age to their children and students. In the absence of innovation, successive generations of scholars and intellectuals debate the same properties of nature, the divine, epistemology, and ethics and reached more or less similar conclusions to previous generations of wisemen and scholars. Such persons may infer that the well-plowed furrows of thought and conduct “clearly” represent the best that could be done on earth—and some may conclude that such patterns of life were products of divine intent and approval.

Stable patterns of life allow historians and anthropologists to describe various time periods and states of development with short phrases such as the Stone Age, the Bronze Age, the Iron Age, the medieval period, classical Greece, and so forth. The societies so described had (and in some cases continue to have) stable world views (ethical, natural and super-natural beliefs), patterns of production and consumption, and systems of government and law. Historians referred to such stable periods with terms such as “age,” “era,” and “period.”

Shifts from one “age” to another are often referred to as “revolutions,” as with the shift from the Paleolithic to the Neolithic period, the shift from the Stone Age to the Bronze Age and from the Bronze to the

Iron Age. Modest shifts in technology were assumed to induce social revolutions of previously stable patterns of life. However, it could be argued that even those technological changes little altered the basic patterns of agrarian life.

On the Slightly Different Notions of Economic and Reflective Equilibria

Economics as a field of study emerged at roughly the same time that economic development accelerated in Western Europe and its various colonies and former colonies. Adam Smith’s classic *Wealth of Nations* was published in 1776. John Stuart Mill’s widely read textbook was published in 1848, and Alfred Marshall’s neoclassical text in 1890. Smith and Marshall both held positions in philosophy rather than economics, because economics had not yet emerged as a proper area of specialization at most universities.

Neoclassical economics with its theory of prices was developed to explain and evaluate relatively stable social and economic systems that occurred during industrial revolution of the late nineteenth and early twentieth centuries. It acknowledged that change occurred, but focused for the most part on settings in which it did not occur—which is to say, in an other things being equal environment. Relevant changes would shift markets from one equilibrium to another, but equilibrium was the “natural state” of markets. That comparative statics tradition continues to the present in most economic textbooks. There is, for example, no use of the words progress or growth in Drebeu’s (1959) classic book on general equilibrium theory. Markets reach equilibrium through price adjustments

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that set supply equal to demand in all markets in both the short and long run.

Neoclassical economics provided an explanation for the existence of an equilibrium in markets analogous to that described above for social equilibria: what von Mises referred to as “equally rotating systems,” Schumpeter as “the circular flow,” and Debreu as a “general” equilibrium. A vector of prices can generate an all-encompassing equilibrium across all markets in both production and exchange. Such an equilibrium can be shown to be a consequence of rational choice in well-known circumstances in which market prices are taken into account by individuals who know what they want and simply have to determine how best to attempt to satisfy those wants. Neoclassical economics demonstrates that such choices can be used to characterize individual, firm, and market equilibria. Integrating all of these decisions into a single unified framework was a major intellectual achievement.

However, no innovation occurs in Debreu’s classic characterization of a commercial society. The number of goods and services is finite and stable. In such circumstances, there is often a unique best choice for every consumer and producer.¹

¹ Technically, Debreu’s characterization of general equilibrium allows for multiple best choices among which one is indifferent. Other slightly less general textbook proofs assume that there are unique best choices for all under a given price vector. Neoclassical growth theory emerged in the 1950s and built on and extended the work of Robert Solo (1970), rather than that of Schumpeter. Solo’s theory also neglects the possibility that innovation would affect the nature and number of the products brought to market. Growth in Solo models is generated by capital accumulation and improvements in production technologies that allowed existing

Perhaps surprisingly, such equilibrium concepts are also commonplace in ethics, theology, and ideology. A philosopher reaches a general reflective equilibrium, a set of conclusions that are stable given the information and time spent analyzing it. The word progress does not appear in Rawls’s (1971) *Theory of Justice*. The word innovation appears just a single time. Principles of justice emerge from a common reflective equilibrium that is supposed to emerge by all persons when behind a veil of ignorance. Of course, Rawls is not alone. Ethical principles are regarded to be timeless by most philosophers, whether because they are true—as a natural law would be—or because they are products of divine inspiration or penetrating epiphanies.

It was in reaction to equilibrium-based economic theories that Schumpeter suggested a new model of economic progress, and the finality of the claims made by many philosophers of the nineteenth century that induced Spencer to develop his evolutionary theory of ethics, but it is clear that their ideas failed disturb their fields’ respective equilibria significantly.²

goods and services to be produced with fewer resources. Equilibrium growth paths in a Solo economy are characterized by more of the same, rather than disruptions in the patterns of life and society.

² More recent critiques of the equilibrium view of social continued through the twentieth century, as in Schackle (1961), Kirzner (1973), Cowen and Fink (1985), Grossman and Helpman (1991), and Hanusch and Pyke (2007). It should be acknowledged, however, that these critiques and modeling extensions were minority views in economics for most of the twentieth century. Growth was acknowledged to be possible, but a tendency toward equilibrium growth paths was nearly always assumed.

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Replacing the Idea of Equilibrium with that of Progress

Part of the attraction of the idea of equilibrium is that equilibria sound safe and comfortable, which are features of attractive societies. After a perturbation or crisis, a return to the preexisting equilibrium patterns of life tends to be regarded as “good” or desirable. After all, most persons prefer the certainty and comforts of the recent past to the uncertainties of radical change, which can easily cause a social collapse for reasons implied by chapter 2. Many of our personal and social routines were adopted because they avoided or solved problems. Solutions are often painfully worked out, one at a time, through a long process of trial and error. Why give up on what works?

As a consequence, innovations are discouraged in stable societies. They are regarded as mistakes to be avoided, deviant behavior, or at best silliness soon to disappear, rather than new possibilities to be fully explored. Several Chinese innovations were evidently underappreciated because of such conservative dispositions, including at least two innovations that subsequently changed the world: steam propulsion and gun powder.³ Europe’s medieval period was also characterized by social conservatism.

³ Note that the term “under-appreciated” is normative and for most persons in the West an unexceptional interpretation of these Chinese “mistakes.” This perspective itself reveals a more appreciative perspective on scientific and economic development, that is to say incorporates the idea of progress. A true conservative would regard the Chinese behavior as appropriate and unexceptional.

The idea of the universe which prevailed throughout the Middle Ages, and the **general orientation of men’s thoughts were incompatible with some of the fundamental assumptions which are required by the idea of Progress**...Again, the medieval doctrine apprehends history not as a natural development but as a series of events ordered by divine intervention and revelations. If humanity had been left to go its own way it would have drifted to a highly undesirable port, and **all men would have incurred the fate of everlasting misery** (Bury, J. B. [1921/2011, *The Idea of Progress: An Inquiry into Its Origin and Growth* [KL 321–332]).

To add to the cumulated understanding of the world with innovations requires seeing possibilities previously unseen or at least ignored. That millions of intelligent men and women have previously considered such possibilities implies that relatively few innovations are obvious or anticipated. Nonetheless, that previous innovations create an augmented base of knowledge and circumstances implies that some previously neglected or ignored possibilities were recognized, these often create new possibilities, and that current innovations may cause still others to be imagined and a subset realized. Innovation itself thus tends to both encourage and support further innovation.⁴

By the time that Schumpeter and von Mises had worked out theories that allowed for innovation, it had become obvious that the new more extended markets that had emerged in the late nineteenth and early

⁴ Isaac Newton is known for this expression “If I see further it is only by standing on the shoulders of giants,” written in a letter to Robert Hooke in 1676. The possibility of progress, in effect, requires Newton’s giants to grow taller through time, revealing new possibilities previously unseen. It is likely to be this rather than increasing degrees of genius in successive generations that account for it.

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twentieth centuries were engines of transformation, rather than traditional circular flow or evenly rotating societies. Constant innovation had replaced a circular flow with a spiral as new products and production methods alter patterns of consumption and production in a few families and markets at a time.

Schumpeter termed this process “creative destruction” (*schöpferische Zerstörung*). Major innovations create new patterns of life that destroy or at least radically alter earlier ones, as with the indoor plumbing, steam engine, factory, automobile, jetliner, and internet. Lesser innovations also induce significant modifications of previously existing patterns of life as with central heating, lightbulbs, wrist watches, radios, washing machines, air conditioners, microwave ovens, and cell phones.

However, whether the process of creative destruction generates progress or not depends on one’s views concerning the good life and good society.⁵

⁵ J. B. Bury (1921) provides an important intellectual history of the idea of general progress written at about the same time as Weber, Schumpeter, and Von Mises were analyzing economic development. Bury notes that two broad conceptions of progress were present in the West during the nineteenth century (ch. 12). “Theories of progress are thus differentiating into two distinct types, corresponding to two radically opposed political theories and appealing to two antagonistic temperaments. The one type is that of constructive idealists and socialists, who can name all the streets and towers of ‘the city of gold,’ which they imagine as situated just round a promontory. The development of man is a closed system; its term is known and is within reach. The other type is that of those who, surveying the gradual ascent of man, believe that by the same interplay of forces which have conducted him so far and by a further development of the liberty which he has fought to win, he will move slowly towards conditions of increasing harmony and happiness. Here the development is

III. Capital Accumulation, Community Norms, and Economic Growth

Given that notions of progress have ethical foundations and that some ethical theories imply that a steady increase in material comforts is an instance of progress, we next examine different characterizations of the emergence and key properties of commercial societies, beginning with the neoclassical growth model. Economic development can be induced in a number of ways. The least disruptive of these was the one first incorporated into economics. A person can move more dirt with a shovel than his hands, with a wheelbarrow than without, and with a steam shovel or bulldozer than with a wheelbarrow. Capital accumulation thereby increases the possibilities associated with the activity of digging and frees labor for other purposes. Both effects tend to increase the output and the overall demand for goods and services.

Although the importance of capital had long been recognized, the first mathematical models of growth based on capital accumulation were worked out shortly after WWII. The first models assumed that there was just one homogenous type of capital, usually imagined to be physical equipment, to avoid mathematical complications. Human capital (knowledge, training, experience, and organization) was added to the second generation of neoclassical growth models. As human and physical capital accumulates, economic output increases because two broadly used

indefinite; its term is unknown, and lies in the remote future. Individual liberty is the motive force, and the corresponding political theory is liberalism” (p. 236). The entire book is available online from the Gutenberg

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inputs for production become more plentiful. As a consequence, consumers can obtain more of the products they are familiar with, especially those produced through capital, skill, or knowledge-intensive methods.⁶

Community norm can be regarded as a type of human capital, although that possibility was rarely if ever mentioned. Nor was the role that normative ideas play in capital and knowledge accumulation analyzed. Capital accumulation is not simply about saving or hoarding, but about saving or accumulating particular things and/or the money to purchase things that can be used to increase the effectiveness with which goods are produced for sale or moved from a point of production to a point of sale. Such hoarding would generally be culturally supported only in societies that emphasized long term material comfort and the accumulation of wealth. Those that believed that the good life was realized either through immediate gratification, leisure, or simple (ascetic) lifestyles would tend to be less supportive of capital accumulation.

Table 4.1 illustrates the effects of community norms on rates of capital accumulation, when the accumulation of capital has positive spillovers on other enterprises, a property that economists term positive technological externalities. The payoffs can be thought of as indices of each commercial organization's (firm's) output or net revenues.

Table 4.1: Technological Externalities and the Accumulation of Capital

Robert Accumulation of Capital

		8 unit	6 units	4 units	2 units
Paul Accumulation of Capital	8 units	(P, R) 6, 6	(P, R) 4, 7	(P, R) 2, 8	(P,R) 1, 7
	6 units	7, 4	5, 5	3, 6	2, 5
	4 units	8, 2	6, 3	4, 4	3, 3
	2 units	7, 1	5, 2	3, 3	2, 2

The first setting examined in which a community's norms are neutral with respect to capital accumulation. Capital accumulation is assumed to be self-financed, which is to say financed out of each firm's own net revenues. The existence of technological externalities implies that each enterprise can in a sense free ride off the other's capital accumulation, because the capital accumulation of the other increases its own productivity or lowers its production costs. This causes less than the output or profit maximizing level of capital to be accumulated in the community of interest. Nonetheless, non-trivial capital is accumulated at the Nash equilibrium. However, joint net revenues are not maximized because neither takes account of the effects of their own investments on the returns of the other enterprise.

Now we add the effects of social norms into the decision-making processes at the two enterprises. Table 4.2 illustrates the effects of community norms that generally oppose capital accumulation. The community may, for example, prefer that money be devoted to funding local public works such as a cathedral, donated to the poor, used to help fund fes-

project: www.gutenberg.org/files/4557/4557-h/4557-h.htm#link2HCH0011.

⁶ For an overview of early growth theory grounded in capital accumulation see Solow (1970). For an early model of economic development that includes human capital accumulation, see Romer (1990).

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tivals on community holidays, or simply paid out as wages or shares to the folks working at each enterprise.

Table 4.2: Technological Externalities, Social Norms, and the Accumulation of Capital

		Robert (Accumulation of capital)			
		8 units	6 units	4 units	2 units
Paul Accumulation of capital	8 units	(P, R) 6-G, 6-G	(P, R) 4-G, 7-G	(P, R) 2-G, 8-G	(P,R) 1-G, 7
	6 units	7-G, 4-G	5-G, 5-G	3-G, 6-G	2-G, 5
	4 units	8-G, 2-G	6-G, 3 -G	4-G, 4-G	3-G, 3
	2 units	7, 1-G	5, 2-G	3, 3-G	2, 2

In this case, guilt may be associated with capital accumulation and less would be accumulated. For example, if $G > 1$ the new equilibrium is the lower righthand cell (2,2).

On the other hand, if praise or virtue were associated with the accumulation of capital rather than guilt—as argued by Max Weber with respect to the Protestant ethic—then capital accumulation would be somewhat larger than in the original case, and more technological economies in production would be realized. This virtue payoff might be large or increase with the extent of capital accumulation and encourage sufficient internal savings that the net revenues of both enterprises are maximized. Here one might imagine “market towns” that take pride in the size of their markets, “mill towns” that take pride in the number and variety of their mills, “steel towns” that take pride in the size of their steel

mills or the “rail towns” that take pride in the extent of their rail networks, or “electric towns” that take pride in the extent to which they are electrified, or “digital towns” that take pride in the extent and speed of their internet or cell-network services.

Such norms clearly affect a community’s economic development insofar internalized norms and praise induce more rapid capital accumulation and these increase a community’s material comforts and reserves. However, the extent of the market networks would still tend to limit the extent to which large scale enterprises could be profitable.⁷

IV. Innovation, Community Norms, and Progress

Increases in the production of familiar products through more capital-intensive methods are only one of the many forms of economic progress. Much, perhaps most, of the economic development associated with a commercial society occurs through the invention of new goods and services, refinements in the nature of goods and services previously produced, and innovations in production methods rather than production of more of the same old things through long-standing production processes. Although sailboats and container ships, horses and automobiles, sailing ships and jetliners, all provide “transportation services,” they

⁷ Buchanan and Yoon (1994) provide a very nice collection of essays on the possibility of increasing returns that may be generated by technological externalities and increased specialization. Buchanan’s introductory chapter provides a very nice over view of the issues at stake for theories of economic development.

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are produced with quite different inputs, are arguably substantially different services, and support very different lifestyles.⁸

Joseph Schumpeter (1883–1950) was among the first to analyze the innovation-induced growth characterized by commercial societies in the late nineteenth and early twentieth centuries. Writing in the early twentieth century, Schumpeter argued that innovation and disruption were essential features of economic development.

The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers' goods, the new methods of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates (Schumpeter, Joseph [1942 / 2012-12-19]. *Capitalism, Socialism, and Democracy* [Kindle Locations 1823–1825], Routledge, Kindle Edition).

Innovation is generated by creative men and women who refine old methods and products or invent entirely new production methods and products. Such new and improved products obviously compete with older products for sales and inputs. Successful product introductions thus affect the equilibrium price vector and pattern of consumption and employment. Some prices rise and others fall. Some incomes increase and others are reduced. Similarly, new production methods such as the Bessemer process, assembly line, or computer-aided manufacturing reduce the cost of a subset of existing products, which either bankrupts their less efficient rivals or induces them to make new investments in

⁸ Oddly enough, jet-setters have a nostalgic fondness for sailboats and horses.

plant and equipment to remain competitive. It also creates new possibilities for other products benefit from the new lower production costs and prices. Late in the twentieth century, a variety of Schumpeterian models of economic growth came into use, supplanting and supplementing the Solo models. In these models, innovations (productivity shocks) introduce both business cycles and economic growth.⁹

For the purposes of this book, it is important to understand that the process of creative destruction nearly always violates the “do no harm” principle common to a variety of ethical theories. Less costly or higher-quality products reduce the wealth of less efficient businesses and lower the incomes of their employees, and disrupt associated patterns of life that may have existed for decades or centuries. Products that are no longer as useful become obsolete—as with wadding, buggy whips, slide rules, photographic film, floppy drives, and picture tubes. Many of these products and their associated manufacturers disappear from markets, and the formerly well-known words for those products may disappear from common knowledge.

Of course, not all innovations completely disrupt long existing patterns of life. Many simply induce modifications of preexisting products and activities. As the cost of steel fell in the nineteenth century, secondary innovations in the possible uses of what previously had been an extraordinarily expensive “high tech” metal rapidly emerged. New applications were developed for construction of building and bridges, military

⁹ The development of Schumpeterian growth models are by now a very large literature. See, for example, Mueller (2005) or Van Der Berg and Lewer (2007) for short overviews.

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equipment, railroads, household appliances, and subsequently the automobile.

Tertiary innovation in all of these new product areas also followed. Contemporary automobiles are still steered with a wheel, ride on rubber tires, and propelled (for the most part) by gasoline engines with cylinders and spark plugs. Nonetheless, modern mass-produced automobiles are clearly different from Henry Ford's old model T in hundreds of respects. Contemporary radios, heating and cooling systems, mapping programs, Internet connections, and energy-saving shapes were beyond the imagination and ability of the most creative engineers of 1908. Contemporary automobiles allow one to go farther on less fuel, carrying more stuff, with far greater comfort than possible with Ford's pioneering tin lizzy. Modern automobiles reflect more than a century of continual innovations in design and features.

A recent contribution by Jason Potts (2019) suggests that there are positive technological externalities to innovation as new ideas encourage other new ideas and products to emerge. Thus, normative support or opposition to innovation has effects similar to those analyzed above for capital accumulation. However, normative opposition to innovation is likely to be even stronger than opposition to capital accumulation and the disruptive effects of innovation on a community's economic, cultural, and intellectual development even larger. As Potts and Burke (1978) before him remind us, transformative innovations are very rarely single revolutionary leap of imagination, rather innovations stimulate other new ideas, which stimulate still others and so forth, with some new combinations of ideas, materials and machinery being more transformative than

others. Thus, opposition to innovation stifles not only the new ideas of a few local businesses, but it also tends to prevent innovation cascades from emerging.

Table 4.3 illustrates how conditional norms that support particular rates of innovation may accelerate rates of innovation affect innovation rates and thereby economic development.

Table 4.3: Technological Externalities, Social Norms, and the Innovation Commons						
		Robert Rate of Innovation				
		Rapid	Moderate	Slow	Minimal	
Joseph	Rapid	(J, R) 6+V ₃ , 6+V ₃	(J, R) 4+V ₃ , 7+V ₂	(J, R) 2+V ₃ , 8+V ₁	(J,R) 1+V ₃ , 9	
	Rate	7+V ₂ , 4+V ₃	5+V ₂ , 5+V ₂	3+V ₂ , 6+V ₁	2+V ₂ , 7	
of Innovation	Slow	8+V ₁ , 2+V ₃	6+V ₁ , 3+V ₂	4+V ₁ , 4+V ₁	3+V ₁ , 5	
		Minimal	9, 1+V ₃	7, 2+V ₂	5, 3+V ₁	2, 2

The initial equilibrium in the lower righthand cell can be regarded as the minimal innovation rate evident in most of the period after agricultural methods and supporting rules were worked out ten thousand years ago. This equilibrium it is not necessarily based in moral opposition to innovation, but simply because two few innovators are in the community of interest for the process of innovation to catch fire. When innovations are rare, they may pass largely unnoticed because they rarely disrupt life for anyone in the community of interest. Increasing the rate of innovation requires moral support because of the creative commons externali-

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ty—which is the opposite of the Hardin case examined in chapter two. Rather than too much use of the innovation commons there tends to be too little.

In such cases one can imagine normative systems that provide various conditional levels of support for rates of innovation such as: support for slow innovation (V1), support for moderate rates of innovation (V2), or essentially unlimited support (V3), with associated equilibrium rates of innovation that move up the diagonal towards to the upper lefthand cell as support for different rates of innovation emerge or not. Initially, the idea of improvement may take hold in a community and support for slow rates of innovation might become commonplace, followed by somewhat support for a higher rate of innovation when the results prove attractive, and so on. Ethical and other social support for innovation can produce different rates of innovation, because they change the rewards of innovation and overcome the technological externalities associated with innovation. As a consequence, a community's ethos tends to generate different rates of economic development through their effects on the types and rates of innovations forthcoming.

In the most innovative communities, nearly all economic innovations are supported by internalized norms and external praise from those either benefiting directly from the new products and production methods, or simply fascinated by them. Support for innovation in many contemporary societies arguably has reached level 3 of table 4.3.

V. The Ethical Case Against Innovation

It bears noting that the process of economic innovation raises a variety of ethical issues that do not exist in stationary or slowly expanding economies. Changes in market conditions associated with innovation impose costs as well as benefits on essentially everyone that lives in commercial societies.

Generally, however, in the capitalist system, with its rapid strides in improving human welfare, progress takes place too swiftly to spare individuals the necessity of adapting themselves to it. **When, two hundred years or more ago, a young lad learned a craft, he could count on practicing it his whole life long in the way he had learned it, without any fear of being injured by his conservatism. Things are different today** (von Mises, Ludwig [1927/2012]. *Liberalism* [p. 81]).

For those who lose their jobs or businesses as a consequence of innovation, the effects can be as devastating as a major earthquake or fire. As a consequence, many of the economic and social effects of innovation conflict with both traditional norms and others more liberal in their orientation. For example, Mills argued that:

[T]he fact of living in society **renders it indispensable that each should be bound to observe a certain line of conduct** toward the rest. **This conduct consists, first, in not injuring the interests of one another** (Mill, J. S. [2013-08-16], *On Liberty* [KL 41041-41043]).

Mill's indispensable duty is violated every time a new product is successfully introduced, because such products nearly always reduce the

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income of persons producing rival products. New products that bankrupt rival companies may cause thousands to lose their jobs, many of whom face lower wages as their skills become obsolete, and lower wealth as their house near their place of work falls in value.

Mill also argues that utilitarian principles imply that government interventions may be appropriate in cases in which one person's actions harm another:

As soon as any part of a person's conduct affects prejudicially the interests of others, society has jurisdiction over it, and the question whether the general welfare will or will not be promoted by interfering with it, becomes open to discussion. (Mill, J. S. [2013-08-16], *On Liberty* ([KL 41047–41049])).

Rawls draws a similar conclusion when he states that

Of course, **liberties not on the list**, for example, the right to own certain kinds of property...and freedom of contract as understood by the doctrine of laissez-faire are not basic; and so **they are not protected by the priority of the first [equal liberty] principle** (Rawls, J. [2003], *A Theory of Justice* [p. 52]).

From these perspectives, capital accumulation and innovation are simply two of many activities that a community might properly regulate.

One cannot simply assert, as many economic textbooks do, that “pecuniary externalities” do not count. Such claims run counter to the utilitarian foundations of mainstream welfare economics and also to contractarian ideas about the good society. Without a long series of obvious welfare-improving innovations, most consequentialist ethical theories would have a difficult time defending the process of creative destruction.

And, of course, historically many communities have blocked innovation. For example, many Medieval European communities had restrictions on entering new markets that protected existing firms and town centers. Even innovations in food and clothing have been regulated to protect elites from what might be regarded as “status losses” associated with innovations, as with the various dietary and sumptuary regulations of medieval societies.

Given the unavoidable negative effects of entry and innovation on the welfare of other firms and their employees, in what sense can it be moral to innovate?

Both utilitarian and contractarian theories of social ethics provide answers to that question. First, utilitarians note that the benefits that consumers of new higher quality or less expensive or new products have to be taken into account as well as any costs imposed on rival firms and their employees. Consumer utility (or net benefits) must increase if they purchase the new over the old products. Moreover, the losses borne by rival firms and their employees are often temporary as firms shift their capital into new products and employees leave for other firms. Moreover, such persons often benefit from other innovations. Thus, the overall costs borne by rival firms and their employees tend to be smaller than the benefits realized by consumers. The moral issue for utilitarians is whether aggregate utility tends to be increased by a series of innovations, or not?

From a contractarian perspective, the ethical issue is whether essentially all persons anticipate being on average better off as a consequence of a long series of innovation or not? If so, establishing a general or limited right to innovate would be appropriate policy and innovation

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generally a virtuous and praiseworthy activity. If not, the status quo ante should be protected and innovations banned or limited to areas in which it is generally agreed that the benefits of innovation are likely to exceed their costs.¹⁰

Other moral perspectives can also justify innovation on procedural grounds. For example, if civil law has the character of Kantian universal rules (which is to say, they work well when everyone follows the same rules), and civil law permits innovation in a particular area, then behavior consistent with those rules is, by definition, moral or at least not immoral. Other ethical theorists may stress voluntariness rather than civil law, noting that the profits of innovators arise from consumer decisions, just as the losses of rivals do. Such ethicists would argue that it is immoral to force consumers to continue purchasing inferior products rather than allowing them to choose between old and new products.

VI. Progress, Risk Management, and Ethics

Commercial societies thus tend to have ethical dispositions that support or at least do not discourage capital accumulation and innovation. However, it does not imply that such communities are unaware of or indifferent to problems that arise because of those processes.¹¹

¹⁰ Rawls (2003), for example, notes that inequalities induced by innovation are acceptable under his difference principle if the entrepreneur's "better prospects act as incentives so that the economic process is more efficient, innovation proceeds at a faster pace, and so on" (p. 66).

¹¹ That innovation produces uncertainty is self-evident within microeconomics. That it generates macroeconomic uncertainty is nearly so, as developed in Schumpeter's research on business cycles. Towards the end of

In societies that accept and support the notion of progress, the future course of life and society is understood to be uncertain. Rather than an evenly rotating society, such societies are constantly being disrupted by innovations of various kinds. The result is considered to be on average "good," but it requires adjusting one's life and in some cases one's ethical ideas to benefit from or cope with disruptions to one's preexisting patterns of life.

What might be called dynamic tranquility is also increased through various ethical and planning innovations. Flexibility becomes a virtue and recalcitrance a sin. In addition community norms with respect to personal responsibility tend to evolve. In a stable community, one's success in life is arguably a matter of individual decisions to follow well-established rules that tend to produce success. One may be unfortunate—accidents may happen—but individuals and families largely control their own fortunes (such as they were) in such communities. Social insurance may be regarded to be a useful community service because of accidents and illness, but if such events are rare and treatments are limited, relatively little social insurance will be necessary.

On the other hand, when innovations can disrupt long-standing patterns of life, the old rules do not necessarily produce comfortable or good lives. These new disruptions as well as new treatments for old calamities tend to increase the extent to which social insurance is regarded

the twentieth century, a new school of macroeconomics emerged that argues that many if not all business cycles are generated by "productivity shocks," which is simply another name for innovations affect manufacturing methods. See for example Greenwood, Hercowitz, and Hoffman (1988) or McCallum (1988).

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to be a useful or moral service (rather than one that tends to undermine prudence and other rule-following behavior). The increase in uncertainty associated with commercialization may induce communities to provide more social insurance for its residents.

In principle, such social insurance may be generated through modifications in existing norms and associated voluntary contributions to organizations that provide such services such as religious organizations, odd-fellow societies, insurance cooperatives, and private insurance companies. As noted in chapter two community useful community services can be provided without a taxing or rule-enforcing organization when anti-free-riding norms exist and there is agreement about the usefulness of community services. And, it bears noting, that a variety of social insurance systems existed before national governments began taking an active role in its provision during the early 20th century.

Uncertainty also tends to undermine market activities and to the extent that it can be reduced through various commercial organizations and transactions, such organizations will tend to emerge and transactions undertaken. Frank Knight (1921) was among the first economists to integrate risk and uncertainty into microeconomic analysis. He noted, for example, that markets tend to produce specialization in various risk- and uncertainty-bearing services.

Uncertainty thus exerts a fourfold tendency to select men and specialize functions: (1) an adaptation of men to occupations on the basis of kind of knowledge and judgment; (2) a similar selection on the basis of degree of foresight, for some lines of activity call for this endowment in a very different degree from others; (3) a specialization within productive groups, the individuals with superior managerial ability (fore-

sight and capacity of ruling others) being placed in control of the group and the others working under their direction; and (4) those with confidence in their judgment and disposition to “back it up” in action specialize in risk-taking (Knight, F. [1921/2009-02-05], *Risk, Uncertainty, and Profit* [KL 3154-3159]).

The effect of specialization in risk bearing and risk pooling is to reduce uncertainty for most commercial enterprises and persons and thereby to make life in a commercial society more attractive. Such risk management services and products do not reduce risks by reducing rates of innovation, but reduce the downside risks generated by innovation and other unpredictable events such as weather that affect prices, salaries, and wealth. Innovations in risk and crisis management thus tend to reduce, rather than increase, uncertainties.

In the early twentieth century, several innovations in public policies were also adopted to reduce risks associated with commercial societies and thereby make such societies more attractive. Examples include both unemployment insurance and efforts to manage the business cycle. These new policies took the merits of the commercial society for granted and simply attempted to moderate or pool the risks associated with life in such societies. Many were formally risk pooling efforts analogous to private insurance. This is evident in their official names, which often include the term insurance; in their method of funding, often through earmarked taxes collected from those most likely to benefit from the insurance; and in the terms of eligibility for payouts: being temporarily unemployed or disabled. Such insurance-like policies do not interfere with the core pro-

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cesses of commercial societies but made them more broadly attractive for the risk-averse persons living within them.

The role of ethics in the governments, laws, and public policies in commercial societies is taken up in part II of the book.

VII. Conclusions: Ethics and Economic Development

A variety of social dilemmas have to be solved to generate the capital accumulation and productive innovations that characterize a commercial society. This chapter has explored how technological externalities associated with each may be overcome by ethical dispositions that tend to promote saving over consumption and that support productive creativity. Such rules enable societies with stable attractive patterns of life with significant but relatively modest levels of market activities to become commercial societies in which the size of commercial enterprises increases dramatically and rates of innovation accelerate to breathtaking rates.

These two processes conflict with a variety of ethical dispositions that solve or ameliorate the social dilemmas explored in chapters 2 and 3. Capital accumulation often increases inequality and displaces many smaller scale producers of goods and services. Innovation nearly always disrupt the status quo ante and impose a variety of damages on rival firms and their employees. Both capital intensive production and innovation thus conflict with a variety of “do no harm” principles that reduce conflict within communities. Such norms tend to oppose capital accumulation and innovation, which may at least partly account for the relatively

slow rates of innovation and capital accumulation in most places and during most times before 1700.

Communities in which extensive commercial systems emerge are thus likely to have modified their do-no-harm norms in a manner that takes account of the advantages of at least some forms of capital accumulation and innovation. Without such modifications, it is difficult to imagine how those processes get underway.

This chapter has suggested several ways in which the do not harm norm may be modified without unleashing Hobbesian levels of conflict. For example, voluntariness may be stressed or long run average harm may be considered more relevant than short term temporary harm. Normative theories of property rights may support both capital accumulation and innovation. Both saving and innovation may be considered virtues and any associated harms to be minor and unimportant. Communities with such norms would tend to be more open to both capital accumulation and innovation than those with rules that tend to block changes to the existing patterns of life.

As the possibility of progress becomes accepted, notions of the good life tend to change. It may no longer be regarded to be a stationary ideal state, but as one which one gradually perfects one character, propelled by one’s own creativity and stimulated by others—an idea that is not so far from Aristotle’s life of intellectual and moral development. The good society may similarly be regarded as one in which progress continually takes place—in both the domain of ideas and material comforts.

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As in the chapter 3, one can argue that a community's initial ethos may support or oppose the emergence of a dynamic commercial society. However, as that society emerges, it is likely that changes in the returns to different ethical dispositions are likely to alter the distributions of ethical dispositions within a community. For example, the dynamic, unpredictable character of a commercial society may make the virtue of prudence relatively more rewarding in one's private life, in business, and in public policies. Flexibility and the ability to cope with surprises—may become virtues rather oddities or sins. A lifetime of learning and innovation may increasingly be considered to be aspects of a good life, rather than odd predispositions of a few scholars and tinkerers.

Together, chapters 2, 3, and 4 imply that the extent of commerce and the trajectory of commerce are affected by conclusions about the good life and society, because ethical dispositions grounded in those ideas affect the gains from trade and specialization and also rates of capital accumulation and innovation. They do so by overcoming a number of social dilemmas associated with life in communities, markets, and economic development. In particular, they do so by tolerating or supporting the core processes of commercialization: voluntary exchange, team production, specialization, innovation, and capital accumulation.

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Appendix A: Differences between Improvement versus Generalized Progress

The possibility of improvement has long been recognized. Aristotle, for example, considered ethics to be a method of self-improvement. He also regarded some forms of government to be better than others. Adam Smith regarded the system of natural liberty to be an improvement over the medieval system that had previously characterized public policies in Great Britain. Kant regarded the Categorical Imperative to be an improvement over previous ethical theories. Bentham believed that the utility principle placed ethics on a firmer more consistent foundation.

That generalized progress is possible and desirable is a more recent belief. That improvement is always possible is an idea that presents a number of challenges to ethical and scientific theories, public policy, and institutional design as developed in this chapter. It implies that our current understanding of natural laws—both positive and normative—is always imperfect, always incorrect in some ways, and will always be so even as our understanding improves.

If there are universal truths, we have yet to discover them or perfectly understand them. Moreover, if progress is always possible, we'll never fully understand such laws—if they exist. This generalized fuzziness or uncertainty is a far more unsettling concept than stating that we know how to improve ourselves or our societies. Believing that we know

or can potentially know the ideal is clearly more comforting than believing that at best we will at best be able to distinguish “better” from “worse”—and acknowledging that we may make mistakes about these as well.

That relatively few philosophers and theologians believe that ethical or moral progress is possible is implied by most of the ethical and theological theories reviewed in part III. Most regarded ideas about good and evil, right and wrong, better and worse to be permanent and unchanging, rather than subject to improvement. Spencer is a rare exception to that rule, and while he is of course not right about everything that he pontificates about, his ideas about ethics are consistent with the idea that progress is possible for moral theories as well as physical theories.

If progress is acknowledged to be possible, it is more likely that normative innovations will be forthcoming than if it is not. Part III provides a evidence that ethical ideas evolved in a manner that tended to increase support for commerce and innovation in the period immediately preceding the great acceleration.

Appendix B to Chapter 4: Ethics and the Laws Governing Innovation

Whatever conclusions are reached about the morality of innovation by policy makers—whether by voters, aristocrats, or kings—is likely to affect a community's laws. For example, if only innovations that harm no other persons are allowed, then only relatively minor innovations

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would be deemed legal or worthy of political support. A farmer might invent a new method of planting or harvesting his or her crops, which arguably would increase his profits without harming any other, as long as it was not widely adopted. However, a major innovation that affects the farming practices of the entire industry would affect broad patterns of demands for labor, capital, and land. The new relative prices for the various inputs changes the distribution of income and wealth. There are many losers from major innovations, and so these would be banned, because of the damages generated.

Similar conclusions would be drawn for innovations in non-economic spheres of life as well. Major new ethical, scientific, and religious theories also disrupt patterns of life, as they attract the time and interest of large numbers of persons in a given society. New dietary ideas may affect the demand for corn, wheat, beef, and fish. New religious ideas or interpretations may produce new organizations (sects) whose political influence may induce new laws and legal reforms harming those with different beliefs. In a truly conservative society, only conventional ideas and behavior would be deemed praiseworthy or worthy of political support.

However, if some harms are regarded to be unavoidable, but progress widely is believed to be possible, then policies would support rather than suppress major innovations improve life or society. For example, if the good life is an active creative life—a life of becoming rather than being—innovation will be praised rather than disapproved of. If material comforts and entertainment are regarded as essential to a good life, then commercial innovations will likewise be praised rather than dis-

approved. Laws in such communities will support the development and adoption of new ideas, technologies, and products.

Civil and criminal law would allow innovators to damage others in particular ways, as with the various price and wealth effects that economists refer to as pecuniary externalities. Innovations that destroy other businesses in a manner analogous to arson would be exempt from the criminal punishments associated with arson. They would also be exempt from liability for pecuniary damages that an accidental fire would entail. The persons damaged by innovations would not be able to sue innovators for compensation in court. Other policies such as patents and copyright production thought to increase rate of innovation might also be adopted. Support for public education (especially in areas where innovations seems likely and beneficial), and subsidies for research and development might also be provided to further accelerate the pace of innovation.

Differences in ethical systems can thus partially account for differences in the both the degree of economic development that has taken place in the past two centuries and for differences in innovation rates among contemporary societies. Far less innovation and industrialization would take place in conservative societies where equilibrium rather than growth is the aim of a good life and good society. In societies where widely held normative theories support the idea of progress and commerce, more would take place as innovators are freed to pursue new ideas, technologies, and products to replace the old.

Appendix C to Chapter 4: Reducing Uncertainty: On the Superficial Appeal of Central Planning

Mid-twentieth century utilitarians moved beyond Pigou's welfare economics to argue that an economy could, at least in principle, be directed by a utilitarian central planner who would produce a more attractive pattern of life by eliminating commerce while increasing aggregate utility, much as More's magistrates did in his imagined utopia. It was argued that such a planner could increase aggregate utility by reducing uncertainty, improving the distribution of income, and eliminating externality problems. Such conclusions were consistent with mainstream economic models of the twentieth century, which implied that a perfectly informed, all-powerful, utilitarian ruler analogous to Plato's philosopher king could improve on the commercial society by replacing it entirely or by administering a broad subsection of it.

The equilibrium models of neoclassical economists provided support for this new strand of utilitarian reasoning. Indeed, Russia and its Soviet Union maintained that such a system was successfully being implemented in Northern Asia.¹² This was a radical challenge to mainstream utilitarians, who had long favored commercial societies. This debate involved many technical economic issues, so it is unsurprising that

¹² Note that such a society, without markets but with ideal production and distribution, resembles Thomas More's *Utopia*, with its sharing of labor and distribution squares. It seems clear that such a society could not exist without ethical foundations, insofar as shirking rather than working tends to be more prevalent when work is unrelated to salary than when it is. The ethical foundations for such a society are beyond the scope of the present volume.

the central planning debate took place largely among economists. What might be surprising is that much of the debate over central planning relied upon utilitarian reasoning.¹³

Those who challenged the analysis of the proponents of central planning used several lines of attack. First, critics argued that using neoclassical models as the foundation of their analysis generated several misleading conclusions. The commercial society was far more innovative and dynamic than those models implied. Moreover, the implicit informational assumptions of neoclassical models implied that planners and market participants had far more information at their disposal than they were likely to have in reality. Second, they argued that the "first best" outcomes of utilitarian planning were not feasible. This was partly for the same reasons. Planners would not be able to produce an innovative society, nor would they have sufficient information to replicate the equilibrium allocation of resources generated by markets in the short term. Moreover, it was also argued that the persons that become central planners were not likely to be utilitarians. Thus, the outcomes associated with even perfectly informed planning are not likely to maximize aggregate utility or attempt to do so. As a consequence of all these factors, the re-

¹³ A useful collection of essays on the original central planning debate was assembled by Hayek (1935), which has been reprinted several times. Interest in somewhat more limited forms of central planning continued after World War II, as in Tinbergen (1964). The arguments were not often conducted in terms of utility per se but, with respect to economic output and growth, more or less in the manner pioneered by Pigou. Late twentieth century commentary and critiques of central planning include Lavoie (1985) and Boettke (2002).

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sult of central planning would far lower aggregate utility (as proxied by economic output) than generated by a dynamic commercial society.

For example, Friedrich Hayek (1899–1992) reminded proponents of central planning that information is not freely available at a central depository but remains disaggregated in the minds of individuals. This, in combination with the heterogeneity of the knowledge that we each possess (and our ignorance), implies that planners would not know all that was necessary to coordinate the behavior of market participants as well as market prices do.

It is useful to recall at this point that all economic decisions are made necessary by unanticipated changes, and that **the justification for using the price mechanism is solely that it shows individuals that what they have previously done, or can do now, has become more or less important**, for reasons with which they have nothing to do (Hayek, F. A. [1968/2002], “Competition as a Discovery Process,” *Quarterly Journal of Austrian Economics* 5: 9–23).

Hayek also argued that markets take account of far more information than a real benevolent central planner could.

[T]he **two advantages of a spontaneous market order** or catallaxy: **it can use the knowledge of all participants, and the objectives it serves are the particular objectives of all its participants in all their diversity and polarity.** The fact that catallaxy serves no uniform system of objectives gives rise to all the familiar difficulties that disturb not only socialists, but all economists endeavoring to evaluate the performance of the market order (Friedrich Hayek [1968/2002], “Competition as a Discovery Process,” *Quarterly Journal of Austrian Economics* 5: 9–23).

In Hayek’s view, this ignorance extends to the common understanding of markets themselves.

Even today the **overwhelming majority of people**, including, I am afraid, a good many supposed economists, **do not yet understand that this extensive social division of labor, based on widely dispersed information, has been made possible entirely by the use of those impersonal signals** which emerge from the market process and tell people what to do in order to adapt their activities to events of which they have no direct knowledge. That in an economic order involving a far-ranging division of labor it can no longer be the pursuit of perceived common ends but only **abstract rules of conduct—and the whole relationship between such rules of individual conduct and the formation of an order** which I have tried to make clear in earlier volumes of this work (Hayek, F. A. [1979], *Law, Legislation and Liberty, Volume 3: The Political Order of a Free People* [p. 162]).

Another crucial issue was whether the central planner would tend to be benevolent or not (utilitarian or not), an issue that goes back at least as far as Plato’s and Aristotle’s analyses of ideal governments. Post-war public choice analysis suggested that the persons most likely to rise to positions of authority are unlikely to be utilitarians or altruists.

The rapidly accumulating developments in the theory of public choice, ranging from sophisticated analyses of schemes for amalgamating individual preferences into consistent collective outcomes, through the many **models that demonstrate with convincing logic how political rules and institutions fail to work as their idealizations might promise**, and finally to the array of empirical studies that corroborate the basic economic model of politics—these have all been influential in modifying the way that modern man views government and political process.

The romance is gone, perhaps never to be regained. The socialist paradise is lost. **Politicians and bureaucrats are seen as ordinary persons much like the rest of us, and**

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politics is viewed as a set of arrangements, a game if you will, in which many players with quite disparate objectives interact so as to generate a set of outcomes that may not be either internally consistent or efficient by any standards (Buchanan, J. M [1984], “Politics Without Romance,” *The Theory of Public Choice II*).

What Hayek, Buchanan, and many other economists suggest is that feasibility cannot always be deduced from economic models, because the models necessarily abstract from many details in order to facilitate theoretical developments. Unfortunately, those details cannot always be ignored in practice. The disintegration of the Soviet Union in 1992 affirmed most of their conclusions. It revealed that Soviet planners had not been able to replicate the production efficiency or the material comforts of Western commercial societies after more than a half century of active central management. Moreover, that economy generated very few innovations.

In the centralization debate, differences in normative theories were arguably less important than differences in the expected implications of central planning, because the debate was largely among utilitarians or persons who had accepted the neo-utilitarian approach of Pigou. Nonetheless, assumptions about the ethical dispositions of persons in the societies to be centrally managed were also central to the argument.

A central planner that had internalized utilitarian theory would do better at maximizing aggregate utility--to the extent this can be discerned--than a pragmatist interested in maximizing his own income and authority. Economic incentives matter less if all persons have internalized a

strong work ethic and a rule following norm.¹⁴ The argument in favor of central planning thus implicitly assumed a very complementary normative foundation for their society. Without that ethical foundation, it was behaviorally infeasible, regardless of whether it was economically feasible or not.

Life in the former Soviet Union would doubtless have been far more attractive had their leaders been utilitarians rather than pragmatists seeking personal authority and its citizens ascetic idealists without interests in material comforts and leisure. Central planners would still have been limited by the information at their disposal, but the results are likely to have been far better than they were.

In the end, economic analysis, many ethical theories, and social evolution favored commerce over central planning, and attention returned to improving the commercial society rather than replacing it.

¹⁴ It is interesting to note that markets tend to reward these core ethical beliefs insofar as they tend to increase firm profits, individual incomes, and consumer satisfaction. Without such market rewards, it is clear that the distribution of internalized norms in centrally planned societies would be different than those of market-based societies. Market rewards for a work ethic and for rule following behavior tend to cause such ethical dispositions to be more commonplace and strongly internalized, as demonstrated in part II.