Mainline Economics

Six Nobel Lectures in the Tradition of Adam Smith

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Introduction: What Is Mainline Economics?

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Adam Smith made important contributions to political economy, moral philosophy, political science, and legal philosophy. Additionally, he wrote interesting pieces on everything from astronomy and stage acting to rhetoric. Despite the breadth of his scholarship and the significance of his influence in multiple disciplines, Smith is deservedly referred to as the father of modern economics. He asked and attempted to answer what has continued to be the central question in economics: Why are some nations rich and others poor?

In his primary contribution to political economy, *An Inquiry into the Nature and Causes of the Wealth of Nations*, as well as in several of his other works, especially *The Theory of Moral Sentiments* and *Lectures on Jurisprudence*, Smith explored the nature and consequences of economic exchange and the influence of informal and formal institutions on exchange relationships.

Smith offers a straightforward recipe for economic development in *The Wealth of Nations*. This recipe is captured in Smith's famous dictum regarding the importance of "peace, easy taxes, and the tolerable administration of justice." The richest societies are those societies that benefit from the gains to productivity that result from the division of labor. According to Smith ([1776] 1981: 13), "the greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is any where directed, or applied, seem to have been the effects of the division of labour." It is, Smith argues, our propensity to trade that gives occasion to the division of labor. It is our propensity to "truck, barter, and exchange" that allows both for you to satisfy your need for food and for me to satisfy my need for farming instruments even when you have focused solely on developing farming instruments and I have focused all of my efforts on farming. "As it is the power of exchanging that gives occasion to the division of labour," Smith (ibid.: 31) explains, "so to the extent of this division must always be limited by that power, or, in other words, by the extent of the market." The richest societies are, therefore, those whose formal and informal institutions allow for and protect an open and expansive market sphere.

In addition to articulating the key question in modern economics and offering a compelling and still well-regarded answer to that question, Adam Smith also anticipated and inspired a number of the major theoretical developments in several branches of economics, including price theory, market process economics, economic development, industrial organization, public economics, institutional economics, experimental economics, and behavioral economics. But, while many economists will trace the profession back to the tomes of Adam Smith and admit to finding inspiration in Smith for their theoretical and empirical projects, it is sometimes quite difficult to identify Smith's direct influence in many of the branches of modern economics. In fact, the propositions regarding the nature of human action, the place of institutions, and the role of government articulated by the mainstream of economics has sometimes deviated quite significantly from those advanced by the mainline of economics that descended from Adam Smith.

There are, however, several economists whose research is grounded in the Smithian mainline of economics. The Nobel Laureates in Economics whose addresses are collected in this volume—F. A. Hayek, James M. Buchanan, Ronald H. Coase, Douglass C. North, Vernon L. Smith, and Elinor C. Ostrom—represent key figures in the mainline of economics.

Mainline Political Economy

Peter Boettke has written elsewhere about the distinction between mainline and mainstream economics.[1] "Mainline," he (2012: xvii) explains, "is defined as a set of positive propositions about social order that were held in common from Adam Smith onward, but mainstream economics is a sociological concept related to what is currently fashionable among the scientific elite of the profession."

The economists in the mainline are attempting to address the questions advanced by Smith and are working to critically engage and advance the propositions that Smith introduced. This is not to suggest that mainline economists are always self-consciously engaged in a history of thought or hermeneutical exercise to interpret or reinterpret Smith.[2] This is also not to suggest that the mainline economists always agree with any particular aspect of Smith's analysis or with Smith's conclusions. Instead, it is meant to suggest that you can identify Smithian themes in their theoretical and empirical work.

Mainstream economics, on the other hand, is the dominant economics at any given time. It is the brand of economics practiced by most professional economists in any particular period. The economists in the mainstream, thus, represent the leading figures in economic science at any given time. They hold positions at the most prestigious institutions, and they publish in the most prestigious academic journals.

Those economists outside the most prestigious places who take their scientific cues, as it were, from those at the most prestigious settings, would also be considered mainstream economists.

It is important to note that there have been significant shifts over time in what constitutes mainstream economics. For instance, the Keynesian revolution in macroeconomics gave rise to the Neoclassical Synthesis, which in turn lost ground to the Neo-Keynesians, who were then replaced by monetarism and New Classical Economics, which gave way to New Keynesian Economics, which has lost ground to the New Neoclassical Synthesis. The same has happened in institutional economics, where the Old Institutionalism of Thorstein Veblen has been replaced by the New Institutional Economics of North.

It is also important to note that mainline economics sometimes represents the mainstream and sometimes it does not. As Boettke (ibid.) notes, "Often the mainline and the mainstream dovetail, but at other times they deviate from one another." Keynes' theory, for instance, replaced an older mainline monetary theory advanced by Knut Wicksell, Hayek, and others as the mainstream view. Similarly, as noted above, the institutionalism of Veblen was replaced by the mainline institutional views of North.

Arguably, there are at least three propositions regarding the nature of human action and the role of institutions that mainline economics critically adopt and advance: (1) there are limits to the benevolence that individuals can rely on and therefore they face cognitive and epistemic limits as they negotiate the social world, but (2) formal and informal institutions guide and direct human activity, and, so (3) social cooperation is possible without central direction. Stated another way, by relying on the emergent and human-devised rules of conduct, agents possessing both the capacities and the failings of the typical human being can nonetheless work together to achieve their individual and collective goals.

Human beings can be imperfectly benevolent. As Smith argues in the "butcher, brewer, baker" passage in *The Wealth of Nations*, civilized society forces us to rely on the cooperation and assistance of countless others who are outside our narrow circle of family and friends. Think, for instance, of the large number of individuals involved in the production of the simple woolen coat that the day laborer wears.[3] Consequently, we cannot rely on others' benevolence alone when attempting to convince them to act on our behalf. We are more likely to succeed, Smith explains, by relying on their self-love than by relying on their kindness. "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner," Smith ([1776] 1981: 27) writes, "but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages." Although individuals are far from selfish on Smith's account, and do not slavishly pursue their narrow interests without limits, they are rightfully self-interested. As Smith ([1759] 1982: 213) explains in *The Theory of Moral Sentiments*, prudence is a virtue.[4]

While human beings cannot rely solely on the benevolence of individuals to assist them, they also cannot rely on a central authority arranging human society and directing others in such a way that everyone's needs are met. Human beings can also never know enough to devise and control such a system. Smith's ridicule of the "man of system" is quite telling in this regard. "The man of system," Smith (ibid.: 234) writes, "is apt to be very wise in his own conceit." And, as Smith (ibid.: 235) continues, the man of system

> seems to imagine that he can arrange the members of a great society with as much ease as the hand arranges the different pieces upon a chess-board. He does not consider that the pieces of the hand have no other principle of motion besides that which the

> hand impresses upon them; but that, in the chess-board of human society, every single piece has a principle of motion of its own, altogether different from that which the legislature might choose to impress on them.

The man of system inexorably faces what Don Lavoie ([1985] 2015; [1985] 2016) has characterized as a "knowledge problem." Every human being has a principle of motion of her own that the central authority could never know, much less marshal to control human society.

That we must cooperate with countless others to satisfy our needs, and that these others cannot be made to do so by some central authority nor compelled to do so because of their intimate connection to us, need not paralyze us. Individuals are able to negotiate the social world because there are formal and informal rules of just conduct on which they can rely.

Institutions matter for Smith. As Smith ([1776] 1981: 910) notes, "commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice, in which the people do not feel themselves secure in the possession of their property, in which the faith of contracts is not supported by law, and in which the authority of the state is not supposed to be regularly employed in enforcing the payment of debts from all those who are able to pay." Consider, also, Smith's discussion of how different institutional arrangements in two universities can actually alter the quality of teaching in those settings (ibid.: 760). While teachers in Scotland were paid primarily from fees from students, teachers in Oxford were paid from endowments and were prohibited from receiving fees from their pupils. As such, in Scottish universities (such as Glasgow), teachers could incur monetary losses if student enrollment dropped, whereas in Oxford, teachers were paid the same whether their lectures were well attended or not.

According to Smith, professors cared more about teaching in Scottish universities than they did at Oxford. "In the university of Oxford," Smith (ibid.: 761) asserts, perhaps hyperbolically, "the greater part of the public professors have for these many years, given up altogether the pretense of teaching" because professor pay there was divorced from performance. By examining the incentives of the different institutional structures, Smith was able to understand why a commitment to teaching and providing quality lectures varied across universities.[5]

Similarly, Smith has also argued that norms govern the behavior of individuals. For instance, he described how norms of fair play affect the way that we compete with one another and how we view the competitive behavior of others. As Smith ([1759] 1982: 83) explains,

> In the race for wealth, and honours, and preferments, he may run as hard as he can, and strain every nerve and every muscle, in order to outstrip all his competitors. But if he should justle, or throw down any of them, the indulgence of the spectators is entirely at an end. It is a violation of fair play, which they cannot admit of. This man is to them, in every respect, as good as he: they do not enter into that self–love by which he prefers himself so much to this other, and cannot go along with the motive from which he hurt him.

We are comfortable with people competing to the best of their abilities, trying as hard as they can, and seeking whatever advantage that they can secure so long as they act within the rules. But, we are not willing to endorse individuals who are willing to cheat to win. And, most of us cannot so prefer ourselves over others that we cheat to win without our internal compasses "humbl[ing] the arrogance of [our] self-love, and bring[ing] it down to something which other men can go along with" (ibid.).

Individuals with imperfect benevolence, cognition, and knowledge are able to cooperate with the aid of formal rules and social norms. Additionally, this cooperation and the social order that results, Smith has demonstrated, can and does occur without the direction of a central authority.

Indeed, as Smith famously argued, individuals pursuing their own goals are led as if by an "invisible hand" to satisfy the desires and to improve the lives of others. Commenting on the efficacy of efforts to regulate commerce with the aim of supporting domestic industries, Smith ([1776] 1981: 453) argued in *The Wealth of Nations* that "no regulation of commerce can increase the quantity of industry in any society beyond what its capital can maintain. It can only divert a part of it into a direction into which it might not otherwise have gone; and it is by no means certain that this artificial direction is likely to be more advantageous to the society than that into which it would have gone of its own accord."

The maximum size of a society's economy, as it were, is driven by certain market fundamentals (that is, the extent of the market, the level of productivity, the size of its capital stock, and so on). Moreover, while efforts to direct the economy through regulation can change its course (perhaps for the worse) toward certain industries and away from others, regulation cannot expand the domestic economy beyond certain natural limits. In fact, as Smith writes, domestic entrepreneurs attempting to advance their own interests, rather than regulation, is what drives economic growth. According to Smith (ibid.: 456),

> every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. . . . by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own

> gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.

And, as Smith (ibid.: 454) wrote, "Every individual is continually exerting himself to find out the most and every man's interest leads him to seek that employment of capital which is most advantageous to the society. It is his own advantage, indeed, and not that of the society, which he has in view. But the study of his own advantage naturally, or rather necessarily leads him to prefer that employment which is most advantageous to the society." It is not the visible hand of regulation but the invisible hand of the market that directs entrepreneurial efforts in socially beneficial directions.[6]

In *The Theory of Moral Sentiments*, Smith's reference to the invisible hand speaks to the likelihood that the advantages of the rich can, must, and will (eventually) be shared with even the poorest in a commercial society. The constant striving for riches leads to economic growth and might lead to inequality in certain respects, but the trend is always toward equality regarding the necessaries of life. As Smith ([1759] 1982: 184–185) wrote,

> The produce of the soil maintains at all times nearly that number of inhabitants which it is capable of maintaining. The rich only select from the heap what is most precious and agreeable. They consume little more than the poor; and in spite of their natural selfishness and rapacity, though they mean only their own conveniency, though the sole end which they propose from the labours of all the thousands whom they employ be the gratification of their own vain and insatiable desires, they divide with the poor the produce of all their improvements. They are led by an invisible hand to make nearly the same distribution of the necessaries of life which would have been made had the earth been divided into

> equal portions among all its inhabitants; and thus, without intending it, without knowing it, advance the interest of the society, and afford means to the multiplication of the species. When Providence divided the earth among a few lordly masters, it neither forgot nor abandoned those who seemed to have been left out in the partition. These last too enjoy their share of all that it produces.

The invisible hand postulate in Smith, thus, speaks to the likelihood that individuals pursuing their self-interest within the institutional framework that typically characterizes commercial societies generates a complex but unintended social order that aligns their individual interests with the general interests.

Adam Smith articulated a view of the economy that stressed the limits to human generosity, rationality, and knowledge; the importance of formal rules and social norms; and the potential of the invisible hand to lead individuals pursuing their self-interest in commercial settings to behave in socially beneficial ways. The six Nobel Laureates in Economics featured in this volume share these characteristic views of mainline economics, recognize their distinction from the mainstream of the discipline, and argue for continued work within the mainline tradition.

Six Nobel Lectures in the Mainline Tradition

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel (Nobel Prize in Economics) has been awarded annually since 1969 to scholars who have made significant contributions to the field. Nobel Prize addresses are typically opportunities for the laureates to summarize their work and reflect on their scholarly contributions. They are, however, also opportunities to comment on the state of the economics profession and to offer advice to current and future economists.

It should be noted that while we include only six addresses here, we do not mean to suggest that the other Nobel Laureates in Economics (seventy-six to date at the printing of this volume) have rejected Adam Smith's ideas or have not been influenced by Smith's arguments. We argue, instead, that the six Nobel Laureates in Economics featured here are the ones who most consistently embrace and seek to advance the insights found in Adam Smith. These six addresses also offer serious critiques of the mainstream of the discipline and make an appeal to a return to the mainline.

In chapter 1, "The Pretense of Knowledge," Friedrich August von Hayek discusses his disappointment with the economics profession over its failure to guide public policy in a direction that would have avoided the economic problems of the 1970s as well as as his disappointment with those economists who are more concerned with appearing scientific than actually being scientific.

Hayek, along with Gunnar Myrdal, won the Nobel Prize in Economics in 1974 for "their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena."[7] The Nobel Committee also highlighted Hayek's work on comparative economic systems, specifically noting his contributions to the inherent problems with central planning and market socialism, and the ability of different economic systems to access, interpret, and utilize decentralized knowledge to solve collective problems.

Rather than using his Nobel address to celebrate his own work or influence, as was by then and would continue to be the typical subject matter of Nobel addresses, Hayek used his address to criticize the economics profession. As Hayek (see page 25) states, "We have indeed at the moment little cause for pride: as a profession we have made a mess of things." He cautions that while economists are often asked to design policies, they must recognize the limits of central planning and interventionism as well as the unintended consequences of tinkering with how people engage in commercial and social activity.

In fact, Hayek chided economists for their hubris. The economist's hubris, Hayek explained, is manifested in a "pretense of knowledge," a pretense that economists can and do know what it is actually impossible for us to know in an effort to imitate and appear on par with the physical sciences. But, given the complexity of the subject matter, the economist can at best attain "true but imperfect knowledge," which might leave "much indetermined and unpredictable" (see page 32). And, economists should acknowledge as much when advising on public policy rather than pretending to have access to an "exact knowledge which is likely to be false" (ibid.). Moreover, as Hayek concludes, "If man is not to do more harm than good in his efforts to improve the social order, he will have to learn that . . . he cannot acquire the full knowledge which would make mastery of the events possible." Ultimately, Hayek argues, economists should remain humble when weighing in on public policy discussions. "The recognition of the insuperable limits to his knowledge," Hayek states, "ought indeed to teach the student of society a lesson of humility which should guard him against becoming an accomplice in men's fatal striving to control society."

In chapter 2, "The Constitution of Economic Policy," James M. Buchanan emphasizes the importance of methodological symmetry when studying both markets and politics, and highlights his intellectual indebtedness to Wicksell.

Buchanan won the Nobel Prize in Economics in 1986 for "his development of the contractual and constitutional bases for the theory of economic and political decision-making."[8] The Nobel Committee recognized Buchanan's contributions to the development of the fields of public choice economics and constitutional political economy, specifically noting his utilization of the tools of economics to examine the political process and his emphasis on the importance of the rules of the game in determining the success or failure of political action.

Buchanan used his Nobel lecture to remind economists that individuals in politics, just as in markets, act purposively, pursue their own interests, and engage in exchange in order to secure the (political) goods and services for themselves or others. As such, economists would do well to heed the guidance of Wicksell. "Stripped to its essentials," Buchanan (see page 44) asserts, "Wicksell's message was clear, elementary, and self-evident. Economists should cease proffering policy advice as if they were employed by a benevolent despot, and they should look to the structure within which political decisions are made."

The nature of the institutions that govern political decision-making and the difference between political and market institutions matter a great deal to Buchanan. For Buchanan, the differences we observe between politics and markets (which we can think of as two games we chose to play) have more to do with the different rules governing action within the two games and less to do with any differences in the players who are attracted to those games. As Buchanan (see page 50) asserts, "The relevant difference between markets and politics does not lie in the kinds of values/interest that persons pursue, but in the conditions under which they pursue their various interests."

Buchanan believes that a focus on the rules of the political process, the processes by which citizens can alter these rules, and the likely consequences of any policy proposal, given the existing or likely institutional environment in which it will be implemented, rather than advocacy of specific policies and interventions, should become the central focus of the political economist. Like Hayek, then, Buchanan (see page 58) argues for a more humble role for the political economist: "Positively, this role involves analysis of the working properties of alternative sets of constraining rules. . . . Normatively, the task for the constitutional political economist is to assist individuals, as citizens who ultimately control their own social order, in their continuing search for those rules of the political game that will best serve their purposes, whatever these might be."

In chapter 3, "The Institutional Structure of Production," Ronald H. Coase discusses the importance of industrial organization theory as well as the role of institutions in shaping social activity.

Coase won the Nobel Prize in Economics in 1991 for "his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy."[9] Specifically, the Nobel Committee highlighted Coase's introduction of a focus on the costs associated with engaging in exchange and managing organizations into economic analysis as well as his success in explaining the institutional structure of the economy.

Coase, in his Nobel lecture, described modern economics as an attempt to fill in the gaps in Adam Smith's system and to make certain principles in Adam Smith's analysis more exact. As Coase explained (see page 64), "A principal theme of *The Wealth of Nations* was that government regulation or centralized planning were not necessary to make an economic system function in an orderly way. The economy could be coordinated by a system of prices (the 'invisible hand') and, furthermore, with beneficial results. A major task of economists since the publication of *The Wealth of Nations* . . . has been to formalize this proposition of Adam Smith." Coase noted that his contributions, in particular, sought to explain the existence and size of firms by explicitly introducing transaction costs into economics, which in many ways was just an extension of Smith's implicit use of transaction costs when discussing how certain "hindrances to commerce" might exist and could be overcome by the use of money. Additionally, Coase notes that he hoped that his research would highlight the importance of examining legal institutions for economic analysis.

Throughout his address, Coase emphasizes the role of institutions in shaping social activity. Although understanding economic systems and the likely effects of public policy necessitates a focus on institutions, Coase argues that institutions have long been ignored by contemporary economists. There is, Coase (see page 66) explains, a "neglect of the market or more specifically the institutional arrangements which govern the process of exchange. As these institutional arrangements determine to a large extent what is produced, what we have is a very incomplete theory." This neglect, according to Coase, occurred because of the increasing formalization and abstraction of the discipline. "What is studied," Coase (ibid.) laments, "is a system which lives in the minds of economists but not earth. . . . The firm and the market appear by name but they lack any substance." Coase meant for his research to be a corrective to this trend and describes his work as bringing institutional analysis back into the discipline by contributing to the understanding of the various ways in which individuals overcome transaction costs (through firms, legal structures, and so on). "In fact," Coase (see page 70) argues, "a large part of what we think of as economic activity is designed to accomplish what high transaction costs would otherwise prevent or to reduce transaction costs so that individuals can freely negotiate and we can take of advantage of that diffused knowledge of which Hayek has told us."

Douglass C. North, in chapter 4, "Economic Performance Through Time," argues that neoclassical economics, which neglects the importance of institutions and time, is ill-suited to study economic history and development.

North, along with Robert W. Fogel, won the Nobel Prize in Economics in 1993 for "having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change."[10] The Nobel Committee highlighted North's role in pioneering New Institutional Economics and, in particular, his explication of the role of institutions in shaping economic processes as well as his key insights regarding the process of institutional change.

North explained in his address that "neoclassical theory is simply an inappropriate tool to analyze and prescribe policies that will induce development" (see page 81). While the study of economic performance through time must acknowledge that time matters and must account for the role of institutions, neoclassical theory assumes "(i) that institutions don't matter and (ii) that time does not matter" (see page 82). "When applied to economic history and development," North (ibid.) explained, neoclassical theory "focused on technological development and more recently human-capital investment but ignored the incentive structure embodied in institutions that determined the extent of societal investment in those factors."

North, however, advances an approach to studying economic history and development that modifies neoclassical theory to include institutions and to explicitly account for the passage of time. Institutions, North (see page 83) explains, "are the humanly devised constraints that structure human interaction." These include formal constraints (like laws), informal constraints (like social norms), and the mechanisms through which these constraints are enforced. According to North, the institutions "define the incentive structure of societies" (ibid.) as well as explain the "organizations that come into existence" (see page 86). And, it is the interactions between the rules of the game (the institutions) and the players of the game (the organizations) that lead to the "institutional evolution of an economy" (ibid.). Institutional change occurs when the players perceive that they could do better under different rules.

In chapter 5, "Constructivist and Ecological Rationality in Economics," Vernon L. Smith emphasizes the shortcomings of the standard socioeconomic science model of rationality, the limits of constructivism, and the importance of emergent phenomena like norms, traditions, and morality in understanding how social order comes about through the interaction of individuals.

Smith won the Nobel Prize in Economics in 2002, along with Daniel Kahneman, for "having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms."[11] The Nobel Committee also recognized Smith's role in developing multiple experimental methods as well as setting standards for examining economic questions in the lab.

In his Nobel address, Smith distinguishes between two types of rational social orders: constructivist rationality and ecological rationality. According to Smith (see page 108), constructivist rationality (what Hayek called constructivism) "uses reason to deliberately create rules of action, and create human socioeconomic institutions that yield outcomes deemed preferable, given particular circumstances, to those produced by alternative arrangements." Contrastingly, ecological rationality (which appreciates emergent order) "uses reason—rational reconstruction—to examine the behavior of individuals based on their experience and folk knowledge, who are 'naive' in their ability to apply constructivist tools to the decisions they make; to understand the emergent order in human cultures; to discover the possible intelligence embodied in the rules, norms, and institutions of our cultural and biological heritage that are created from human interactions but not by deliberate human design" (see pages 110–11).

While we should be proud of the achievements of constructivism, as Smith points out, most institutions and decision-making are guided by ecological rationality rather than constructivist rationality. Most people follow rules that might be tacit. Most people engage in social practices that they might not be able to explain. Understanding this rule following and norm performance is critical to understanding the existence, emergence, and evolution of social order. According to Smith (ibid.), recognizing the importance of the "undesigned ecological system that emerges out of cultural and biological evolutionary processes" is "the intellectual heritage of the Scottish philosophers [including Adam Smith], who described and interpreted the social and economic order they observed." Economic experiments, Smith explains, allow us to explore both how constructed orders are likely to perform as well as the functioning of the "undesigned ecological system."

In chapter 6, "Beyond Markets and States: Polycentric Governance of Complex Economic Systems," Elinor C. Ostrom argues for social science research that appreciates the complexity of polycentric self-governance systems in order to more fully understand how complex human beings live within a variety of institutional arrangements to satisfy their individual goals and work together or fail to work together to solve collective problems.

Ostrom won the Nobel Prize in Economics in 2009, along with Oliver E. Williamson, for "her analysis of economic governance, especially the commons."[12] Specifically, the Nobel Committee highlighted Ostrom's use of fieldwork to study real-world collective action problems, like governing common-pool resources, as well as her efforts to explain how groups overcome those challenges and establish effective governance mechanisms.

Ostrom was dissatisfied with the use of simple constructions that were traditionally used by social scientists. Fortunately, Ostrom (see page 193) explains, "scholars are slowly shifting from positing simple systems to using more complex frameworks, theories, and models to understand the diversity of puzzles and problems facing humans interacting in contemporary societies." She highlights her work on common-pool resources and the ways in which communities find ways to govern, use, and conserve these resources despite clear ownership and exclusion rights. Adopting traditional distinctions between public and private goods, she explains, would not have been adequate for understanding the collective solutions that emerged to deal with this challenge. Through extensive fieldwork and case studies (such as examining forests, fisheries, and water rights management, as well as policing services) throughout the world, however, she discovered a set of design principles for successful common-pool resource management. Such principles include establishing boundaries, appropriation and provision rules, collective choice arrangements regarding rights and rules, monitoring, graduated sanctions, conflict resolution, and nested governance systems.

Ostrom's investigation of these collective efforts to overcome community challenges and her appreciation of the commonalities between successful collective solutions to these problems taught her critical lessons for conducting public policy analysis. One key lesson regards the difficulty of monitoring and the importance of trust in group settings. Another is related to the inadequacy of using simple models to make sense of complex phenomena. And, an additional key lesson speaks to the error of advocating one-size-fits-all solutions to similar but distinct social problems. However, "the most important lesson for public policy analysis derived from the intellectual journey I have outlined here," Ostrom (see page 237) concludes, "is that humans have a more complex motivational structure and more capability to solve social dilemmas than posited in earlier rational-choice theory. . . . Extensive empirical research leads me to argue that instead, a core goal of public policy should be to facilitate the development of institutions that bring out the best in humans."

Notes

1. Boettke developed his concept of mainline economics from Kenneth Boulding, who also used the term. Boulding (1971) argued that Adam Smith was a part of the "extended present," that not all of his insights had been incorporated into present-day theories, and so he still has something to teach contemporary readers and researchers. See also Boettke et al. (2014).

2. Though, at least four of the six authors here (Hayek, Buchanan, Coase, and Smith) have attempted rather deep historical interpretations of Adam Smith and the Scottish Enlightenment as part of their projects. Additionally, North and Ostrom have at least reflected on their connections to Smith.

3. Smith ([1776] 1981: 16) states, "The labour too which is necessary to produce any one complete manufacture, is almost always divided among a great number of hands. How many different trades are employed in each branch of the linen and woollen manufactures, from the growers of the flax and the wool, to the bleachers and smoothers of the linen, or to the dyers and dressers of the cloth!" And,

> Observe the accommodation of the most common artificer or day-labourer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part, though but a small part, has been employed in procuring him this accommodation, exceeds all computation. The woollen coat, for example, which covers the day-labourer, as coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must all join their different arts in order to complete even this homely production. How many merchants and carriers, besides, must have been employed in transporting the materials from some of those workmen to others who often live in a very distant part of the country! How much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour too is necessary in order to produce the tools of the meanest of those workmen! To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver, let us consider only what a variety of labour is requisite in order to form that very simple machine, the shears with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting-house, the brick-maker, the brick-layer, the workmen who attend the furnace, the mill-wright, the forger, the smith, must all of them join their different arts in order to produce them. . . . if we examine, I say, all these things, and consider what a variety of labour is employed about each of them, we shall be sensible that without the assistance and co-operation of many thousands, the very meanest person in a civilized country could not be provided, even according to, what we very falsely

imagine, the easy and simple manner in which he is commonly accommodated. (22–23)

Similarly, Leonard E. Read (1958) explored the complicated process of manufacturing another abundant and inexpensive product, the pencil.

4. According to Smith ([1759] 1982: 213), "The care of the health, of the fortune, of the rank and reputation of the individual, the objects upon which his comfort and happiness in this life are supposed principally to depend, is considered as the proper business of that virtue which is commonly called prudence."

5. See also Smith's ([1776] 1981: 788) discussion of established churches and religious competition. He argued that competition in religion would lead to more religiosity in society, as preachers would be incentivized to be more effective. As Smith (ibid.: 788) wrote, "The teachers of the doctrine which contains this instruction, in the same manner as other teachers, may either depend altogether for their subsistence upon the voluntary contribution of their hearers; or they may derive it from some other fund to which the law of their country may entitle them; such as a landed estate, a tythe or land tax, an established salary or stipend. Their exertion, their zeal and industry, are likely to be much greater in the former situation than in the latter."

6. Smith pairs this with a warning against insisting that businesses allow social aims to trump commercial goals. According to Smith ([1776] 1981: 456), "I have never known much good done by those who affected to trade for the public good." Additionally, Smith (ibid.) writes, "The statesman, who should attempt to direct private people in what manner they ought to employ their capitals, would not only load himself with a most unnecessary attention, but assume an authority which could safely be trusted, not only to no single person, but to no council or senate whatever, and which would nowhere be so dangerous as in the hands of a man who had folly and presumption enough to fancy himself fit to exercise it."

7. "The Prize in Economics 1974—Press Release," *Nobelprize.org,* accessed March 9, 2016, http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1974/press.html.

8. "The Prize in Economics 1986—Press Release," *Nobelprize.org,* accessed March 10, 2016, http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1986/press.html.

9. "The Prize in Economics 1991—Press Release," *Nobelprize.org,* March 10, 2016. http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1991/press.html.

10. "The Prize in Economics 1993—Press Release," *Nobelprize.org,* accessed March 10, 2016, http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1993/press.html.

11. "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2002," *Nobelprize.org,* accessed March 2, 2016, http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2002/.

12. "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2009," *Nobelprize.org,* accessed March 10, 2016, http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2009/.

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