

PUBLIC ADMINISTRATION IN TODAY'S WORLD OF ORGANIZATIONS AND MARKETS

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Keywords: Complex Organizations, Coordinating Mechanisms, Social Implications, Organizational Innovation, Adaptation to Change

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Summary (by Krishna Tummala, Honorary Theme Editor for 'Public Administration and Public Policy')

Herbert Simon, the Nobel economics prize winner, who had developed the theory of “bounded rationality”, in this article challenges the notion of Adam Smith, that the “invisible hand” of market forces controls and dictates economic and social life. He shows the proliferation of public organizations, and their need. Departing from the “public choice” theorists, he also points out that public organizations play a vital role in providing some services which cannot, and should not, be entrusted to the private sector. Distinction here is drawn as to why we have markets and also public organizations, while explaining the boundaries between them. The plea thus is that both economics and politics, as disciplines of study, shall borrow from each other and continue the mutual education process.

1. Research on Complex Organizations

Two questions pertaining to both private economic institutions and government are raised: What mechanisms make complex organizations effective instruments for carrying out human purposes? And what kinds of organizational structures facilitate change and innovation?

The Russell Sage Foundation sponsored several conferences involving some Nobel Prize winners in economics who have strayed into political science, often either to show how economic analysis could explain political phenomena (i.e., "Public Choice") or to discuss the merits of markets and private enterprises as ways of getting our society's work done. I was invited to participate in the conferences as a Nobel economist, but I treasonably defected to my political science origins in order to defend our political institutions against the imperialism of utility maximization, competitive markets, and privatization.

Neoclassical economics created a unified framework for "explaining" virtually all human behavior as produced by an Olympian process of utility maximization that recognizes no limits to the knowledge or thinking powers of the human actors. This framework assumed a static equilibrium and, as soon as serious attention began to be paid to dynamic phenomena and uncertainty in large, complex social systems, the structure began to deteriorate, and continues to crumble today.

Today, economics is in an increasingly chaotic and productive state of disorganization, searching for an alternative picture of economic mechanisms and human rationality—that is, of the genuine bounded rationality of which people are capable. There are theoretical proposals galore; what is still in short supply is detailed empirical research (of kinds that are well-known in political science) to determine how human beings actually go about solving problems and making decisions.

I do not intend to reopen the whole range of questions posed by bounded rationality, but will direct my remarks to just one institutional aspect: Why, in a modern society, do we have markets, and why do we have organizations, and what determines the boundary between these two mechanisms for social organization? These questions go to the heart of the roles of our diverse political and administrative institutions, public and private, in contemporary society.

2. Markets as Coordinating Mechanisms

If we were to take an extreme libertarian view, both markets and organizations would be unnecessary. For the libertarian, human beings are Leibnizian monads: hard, elastic little particles that bounce off each other without any other interaction, certainly without either responding to or influencing each others' values. Libertarians can hold to their faith only on the absurd assumption that my exercise of freedom never affects your ability to exercise yours. Quite the opposite: The freedoms and the fates of all six billion of us who occupy this globe are inextricably interwoven.

Markets and organizations allow human beings to do together, through interchange of information and the ensuing coordination of activity, things they could not do independently. Coordination simply means organizing activity in such a way as to handle the problems that arise because the behavior of each participant depends in some ways on the behaviors of the others. I hardly need explain why such dependence is often valuable; if you absent-mindedly drive in the right instead of the left lane while visiting Britain, you will find out all too soon. Organizations, some quite large, especially armies, have been with us since the earliest historic times and earlier. Perhaps for that reason, we take them for granted, and they excite in us less wonder than do markets, which developed

somewhat later, first locally, then over increasingly long distances. The most peculiar characteristic of markets, Adam Smith's "invisible hand," is their ability to secure coordination without obvious central planning, and without a common interest among their members, for each buyer and seller is supposed to be pursuing independently his or her own private interest.

But this invisibility of mutual dependence is deceptive. The usefulness of markets depends on a shared knowledge of the prices and the characteristics of goods that are being traded, the absence of serious third-person effects (so-called "externalities") that are not reflected in prices, and sufficient stability of products and manufacturing practices so that both sellers and buyers can plan their activities rationally and make rational decisions to sell and buy at the prices at which the markets equilibrate. They also depend critically on the safety of transit routes. The effects upon buyers and sellers of agricultural products of prolonged drought, or the effects of closing a strategic strait in a major trade route between India and Europe provide vivid examples of the fragility of markets in the face of various forms of uncertainty, and the social and human distress that can be caused by their malfunctioning.

In order to use markets to provide oil for the lamps of China, oil well owners must know that there exists a land, China, where oil will be used in certain volumes at certain prices for at least the proximate future (the relevant time horizon depending on the time required to produce the oil and amortize the investments). And the Chinese buyers will acquire oil lamps only if they believe that oil will be purchasable at a price that makes oil lamps competitive with alternative light sources. Substantial stability of manufacturing, consumption, and trade is essential to markets working effectively. And, of course, social institutions, and governmental organizations in particular, play an essential role in maintaining (and occasionally destroying) that stability.

On another dimension, where there are many competing commodities, similar but not identical, price information may have to be supplemented by product quality information offered by organizations like Consumer Reports so that buyers can compare competing brands, or by governmental regulations to protect them from injurious products. If we wish to understand how complex markets can be, we can turn to building-construction contracts, or contracts for manufacturing large custom-built machinery, and count how many pieces of information have to pass between designers and builders before a contract can be sealed, and how much daily interaction takes place between seller and buyer while the transaction is being completed. Such contracts might almost better be viewed as agreements to form temporary organizations for the duration of particular construction or manufacturing jobs.

In summary, markets are, indeed, remarkable coordinating mechanisms in the parsimony of their requirements for information. But they are far less parsimonious than they appear at first blush, for they require a high degree of economic stability and a low level of externalities in order to operate. Moreover, in important classes of market transactions, much product information must flow in the negotiation of the exchange and the subsequent manufacturing process. Adam Smith's invisible hand is often highly visible. Consequently, when the qualifying conditions for stability of markets are not met, as, for example, in wartime, we see a rapid movement toward centralized planning as the

preferred coordinating mechanism for many activities.

3. From a Market Economy to an Organizational Economy

We are so accustomed to hearing our society described as a market economy that we are often surprised to observe that, since the time of Adam Smith, markets have steadily declined, and business (and governmental) organizations have steadily grown as the principal coordinators of economic activity. In Adam Smith's time, almost the only economic organizations beyond the scale of individual families were agricultural estates directly managed by their owners or through stewards, and relatively small shops owned by guild masters. The putting-out system was a market system, not an organizational system, though one with a special coordinating role for the capitalist who contracted for the successive stages of manufacture of the products—from flax to yarn to cloth to a peasant's blouse. The contractor did not operate as an employer managing a factory. Adam Smith took a dim view of large organizations where management became separated from the direct oversight of the owner. Looking around for examples of such organizations, he found mainly universities like Oxford and Cambridge, which he described as inept, inefficient, and corrupt. (One could claim that Smith anticipated our golden parachutes for salaried executives. Perhaps he was forewarned by the not-frequent speculations by stewards of the estates of the gentry and aristocracy.) But in spite of Smith's skepticism, organizations have grown until the vast bulk of our economy's activity takes place within the walls of individual large business corporations, not in markets. This growth had already begun to root itself, in the coal mining, iron, ceramics, and textile industries, at the time that Smith was writing his great work, and entered into land and sea transportation a generation or two later. (He foreshadowed it just a bit in his tale of the efficiency of specialization in the manufacture of pins.) It was triggered in large measure by technological advance, especially the invention of the steam engine and its applications as a centralized power source for a factory or mine and, later, for a ship or train. Today, in consequence of these developments, we do not live in a market economy, but in an organization economy, or at most, in an organization/market economy, with a predominance of organizational over market activity. It is ironic that one of the first industries to move toward this new kind of organizational society was transportation, where the railroads enabled an enormous rise of market exchanges over long distances, with correspondingly large factories to produce the goods that were exchanged. Electronics is now completing the comparable transformation of communication.

Now, before going on to my next topic, I must issue one caveat. Current developments in electronics, notably the development of the World Wide Web and e-markets, and the enhanced abilities of organizations to manage geographically dispersed activities, provide new opportunities of unknown magnitude for coordination at a distance. Today, we have very little experience with these new developments, both their current forms and their potential. Hence, there is as yet little basis for judging whether markets or organizations will be best able to make use of the new opportunities and whether, as a consequence, we will see a continuation or acceleration of the current trend towards concentration of productive activity within organizations, or will see that trend slowed or even reversed in favor of markets.

4. How Organizations Coordinate

To understand this growth in organizations, business and governmental, we must understand organizations' ability to coordinate complex activities efficiently, and at far higher levels than markets can attain. As organization theory has long taught us, coordination is not a good but a necessity. Coordination is costly and imperfect, and we wish to introduce no more of it than the structure and intricacy of our goals calls for. Stated a little more positively, organization design focuses on balancing the gains from coordination against its costs. The first step in designing an effective organization is to determine what kinds of interdependencies in its activities will benefit from coordination, and then to minimize the amount of coordination required by partitioning activities in such a way that a much lower rate of interaction, on a more leisurely time scale, is required between subunits at any level than is required within each subunit. This is the familiar division of work. The same issues of balance between the benefits and costs of coordination that guide organizational design also play a major role in defining the boundaries between organizations and markets, which are defined by the decisions of when to make things or perform services within the organization and when to buy them from outside vendors.

In any case, the basic reality of the division of work is that while high rates of rapid communication are required among people who perform activities that are highly interdependent, much less frequent communication is required among those carrying out activities that are independent, and this distinction should be clearly reflected in organization structure. Systems whose structure reflects these properties are referred to as "nearly decomposable." And a formal mathematical theory exists today that describes them and makes important predictions, as we shall see, about their behavior.

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Note: Excerpts from the John M. Gaus lecture delivered by (late) Herbert A. Simon, appearing in *PS: Political Science & Politics* (December 2000), with permission from the Cambridge University Press.

Biographical Sketch

Herbert A. Simon wrote the now classic *Administrative Behavior* which was called the “Book of the Half Century” by *Public Administration Review* (the premier journal in the area of Public Administration, and an organ of the American Society for Public Administration). The Nobel Committee thought of it as “epoch making,” and awarded to Simon the Nobel Prize in economics in 1978. Simon also won the Dwight Waldo prize awarded by the American Society for Public Administration. His knowledge covered a variety of fields such as economics, political science, psychology, and computers. He was a Chaired Professor in Psychology and Computer Science at the Carnegie Mellon University, Pittsburgh, Pennsylvania, till his death in 2001.