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PART ONE

ORIENTATION

## ONE

## Introduction

An *economic system* comprises the totality of institutions and organizations that specify property relations within a given society and that channel and influence the distribution of goods and services. This dry definition covers an amazing diversity of economies at all levels of development: the altruistic foragers of the Kalahari Desert in southern Africa; the highly competitive fishing societies on the Canadian Pacific coast; the egalitarian Lepcha farmers of Sikkim; the intricately structured caste agriculturalists in Uttar Pradesh, India; the industrialized market economies of West Europe; and the former centrally planned economies of East Europe.

How can we make sense of this exuberant profusion, which represents a tribute to humanity's ingenuity at organizing itself? In this book, I look at economic systems in a comparative fashion and ask four key questions about them: Is the number of these systems infinite or do particular institutions and organizations consistently cluster together in a few distinct patterns? If such patterns exist, are they a function of the environment, the social or political structure, or the level of economic development; or are they relatively independent entities? What impact do economic systems have on the performance of the economy? How do they originate, develop, and change?

Although traditional economic theories may help us to approach these questions in a systematic fashion, such theories do not provide many answers. More specifically, we have few believable deductive analyses about which particular institutions and organizations cluster together, not just for industrial/service economies but also for those with other *foci of production*, namely foraging (hunting, gathering, or fishing) and agriculture (plant production and herding). This theoretical confusion was clearly illustrated in a bizarre debate in the 1950s and 1960s about the possibility of

convergence of both centrally planned and market economies toward some “social optimum” in between.<sup>1</sup>

Although the lack of a credible deductive theory of economic systems is certainly not fatal to analysis, it means that we run the double risk of including too few or too many factors in defining such systems. It also means we must approach the four questions posed previously in a more inductive fashion. Only in this way can we develop the stylized facts that would give us a deeper understanding of institutional structures and also bridge the gap between abstract considerations and the concrete reality of economic systems. In brief, this is not a book of airy, high-level generalizations about economic systems, nor is it an attempt to construct a generalized “theory of economic systems,” nor is it a methodological treatise telling others to do what I am too lazy to carry out myself. Rather, I present what I have learned by studying a large number of preindustrial and industrial economies and by looking for groups of complementary economic institutions which, in turn, define different types of economic systems. The results of such an exercise provide a factual basis for theorizing and a systematic formulation of testable hypotheses, thus permitting us to move away from the ideological approaches that have dominated most comparisons of economic systems.

One major conclusion of this study is that for any focus of production, we can isolate a small number of coherent types of economic systems. This is important because, as in biology, the genus (the type of economic system) provides perspective on the individual species (the economy that exemplifies it), so that the accidental or unique elements can be separated from those the economy has in common with other members of the same genus. Conversely, through careful study of a given species, we may be able to isolate mechanisms that operate in other species of the same genus. More specifically, determination of the economic systems provides an analytical framework within which a variety of economic activities can be placed in context for further analysis. In the case of preindustrial societies, for instance, this means that certain economic activities can now be understood as integral parts of the economic system, whereas other activities (often receiving considerable attention) can be viewed as unique aspects of the particular society.

I also show that traditional classifications, such as feudalism or capitalism, are not very helpful and that we need to reexamine the various types of

<sup>1</sup> Nobel laureate Jan Tinbergen was a particular strong advocate of convergence, whereas other economists of lesser professional stature (including myself) argued against it (the debate is reviewed in Pryor, 1973b: 356–71). Subsequent events in East Europe suggest that Tinbergen was dead wrong. The question of institutional coherence is inescapable and we cannot simply pick and choose particular institutions that appeal to us and combine them in an economic system. I discuss this issue in greater detail in Chapter 8.

economic systems from a different perspective. Such an intellectual framework must be flexible enough to embrace the full spectrum of economic and social phenomena but firm enough to retain its unifying elements even as it changes in response to new information.

Isolating different types of economic systems is a relatively straightforward statistical exercise. Once accomplished, I can also demonstrate that they are relatively independent of social, political, and environmental influences but highly dependent on the level of economic development. Serious difficulties arise in exploring the other two major questions that guide this study. To assess the impact of the type of economic system on economic performance and to gain an understanding of systemic change, we can make some detailed empirical investigations for industrial/service economic systems. For agricultural economies, such an exploration also is possible, although in much less detail; and for foraging economies, the lack of suitable data prevents such assessment. In studying the transformation of different types of economic systems, we are also limited by the availability of information to certain broad issues: namely, the factors underlying the transition from foraging to agriculture and from agriculture to industry. For the same reasons, my explorations of the origins of types of economic systems are also limited.

Aside from the four questions underlying this analysis, delineation of a particular economic system allows us to view the institutions structuring economic activities as a whole and, in turn, to relate these patterns to a variety of particular questions we may be investigating. Thus, delineation of the economic systems allows us to step beyond reference to specific economic customs or behaviors to see more general networks of complementary institutions.

The broad focus of this book will, I hope, provide those interested in the various social sciences with a broad synthesis of economic systems, so that they can begin to see connections that they have hitherto overlooked in the chaos of unrelated facts and case studies of various economies. I have also tried to write this book so it would be comprehensible to those at various levels of expertise, placing technical materials in footnotes and appendices. The latter can be found either at <http://us.cambridge.org/titles/0521849047.htm> or at [www.swarthmore.edu/SocSci/Economics/fpryor1](http://www.swarthmore.edu/SocSci/Economics/fpryor1).

### **A. Some Basic Concepts**

Because this study looks at the preindustrial world from quite a different perspective than that of most economists, anthropologists, and historians, it employs a set of concepts and a vocabulary whose meaning is somewhat

different in the various social science disciplines. To avoid confusion, it is important to define four crucial and abstract concepts used throughout this study.

### 1. The Economy

The *economy* consists of all activities aimed at the production of goods and services, their distribution, and their consumption. It reflects the specific ways in which the members of the society make their living and survive, what technologies are employed, and the specific behaviors associated with various economic activities. Consider certain aspects of a simple nomadic foraging economy. Its members spend part of their day hunting, gathering, or (for certain groups) fishing. All humans, as well as certain species of apes, employ tools for foraging; and both humans and some nonhuman primates, such as chimpanzees, make these tools as well.<sup>2</sup> Within all primate species, some foraged products are also distributed. Most of the differences between the economic activities of human and nonhuman primates, however, appear to be quantitative, not qualitative,<sup>3</sup> and all animals (both social and nonsocial) have an economy. Nevertheless, the division of labor is more extensive among humans than among their nonhuman primate cousins; and the distribution and property relationships among humans are more articulated and structured by rules (e.g., norms of sharing of the meat of large game) that are more extensive and are enforced by consensus, rather than by force.<sup>4</sup> As will shortly become evident, only human societies have deliberate institutions, and it is these institutions that define the type of economic system.

### 2. Economic Institutions

*Economic institutions* are, according to Douglass C. North (1998: 79), “the humanly devised constraints that structure human interaction. They are made up of formal constraints (e.g., rules, laws, constitutions), informal

<sup>2</sup> Comparing the complexity of these tools, William C. McGrew (1992: 131–42) found little difference between those of the Tasmanian aborigines and those of the chimpanzees of Tanzania.

<sup>3</sup> This generalization is based on a long comparative survey (Pryor, 2003b) of the economies of various species of nonhuman primates.

<sup>4</sup> Boehm (2004) offers the interesting argument that the defining of individually killed large game as communal property to be shared is a distinctively human trait not found in nonhuman primates.

constraints (e.g., norms of behavior, conventions, self-imposed codes of conduct), and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies.” They also facilitate the organization and conduct of transactions between members of the society and, crucial to their effectiveness, employ various enforcement mechanisms, which can be based on habits, rules of morality, customs, rights, or coercion. Institutions influence beliefs and behaviors of individuals and groups and, thus, the preferences and priorities expressed through both public and private decisions (Engerman and Sokoloff, 2003).<sup>5</sup>

I would add to this definition of economic institutions that these constraints must be *deliberately* set; and, in turn, two criteria must be met to determine the “deliberateness” of such constraints:

- (a) The behavior of members of the society must be individualistic. Such behavior includes strategizing, forming friendships, expressing oneself artistically, inventing, or displaying a distinct personality. In this respect, the differences between human and nonhuman primates also appear quantitative, not qualitative.
- (b) The institutions of one group must differ significantly from those of other groups of the same species in similar ecological circumstances. Nonhuman primates do not meet this second aspect of deliberateness: primatologists have found few behavioral differences among the economic behavior (and the rules inferred from it) of different groups (bands) of the same species, at least for those economic activities occupying a significant amount of time.<sup>6</sup>

In brief, despite considerable differences in the economies of different bands of the same species, nonhuman primates have no real economic institutions according to this criterion. By way of contrast, as I show in Chapters 2 and 3, different groups of human nomadic foragers have had not only very different economies but also a profusion of different property and distribution institutions channeling their economic activities. From an economic

<sup>5</sup> Another useful discussion of institutions is by Baslé (2002).

<sup>6</sup> See Pryor (2003b). For example, although baboon troops may differ considerably in the amount of their hunting and meat eating, in no troop do these figure as salient elements of their time budget or diet. The exchange of grooming services, on the other hand, is a much more important group activity among baboons, and patterns of exchange vary little from troop to troop. Although the patterns of grooming differ significantly *between* species of nonhuman primates, up to now primatologists have found few differences *within* a given species.

point of view, it is the existence of institutions that distinguishes humans from other animals.<sup>7</sup>

Of course, it is often difficult to determine exactly what these institutions are if they are not embodied in constitutions, laws, books of “correct conduct,” or survey results. In preliterate societies, however, anthropologists can ask members of the society about these institutions (and then try to resolve conflicting opinions) or can infer them from the behavior of members of that society. For instance, does a person who takes a tool from the house of its original owner incur punishment when the removal is discovered? As I argue in later chapters, rules of property are found in human societies at all levels of development; we must discard the notion that at a very early stage of human society, our ancestors made no distinction between mine and thine (i.e., the notion of *primitive communism*).

### 3. Economic Organizations

Let us continue with the distinctions made by Douglass C. North (1998: 81): “If institutions are the rules of the game, organizations and their entrepreneurs are the players. *Organizations* are made up of groups of individuals bound together by some common purpose to achieve certain objectives. Organizations include political bodies (e.g., political parties, the Senate, a city council, regulatory bodies), economic bodies (e.g., firms, trade unions, family farms, cooperatives), social bodies (e.g., churches, clubs, athletic associations), and educational bodies (e.g., schools, universities, vocational centers).” Although these examples focus on industrial/service rather than preindustrial economies, North’s basic idea can be applied to all human economies.

<sup>7</sup> Others have argued, incorrectly I believe, that the economies of human and nonhuman primates differ on three other grounds. (1) Some claim the existence of communal property is the key, but I have dealt with this issue elsewhere (Pryor, 2004). (2) Some claim that nonhuman primates have no general concept of property. But, in fact, many species of primates have a strong sense of territoriality (Pryor, 2003b), and some have a sense of personal property as well. For instance, in the Yerkes Laboratory (a large outdoor reserve), chimpanzees performed various tasks and earned tokens to be later exchanged for food; they soon began to hoard the tokens and became “hysterical” when other animals came near their cache (Dare, 1974). (3) Some note that nonhuman primates are relatively self-sufficient and rely very little on exchange. However, many human societies also manifest a high degree of economic self-sufficiency within the nuclear family (although not quite as high as among nonhuman primates). For instance, if we assign values to home-produced goods and services, we find that even in an advanced industrial nation, such as the United States in the latter half of the twentieth century, home-produced goods and services amounted to roughly 50 percent of total personal consumption (Eisner, 1989: Table 1).

Human nomadic foragers have many different types of economic organizations. The most important economic interactions occur within the family, where adult males and females spend a significant portion of their time in joint activities for production, consumption, and distribution.<sup>8</sup> But, other joint economic activities outside the family can also be specified: for instance, foraging parties, food sharing, competitive feasts, and so forth. So it seems we humans are qualitatively distinguished from our simian cousins and other animals by our (deliberate) economic institutions and organizations.<sup>9</sup>

#### 4. The Economic System, the Mode of Production, and the New Institutional Economics

As previously defined, the economic system comprises the entire configuration of institutions. The economic system and the economy are concepts that direct our attention to the same phenomena but from very different perspectives and levels of abstraction.

In studying preindustrial societies, however, most anthropologists have focused primarily on the economy. For agricultural economies, they have investigated various production techniques – swidden, use of irrigation, and types of tools – and they may have dealt with a few key economic institutions, such as tenancy arrangements or the organization of work parties. For foraging societies, most anthropologists have also focused for the most part on the economy, as Binford (2001) did in his monumental synthesis. But, for a complete description of any given preindustrial society, of course, we must investigate both the economy and the economic system.

My focus on economic systems, specified in terms of the overall pattern of economic institutions and organizations defining property relations and the distribution of goods and services, is relatively standard in the West, at least among those working within the mainstream tradition of Anglo-American economics. Implicit in the term “economic system” is the notion that certain institutions are complementary to others and, as a result, are usually found together. Some refer to this phenomenon as reflecting the “logic of institutions,” a concept which, unfortunately, is seldom spelled out or

<sup>8</sup> One possible exception to my generalization about the importance of joint economic activities within the family is the Ik of Uganda (Turnbull, 1972), but this was a semi-starving society, whose long-term survival was in doubt.

<sup>9</sup> Certain types of insects, such as ants, do have complex economies with a division of labor and systems of exchange, so in this respect they have more “advanced” economic organizations than our primate cousins. But their economic organization seems to function on the basis of instinct, so that they also do not meet the criterion of deliberateness.



investigated carefully. By contrast, the cluster analysis employed throughout this book focuses on these complementarities. Moreover, in the latter part of this book, I carefully examine how the logic of institutions influences systemic change, a new issue for comparative economists.

Relatively few economists have analyzed the economic systems of tribal and peasant economic systems in terms of their constituent institutions and organizations. Anthropologists who study these economies are more likely than economists to write from a Marxist perspective and to focus on the *mode of production*, a broader concept than the economic system. Some clarification of these contrasting approaches to preindustrial economies is in order.

A mode of production consists of both *forces of production* and *relations of production*. The former term includes the level of technology, the environment and natural resources, and the physical and human capital available to the economy; the latter term roughly corresponds to my concept of economic system.

Of course, discussing the forces of development in a methodical fashion requires measurement; and, at this point, problems arise. Different aspects of the forces of production require quite different measures. For a measure of economic development in preindustrial economies, I use an ingenious index of “cultural complexity” devised by Robert Carneiro (1970). This measure covers a wide variety of tangible and intangible aspects of the society’s culture, including a large number that directly reflect technology and the division of labor.<sup>10</sup>

Because the connotations of both “cultural” and “complexity” differ greatly from one field of social science to another, I relabel Carneiro’s scale as the “level of economic development” because it reflects what economists mean by that concept. As a measure of economic development in industrial/service economies, I use the per capita gross domestic product (GDP), calculated for each country in 1990 dollar prices. For characterizing other aspects

<sup>10</sup> Carneiro (1970) looked at particular traits reflecting functions common to all societies and selected those aspects of material culture that allow a simple coding yielding an unambiguous scale to rank societies according to their level of development. More specifically, he developed a Guttman scale with several hundred cumulative indicators that cover various aspects of the division of labor, level of technology, architecture, social organization, political organization, law and judicial processes, warfare, religion, ceramics and art, transportation, and special knowledge and practices. In his measure, he focused on only those indicators that could be used in a Guttman scale and did not include other kinds of complexity, such as that embodied in kinship or religious beliefs, which did not allow such scaling. Because his various indicators have little overlap with those I employ in defining the economic system, my use of his scale does not involve any circular reasoning. The estimation technique for those societies not coded by Carneiro is described in Appendix 2-2.

## *B. Classification of Economic Systems*

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of the forces of production, such as the physical environment, I use a number of indicators, including evapo-transpiration (a measure of the moisture available for plant growth), effective temperature (a measure capturing the average temperature and the length of the growing season), soil quality, topography, and so forth. For measures of physical capital, I use an approximation of the capital intensity of production; and, as a measure of human capital, an approximation of literacy or of education in the population.

The concept of mode of production has many inadequacies, which I have discussed elsewhere (Pryor, 1982a). For the purposes of this book, I find that separating the forces and relations of production and considering the former as external to the economic system, rather than as intrinsic to it, has three major advantages. Most important, my approach permits us to test propositions about the correlation (or lack thereof) between economic system and levels of economic development; in other words, to see if the former evolves in a unilineal fashion or whether different types of economic systems can exist at the same level of economic development. Furthermore, the dispute over whether the relations or forces of production have causal priority ceases to be an ideological catfight and becomes an empirical question instead. Finally, for preindustrial societies, the separation of these two aspects of the mode of production allows us to move away from lavishing almost exclusive attention to the forces of production, which is customary in this literature, to giving more attention to the relations of production.

My particular treatment of types of economic systems is related to that of the “new institutional economics,” which also focuses on economic institutions and organizations. But, although the new institutional economics has a microeconomic focus and deals with institutions and organizations primarily as phenomena in isolation from each other, I deal with these phenomena from a more macro-viewpoint and consider how specific institutions and organizations within an economy are interrelated. Nevertheless, of the four key questions asked by comparative economists outlined previously, the new institutional economics deals with all but one: what particular configurations of the institutions and organizations within an economy occur together and what might underlie such complementarities.

## **B. Classification of Economic Systems**

### **1. Common Approaches for Classifying Economic Systems**

The various property relations and methods of distribution of goods and services occurring together and defining an economic system do not appear