Introduction to the Nature of Economics

Archeological and written records of human existence suggest that obtaining the material means to satisfy wants has been a perpetual problem. Food and shelter are requirements of human life. Other goods satisfy a range of human desires and give pleasure or utility to individuals. The study of ways that humans deal with these issues and challenges is called “economics.”

The evolution of processes to solve the provisioning problem takes place in a social context. As a result, the economy is a system and is interrelated with a variety of other social systems. These systems include (but are not limited to) economic, political, religious, social, geographic, demographic, legal, and moral systems. The psychology of individuals is also fundamental to the social system. From the time of the Greeks (e.g. Xenophon [430-355 BCE], Plato [427-347 BCE] and Aristotle [384-322 BCE]) through the Classical economists (e.g. Adam Smith [1723-1791], Thomas Malthus [1766-1834] and David Ricardo [1772-1823]), economics was treated as part of philosophy, religion and/or moral philosophy.

During the 19th century, the social sciences emerged and separate disciplines were carved out. Economics, psychology, sociology, politics, anthropology and other branches of social science developed as separate fields of study. In the last part of the 19th century, “political economy” became “economics.” Since that time, economics has been frequently defined as “the study of how scarce resources are allocated to satisfy unlimited wants.” As a professional discipline, economics is often regarded as a decision science that seeks optimal solutions to technical allocation problems. In this text, economics is presented from two perspectives. One perspective is the technical analysis of the processes by which scarce resources are allocated for competing ends. An alternative perspective is the social context of provisioning.

ECONOMICS AS A STUDY OF THE ALLOCATION OF SCARCE RESOURCES

From a technical perspective, economics is the study of how various alternatives or choices are evaluated to best achieve a given objective. The domain of economics is the study of processes by which scarce resources are allocated to satisfy unlimited wants. Ideally, the resources are allocated to their highest valued uses. Supply, demand, preferences, costs, benefits, production relationships and exchange are tools that are
Allocation questions are:

1) What to produce?
2) How many to produce?
3) How to produce?
4) When to produce?
5) Who gets it?

Provisioning is the process of framing the approaches to the allocation problem.

1. What goods and services should be produced? This requires a valuation or ranking of goods and services from most valued to least valued.
2. How many units of each good (or service) should be produced? Since not everything can be produced, some goods must be sacrificed for other goods.
3. How should those goods (and services) be produced? There are often different ways to produce a good. The amount of the good to be produced may influence the ways in which a good is produced.
4. When should the goods (and services) be produced? The time that a good (or service) is available may affect its value. Producers of skis must have their new equipment ready for the ski season. Economists, accountants and others use the concept of present value to adjust the value of goods (or money) that will be acquired at some point in the future. Generally, goods to be obtained or consumed at some future date are perceived to have a lower value than those available currently.
5. How should those goods (and services) be distributed among the members of society? Societies must devise rules or principles that govern how goods are shared or distributed among its members. The ways that goods are distributed may alter incentives that influence the behavior of individuals. The distribution of goods among the members of society may also influence the ways in which different goods are valued.

ECONOMICS AS A STUDY OF PROVISIONING

Provisioning is the social process that establishes the framework of social institutions, values, beliefs, knowledge, and infrastructure within which the allocation of resources takes place. This social framework is the foundation that influences the individuals’ perceptions, preferences and responses to the problems of what, how much, how, when and who gets it. The provisioning process frames or defines the approaches to allocating resources and goods.

The legal system, property rights, the existence of markets, organizational structures (corporations, governmental units, etc), religious beliefs, standards of morality and family/kinship relationships are a few examples the elements of the social framework. The matrix of these elements can be structured in almost an infinite number of ways resulting in different approaches to the allocation questions.

Economics as a study of provisioning is a social science and tries to understand the historical and philosophical context of the allocation problem. It is a study of the nature of the ends and processes as well as the means. The allocation problem is one aspect of the provisioning problem.

If we are to study the allocation of resources to competing ends, what is the nature and origin of the ends (goals, objectives)? Individuals have goals. To what extent are these goals shaped by different forces in society? How do
individuals’ objectives shape society? Why do individuals value some goods (or services) more highly than others? Are some goods more valuable to the functioning of society than others?

The study of the economics of provisioning must also consider alternative rules or principles that a society might use to structure the allocative mechanisms. Different societies have devised sets of institutions and beliefs to allocate resources. In some cases traditions, customs and mores guide individual behavior. In other cases, a central authority uses commands to regulate individual choice. Voluntary interaction among the members of society is another alternative. In most cases, societies rely on a mix of culture, tradition, command and voluntary interaction.

Economics as a study of provisioning includes the historical and philosophical foundations and context of economic behavior. The tradeoffs between the economic and non-economic goals are considered. The interrelationships of economic life with justice, ethics, morality, creativity, security and aesthetic values are of concern. Human societies have attempted a broad array of alternative systems to deal with the problem of provisioning. Some have been more successful and other less so. Some systems have lasted for thousands of years with few changes. Other systems have come and gone quickly. In some cases, environmental problems have caused the demise of societies. In other cases, the societies ended abruptly with social revolution. Some societies have adapted to changing circumstances and evolved over time. Mayan, Roman, Incan are only a few examples of societies that have come and gone. Archeological studies continually find evidence of societies that flourished and ultimately failed. In some cases they were destroyed from outside forces; examples include the Aztec and Incan societies. In other cases, the causes were environmental; it is believed that a drought may have been responsible for a dramatic change in the Mayan society. The aboriginals in Australia have one of the oldest continually functioning societies.

Economics as a study of provisioning is concerned with the nature and evolution of the structure of society that consists of a matrix of institutions, values, beliefs, knowledge and resources. This study is concerned with relationships among individuals. The interaction among individuals is a major feature of any economic system. Another important feature of any economic system is the nature of the relationship between individuals and the community. The structure of an economic system must also consider the relationship between individuals and both the natural and built environments. Natural environment refers to the geographic (cultural and physical) and meteorological phenomena. The built environment consists of the infrastructure and knowledge that a society has created and inherited. It should be noted that humans have the capacity to alter their natural and built environments in both positive and negative ways.

II Social Science and Economics

There is substantial evidence and general agreement that humans live in social groups. The Western tradition, as framed by the Greeks and the Judeo/Christian tradition, holds that humans are social animals.

Plato [427-347 BCE] and Aristotle [384-322 BCE] offer explanations of the rise of the city-state. In The Republic, Plato sees the origins of the city-state in the quest for justice. Plato describes a conversation between Socrates and a
Aristotle’s organic composition of the a state

Question of the proper role of individual in the community

How can a society maintain the autonomy of its individual members and provide for the commonweal?

Role of Individual in the Community

In economics (and social sciences more generally), the nature of the role of the individual in the community or state has been a persistent question. Every society must address the question (either implicitly or explicitly), “How can the autonomy (or freedom or liberty) of an individual be maintained and at the same time provide for the commonweal (social welfare)?” In some societies, the individual is regarded as more important than the community. In other societies, the community has priority over the individual. From a practical perspective, the problem is to balance the rights and freedom of the individual with the functions of the community.

There are several perspectives about the most appropriate ways to achieve that balance. While dealing with this balance, both the allocation and provisioning problems must be resolved.

Cooperation, Competition and Conscription

Ideally, each individual is free to make choices that are consistent with their desires (preferences, values) and at the same time, these choices are consistent with the commonweal. Competition, cooperation and conscription may be used to coordinate individual actions. Different societies have attempted different approaches at different times.

Cooperation and Conscription

Cooperation implies voluntary agreements and a coordinated approach to the solution of a problem. Conscription implies a non-voluntary or forced behavioral choice in the allocation process. An economic input (labour, capital, land) or good can be conscripted. Conscription implies the ability of one person or group to force another to make choices they would not prefer. Conscription implies that some form of coercion has taken place. Cooperation and conscription are opposite ends of a spectrum or range of behavioral patterns. At another level voluntary and coerced behavior are at opposite ends of a spectrum of motivations.

The degree to which a choice is voluntary or coerced is not always clear. A group of Inuits above the Arctic Circle may use cooperation as an important element of the coordination process. “Cooperation” may be encouraged by
Voluntary cooperation and coerced conscription are at opposite ends of a continuum. "Competition" can be a structural characteristic or a rivalry among agents.

strongly held common values or necessity. Each member of the society understands that their chance for survival is reduced if she or he is not a member of the community. A behavior that is not sanctioned by the community (e.g. theft, murder, or even stating an idea that is not shared by others, etc) may be result in the individual being ostracized and expelled from the community, the result being death. Is the acceptance of group values and activities voluntary or coerced? If a government (a formal social institution for allocating power and decision making authority in a community) uses sanctions to force behavior or choice it is clearly coercion and conscription. If I threaten you with harm if you do not make a given choice or act in a specific way, that is coercion. If a person’s mother says, “You go ahead but it will break my heart!” is that coercion?

Voluntary cooperation and coerced conscription lie at opposite ends of a continuum. It is a variation of the arguments about whether individuals have free will. The shift from voluntary coordinated behavior (cooperation) to coerced coordinated behavior (conscription) is a matter of degrees. In both cases, individuals have an incentive to coordinate their behavior. In the case of coercion, the incentive is the costs created and imposed by other individuals or groups of individuals. A student in high school may feel coerced by their peers, the class bully or the rules of the system. A worker may be coerced by social pressure, other workers, the management of the firm, corporate rules and government regulations.

COMPETITION

Market oriented societies focus on the use of competition to constrain individual behavior. In Western industrial societies, competition is regarded as the optimal way to coordinate economic behavior. A market exchange is a contract between sellers and buyers where each seeks to optimize their self-interest. The seller competes to get the highest possible price (or best deal), while the buyer competes to buy at the lowest possible price. The competition between the buyer and seller is influenced by the tastes (or preferences), information that each has, the alternatives that each has, their relative incomes and the “rules of the game” (customs, mores, laws, regulations, institutions, ideologies, values, principles, etc).

The word “competition” has at least two meanings in economics. One refers to rivalry. In rivalry, there is a winner and a loser. Tennis players are rivals; one wins, one loses. The other is a structural notion of “pure” competition based on the number of sellers and buyers and their responses within markets. The sellers do not see themselves as rivals (Farmers are often thought of as being engaged in highly competitive markets but do not see themselves as rivals; farmer A will help farmer B harvest her crop.).

MODERN ECONOMY IS A MIX OF COOPERATION, CONSCRIPTION AND COMPETITION

Generally, societies use a mix of cooperation, conscription and competition. The difference among different economic systems is the degree to which one (or more) of these processes is emphasized. The aboriginal society in Australia has been based on traditions, customs and mores for 40,000 years according to some estimates. Certainly there has been cooperation, conscription and competition as elements of that society. Western industrial societies have emerged in the last 250 to 500 years (depending on the criteria used). In each case, the mix of cooperation, conscription and
competition has been different and resulted in fundamentally different societies with different solutions to the economic problems or allocation and provisioning.

All societies develop social institutions (behavioral patterns) to coordinate the activities of production, distribution and consumption. There is a wide range of forms these institutions may take depending on the physical environment, state of technical knowledge, social values and other factors. These institutions and behavioral patterns may rely on some combination of competition, cooperation. Market systems tend to focus on competition while other systems may have a larger role for cooperation or conscription.

A bicycle race is a useful metaphor. There are rules that govern equipment, use (or nonuse) of drugs, routes and tactics. In a road race, the riders cooperate in the peloton (the large group of riders in a bicycle race) by drafting (using the rider in front to reduce the wind drag). When a group breaks away from the peloton, they typically form a pace line and each shares the work of riding in front of the group. Eventually, the structure of the pace line disintegrates and the riders compete in a sprint to the finish or they fall back into the group. The race is a mixture of cooperation and competition. The rules of the race, the equipment available, the shared values of the racers (expectations about the behavior of other riders), the route and the surface of the course are examples of provisioning. The structure and character of these elements determines the nature of the race. A road race is fundamentally different from a mountain bike race. The ability and determination of each rider, given the structure of the race, determines or allocates the finishing position (winner, 2nd, 3rd, etc) of each rider. The winner of a mountain bike race may not be the winner in a road race. Soccer and American football have 11 players on each side and a ball. Because the rules are different, a good soccer player may not be a good football player.

In the context of a firm, colleagues cooperate to achieve ends. At the same time, they may compete for promotions or raises. Some one who is too competitive and doesn't cooperate (or is too cooperative and doesn't compete) may not get the big promotion.

Joan Robinson argues that an economic system “... requires a set of rules, an ideology to justify them, and a conscience in the individual which makes him (sic) strive to carry them out.” (Robinson, p 13) provisioning is the way in which society develops the rules, ideology and conscience. The allocation mechanism is the ways in which individuals choose to act given the rules.

SOCIAL INTERACTION AND TECHNOLOGY

Humans have sought to solve the problem of provisioning through social interaction and the use of technology. Social interaction is used to refer to the relationships between two or more individuals. In this context, an “individual” has the ability to make a decision and carry that decision out. In legal terms, this individual is called an “agent.”

An agreement between two individuals or agents is a contract. The agreement may be influenced by social institutions as well as the preferences and values of the individuals. A social institution is a habitual pattern of behavior that is embedded in a social system. Marriage is an example of a social institution. It is a contract between two people. The form of that contract is influenced by commonly held social values and laws
Institutions facilitate and constrain individual action. Almost all societies have some form of marriage. Marriage is a social creation that provides a solution to the problem of rearing children.

The five-day week, a paid vacation, markets, property rights and religious ceremonies on a specific day of the week are examples of institutions. As a social institution, they may change over time as social values, technology, work and environment change. These institutions may vary from place to place, represent, and encourage different behavioral patterns.

Money, law (or the legal system), property rights and markets are examples of economic institutions. Institutions simultaneously facilitate and constrain human activities. Markets may facilitate voluntary exchange and constrain the range of choices of each individual to the contract at the same time. The market provides the structure that allows two parties to negotiate and enter a contract. The market also uses the willingness of each person involved in the contract to constrain the alternatives open to the other.

Technology is the knowledge about the individuals’ relationships with the natural and built environments. This knowledge can be used to alter elements in the environments to satisfy human wants. Technology involves knowledge about alternative ways of solving the problem of provisioning.

### III What is Economics?

Economics has been defined here as both a study of the provisioning problem and the allocation problem. Orthodox economics is defined as the study of how relatively scarce resources are allocated to competing alternative uses within a social context. Some texts define economics as "the social science concerned with the efficient use of limited or scarce resources to achieve maximum satisfaction of human material wants." [McConnell, 2002, p3]

Alfred Marshall states that "... economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing." [Marshall, 8th edition, 1920, page 1]

Robert Heilbroner argues that economics has been caught between two respectively unsatisfactory definitions: an 'objective' interpretation tied to the idea of wealth, and a 'subjective' one focused on decision making. (Heilbroner, *Behind the Veil of Economics*, p14) Heilbroner continues,

> "Both approaches run into trouble. The first because 'objective' wealth cannot be described without reverting to the subjective criterion of utility; the second because the central placement of subjectivity widens economics to the point at which it becomes applicable to everything, and therefore empty of specific 'economic' content." (Heilbroner p 14)

Heilbroner defines economics as "the process by which society marshals and coordinates the activities required for it's provisioning." (ibid)

Warren Samuels argues that the "economy is a process of valuation.... That to behave and to choose is to engage in valuation and thereby to participate in the social, or socioeconomic, valuation process." (Samuels p ix) He goes on to point out that "the economy encompasses more than the market..." and "that other nonmarket valuational processes exist." [ibid p 16]

Some of the other valuation processes are effort, desire and tradition.
Valuation is the process by which individuals assign worth, merit or importance to a phenomenon (good or event). Relative value implies that individuals can rank the value or importance of a set of phenomena. Economics then is the study of processes by which individuals and societies value resources, goods, alternatives, choices, and behavior.

Here economics of provisioning is the study of how individuals in societies provide themselves with the institutions, values, beliefs, ideology, knowledge and infrastructure to provide for their survival and betterment. This process requires the ability to prioritize or value ends and to evaluate means. This is the provisioning problem.

An economic system must also be able to allocate resources or inputs to their highest valued uses. To evaluate the success or failure of an economic system, it is necessary to express values. In spite of the warnings of Oscar Wilde (1854-1900) an Irish playwright who commented “A cynic is someone who knows the price of everything and the value of nothing,” market prices are often used as indicators of value. The study of economics as provisioning must include the value of non-market as well as market phenomena.

**MACROECONOMICS**

Macroeconomics is the study of the process and performance of an economic system. Usually the analysis is at a national level but often, regional economies, such as Asian, Latin America, European, North American, are considered. Typically, aggregate levels of employment, economic growth, general levels of prices (inflation/deflation), and business fluctuations are examples of topics in macroeconomics. Macroeconomics includes measurement of economic activity (national income accounting and related data), theories to explain relationships among economic events and economic policies that include monetary and fiscal tools.

**MICROECONOMICS**

Modern microeconomics is the study of the behavior and interactions among the various individuals and organizations within an economic system. Typically, microeconomics considers the forces that shape the behavior of such economic elements as consumers, producers, buyers, sellers, individuals, sole proprietors, partners, corporations, not-for-profit organizations and industries. These interactions are usually described as interactions within the context of markets. Modern neoclassical microeconomics (orthodox economics) is "atomistic" i.e. the individual units are studied and summed to reflect the operation of the whole or system. Most of the explanations are "mechanical" or use "cause and effect" to explain the interactions among individual agents. Economics as provisioning is concerned with the nature of the system in which the individual agents function.

One of the ways that the economic units interact is through market exchange. A market is a social institution that organizes the contractual relationships among all potential buyers and sellers. Since market transactions are observable and quantifiable, microeconomics tends to focus on competition in the context of market exchange. Cooperation and conscription are other approaches that may be used. Reciprocity, philanthropy, theft and eminent domain are processes that societies may use for the allocation of resources and goods.

Allocate mechanisms include:
- Exchange
- Reciprocity
- Eminent domain
- Philanthropy
- Theft
Market exchange is based on *quid pro quo*. Ideally, it is a voluntary contract between two agents. It specifies what is given and what is to be received. The conditions of payment are known to both parties. Reciprocity is an allocative mechanism based on “obligatory gift giving.” If individual A gives individual B a gift or does B a favor, B is obligated to give a gift or return the favor at some point in the future.

Reciprocity requires trust between the participants. A sense of community where expectations and social sanctions may enforce the reciprocal obligations may substitute for trust. Market exchange can occur between anonymous individuals. Trust, social institutions and legal sanctions may be used to enforce the terms of market exchanges.

Philanthropy is giving gifts with nothing expected in return. Eminent domain is a form of command enforced by an authority. Theft is the taking of property rights through methods not sanctioned by society.

Theory is an explanation about the way the world works. Economic theory is a set of explanations about how individuals interact with one another and the environment to solve the economic problems. Orthodox microeconomic theory can be thought of as a set of “tools,” as a perspective or as a way of thinking. As a set of tools, economic theory can be envisioned as a road map. It does not get us to our objective but it is useful to identify some of the important landmarks or elements on the route to our objective. As a perspective, it emphasizes the importance of the sacrifices that individuals make to achieve ends. Those things we give up to achieve an objective are called tradeoffs. The focus tends to be market oriented and exchange is emphasized.

**ECONOMIC DECISIONS**

In a simple taxonomy, individual behavior may be influenced by rules (command), intuition, emotion, habit, reason or some combination. Philosophers and psychologists have struggled with the issue of fate and free will. The issue has not been resolved. It is not likely that it will be resolved here. The question for economics is to try to understand and explain how humans try to resolve both the problems of provisioning and allocation. They must create the social context in which a solution to the allocation problem is found.

**RULES**

If behavior is constrained or influenced by rules, rules of thumb or habits, the nature of those rules and the process by which the rules evolves is of interest to economists. If the agent’s decision is constrained, the nature of those constraints is of concern.

Rules may by implicit or explicit. Explicit rules often take the form of law and maybe imposed by governments or organizations. Generally, explicit rules are conscious creations and must be communicated and enforced. Social groups may also use explicit rules. Business firms, churches, and other organizations may explicitly impose rules. Implicit rules may also be important constraints. Implicit rules are not consciously created but must still be communicated implicitly or explicitly. Social expectations, customs, mores and traditions often inform individuals about rules of behavior.

Certain types of behavior are expected and influenced by such social constructs as “manners,” mores, custom, rules of thumb and traditions.
These rules are short cuts to problem solving. If over time a particular problem is always, or nearly always, resolved by a specific approach, that approach becomes a habit or rule of thumb. These rules and habits provide ready-made solutions that do not have to be derived by reason or intuition. If a habit, institution or custom fails to provide reasonable solutions over a period of time, new solutions emerge to become new rules, customs or institutions.

**INTUITION**

In recent years, there has been a growing interest in the interrelationship between psychology and economics. Daniel Kahneman (Nobel Foundation prize winner) has explored intuition and reason as thinking and decision processes. (Kahneman, pp 1449-1475) According to Kahneman, intuition can be powerful and accurate, requires practice and is “rapid and effortless.” The reasoning process provides a check on the intuitive process.

**REASON AND RATIONAL BEHAVIOR**

Orthodox, modern economic analysis is generally regarded as the study of alternative uses of resources to achieve objectives. At a technical level, economic analysis is used to evaluate rational decisions. Rational behavior requires that the agent has identified an objective or goal and has evaluated all feasible alternatives to select the alternative that best achieves the objective.

**INFORMATION**

Within any economic system, agents must have information and there must be a set of incentives to encourage appropriate actions. Whether the economic system primarily uses market exchange, reciprocity, eminent domain or some other allocative mechanism, the agents must have information about preferences, inputs, technology and alternatives.

In different economic systems, the decisions may be made by different agents. In a traditional economy, individuals only need to know the previous solutions that were used. In a planned or command economic system, some type of planning authority would necessarily have to have information about an objective, all inputs, all technology and all alternatives that are feasible. An important question is; Whose objective? The planners? The members of society?

In a market-oriented system based on exchange between individuals, the information requirement is altered. Individuals only need to know about their own preferences and feasible alternatives.

There is no reason to believe that a traditional economy, a planned economy and a market economy would make the same allocation of resources and goods. These economies may have different objectives.

In the 1920’s and 30’s there was a debate (The Socialist Calculation Debate) about the ability of socialist systems to acquire necessary information. One side of the debate led by the Austrians (Ludwig von Mises (1881-1973) and Friedrich Hayek (1899-1992)) argued that it would be impossible for a centrally planned economy, run by rules, to have the necessary information to replicate the results of a market economy. Oscar Lange (1904-1965) and Abba P. Lerner (1903-1982) argued that under some circumstances the information could be calculated. This is a simplistic description of the Socialist Calculation Debate but emphasizes the importance of information....
to the functioning of an economic system.

In the Socialist Calculation Debate, Austrians argued that command economies could not be successful because there was insufficient information to guide decisions in the economic process. They believed that each individual had information about their preferences and what they were capable and willing to do. Markets were seen as the social institution that could provide information about relative values through the voluntary, exchange interactions of individuals. The market system was the process that provided the information for the agents to make decisions. The Austrians argued that the command system had no process by which information would be revealed. Lange accepted this criticism and suggested, “market socialism” as an alternative.

An alternative perspective is; If the objectives of the market economy and planned economy were not the same it is not clear why the socialist system would want to replicate the outcomes of a market system.

**INCENTIVES**

Incentives are the forces that encourage or induce agents to behave in particular ways. If information is to be of use, it is important that individuals shape their behavior based on that information. Many forces shape behavior. Preferences are shaped by perceptions of duty, authority and self-interest. Individuals have incentives to behave in ways that will lead to the satisfaction of their preferences. The failure to complete one’s duty may cause feelings of guilt. This guilt is and incentive to perform a duty.

Since neoclassical economics is based on a consequentialist ethic that is expressed through markets, the incentive provided by the satisfaction of self-interest is perceived as dominant. Every action has a cost and a benefit (the cost or benefit may be zero). The perception of a self-interested individual is that the cost of an action or choice is greater than the benefit; it is not an appropriate alternative. If the benefits associate with an action exceed the cost; it is an alternative that is consistent with self-interest.

Other incentives may be equally as important. Adam Smith believed that behavior to achieve self-interest would be constrained by feelings of sympathy expressed as a system of morality.

**RATIONALITY AND INFORMATION**

The allocation of scarce resources requires both information and incentives for the agents. Information about the objectives and feasible alternatives is necessary if “rational choices” are to be made. A rational choice requires that the alternative that “best” satisfies the objective be selected. This requires criteria to evaluate each alternative with respect to the objective. Based on the objective, set of alternatives and the method of evaluation, the optimal or best alternative can be selected. There are three fundamental steps to the process of making “rational” economic choices:

- Identify the objective of the agent.
- Identify all feasible alternatives that are related to the objective.
- Develop the criteria to evaluate each feasible alternative with respect to the objective.

(In Part I the provisioning problem will be addressed in more detail. The orthodox analysis of economics as an allocation problem will be presented in Part II.)