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The Power of the Provisioning Concept

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Abstract This paper supports the conception of economics as the social science that studies provisioning processes. Conceptions of economics help us understand the history of economic thought and have methodological, theoretical, policy and strategic significance. When economists are careful to define their discipline without committing ourselves *a priori* to particular assumptions, methods and theories, but as merely focusing on a class of phenomena, then the result is a more thoughtful and richer economics. The 'natural' choice for this class of phenomena is provisioning systems, because we want to understand as fully as possible the systems that nurture us – meaning that we ought to be interested in monetary and non-monetary mechanisms, self-interest as well as altruism, perfect rationality as well as quasi-rationality, exchange as well as gift relationships, etc., all as part of one discipline.

Keywords: provisioning, definition of economics, economic methodology, history of economic thought, scarcity, comparative paradigms in economics

INTRODUCTION

This paper espouses a particular vision of economics: that of economics as the social science that studies provisioning processes. This conception of economics is by no means original. This paper intends to strengthen the case for it, with a view to (1) obtaining a *Gestalt* interpretation of the history of economic thought; and (2) help improve the quality of the economics profession and economics research and education.

This paper aims its critical arrows at mainstream economics – that is, at successive dominant paradigms of political economy and economics. In doing so, it draws on a panoply of alternative schools of thought. However, it does not attempt to get into the history of thought of these heterodox views. This self-imposed limitation is not due to a lack of respect or appreciation on my part of any non-mainstream approaches. Quite to the contrary – each of the broad heterodox traditions of economic thought merits at least a separate paper-length treatment of history of conceptions of 'the economic.'

What is economics? This question has been posed and answered many times. Far beyond a purely definitional issue, an economist's answer to this question reveals part of his or her paradigmatic core. The question "What is economics?" is intimately related to the question "What is economics all about?" For this reason, I will use the terms *concept* and *conception* in addition to *definition.* I distinguish between these terms as follows. A *definition* is a verbal demarcation of a term. A *concept* is the associated idea. A *conception* is a *concept* viewed as a foundation for paradigmatic development. *Definition* and *conception* are linked as follows: They are the answers to the questions "What is economics?" and "What is economics all about?" respectively.

This paper is not about semantic quibbles, terminology, or demarcation for its own sake. *Its purpose is* not *to yield a watertight definition that allows you to classify any research topic as belonging to one discipline – economics – and one discipline only.* Such a definition probably does not exist. No matter what definition is being used, many phenomena will be amenable to research by multiple disciplines – which is fine. What I do hope to demonstrate is that careful thinking about definitions and conceptions of economics may have profound implications for the history of economic thought, for economic methodology, the management of economic research, economic theory, and applied economics.

In the following sections, I will discuss (1) why the definition of economics matters; (2) the provisioning conception of economics; (3) mainstream definitions of economics in light of the provisioning conception; (4) relations between economics and other disciplines in light of the provisioning conception; and (5) the difference between the scarcity and provisioning conceptions. The final section summarizes the main points.

I. THE IMPORTANCE OF DEFINING ECONOMICS

Why might it be important to formulate what economics is? This section identifies ten roles conceptions of economics might play: agenda-setting; research policy; economics education; communication with non-economists; interpretation of history of economic thought; development of methodological foundations; development of theoretical foundations; the conduct of applied economics and the design of supporting information systems; facilitation of paradigmatic debate; and facilitation of interdisciplinary communication.

First, the problem of demarcation ("What is it that makes a fact, and idea, or a problem a part of economics?") is a far more practical one than may seem at first sight. Surely, we would like to have criteria for deciding who and what are to be included in, or excluded from, economics departments, courses, textbooks, and entire curricula. What should the existing institutions – especially academic departments – that are associated with the word *economics* be doing? Who qualifies as an economist? Statements on the definition of economics are often attempts at agenda-setting. As Nelson (1993: 23) puts it: "So what is economics? This is not an idle question when decisions are being made about publications, promotions, and curricula."

Second, careful consideration of the meaning of economics is an integral part of research policy, of education policy, and of strategy formation of schools universities, university departments, and other educational and research organizations. Organizations are usually served well by clarity of mission. Economics departments need to think about the definition of economics because they need to think about their missions. Organizational leaders and government policymakers in research and education need to understand how the different academic disciplines are different from each other, and how they relate to each other, when they design organizational structures and rules, formulate strategies, and allocate budgets.

Third, a conception of economics is a useful organizing principle in economics education for cognitive reasons. A thoughtful conception of economics may provide a solid foundation for student learning. Conversely, definitions that impose certain restrictions on the scope of economics may constitute significant obstacles to the student's cognitive progress.

Fourth, when we communicate with non-economists, it may be important to clearly state what we do. An organization's mission is closely related to its publicrelations, fundraising, and marketing activities. A compelling message on their field of competency may help economics departments recruit students and raise funds.

Fifth, a conception of economics may help us interpret the history of economic thought. For example, a conception of economics may help us interpret the history of conceptions of economics, which in turn may help us interpret the history of economic thought (see below).

Sixth, conceptions of economics have methodological implications. To answer the question "How to do economics?" we must first know what economics is. Certain conceptions of economics directly invoke methodological restrictions (e.g., "Economics is the mathematical/quantitative study of…."), but the link between conception and methodology can be a lot subtler yet important. For instance, the conception of economics as being focused on the implications of rational choice entails a certain amenability to mathematical modeling. The line between methodological preference and definition is not always clear-cut. Nelson (1992) points out that mainstream economics tends to associate itself with being "hard, logical, scientific, precise" rather than "flexible, intuitive, humanistic and rich," but it not clear whether this distinction concerns the definition of economics per se or the issue of good versus bad economics. A non-mathematical, imprecise paper might still be considered economics by neoclassicals, but they might consider it *bad* economics. In contrast, the provisioning conception is associated with methodological pluralism.[1]

Seventh, formulating a conception, or thinking about it more carefully, will be even more important if it leads to improvements in theoretical reasoning. However, there is a major danger if one intends to develop a theory out of a definition. The temptation is great to incorporate into the definition of economics certain assumptions that are used for theory formation – thereby shutting out alternative assumptions and theories. I will argue that this is the problem with many – or even all – conceptions of economics other than the provisioning conception. The provisioning conception does not impose *a priori* restrictions on assumptions, methods and theories, and is therefore suitable as a basis for *meta-theory* – the comparative study of theories and the integration of theories into larger

[1] As argued in greater detail in Binenbaum (2004). For a defense of methodological pluralism see Caldwell (1994)

frameworks. Meta-theory encourages theorists to think more carefully about their methods and assumptions and may thus eventually lead to firmer foundations for theory.

Eighth, as applied economics is based on economic theory and on methodology, it will be affected by its practitioners' conceptions of economics. If a definition of economics imposes certain restrictions on economic theory and methodology, then this may induce applied economists to emphasize certain methods and explanations and to de-emphasize or completely overlook others. The provisioning conception as advocated here confines itself to roughly delineating a class of phenomena to be studied by economists, whilst avoiding built-in biases or prescriptions for how to think about those phenomena.

Ninth, different schools of economic thought typically adhere to different conceptions of economics. However, if adherents of different schools are interested in each other's points of view and in engaging each other in debate, a good strategy might be to start by agreeing on a common definition of economics – to facilitate communication and mutual understanding. As argued below, the provisioning concept could conceivably fulfill this role.

Finally, another important function of formulating a conception of economics is clarification of the relationship of economics to other disciplines, including the (other) social sciences, engineering research, and management studies. How does economics fit in with other disciplines and how can they learn from each other? The right definition of economics might help resolve such questions in a satisfactory manner (see below).

II. THE PROVISIONING CONCEPTION

I propose the following version of the provisioning definition of economics: *Economics* is *the social science that studies provisioning processes*. *Provisioning*, in turn, can be defined as *the furnishing of means for the satisfaction of wants and needs*. These means can be called *goods and services*.

Provisioning processes include allocation of resources among productive uses, and the production, distribution, and consumption of goods and services. Thus, a more elaborate version of the provisioning definition runs as follows: *Economics is the social science that seeks to understand the economy. The economy is a complex of interacting* *processes. At the beginning of the processes there are resources. At the end there is consumption – the satisfaction of wants and needs. Economics seeks to understand the allocation of resources among productive uses, and the production, distribution, and consumption of goods and services.*[2]

There is a compelling logic to these four processes, which must of necessity occur in provisioning systems. Some other definitions do not have this quality of generality. For example, a definition centering on *markets* may encourage economists to ignore non-market mechanisms for allocation of resources and distribution of goods, such as hierarchy and custom. Similarly, *exchange* does not have the same level of generality as allocation and distribution: for example, the latter processes may occur through gifts instead of exchanges.

At this point, it is necessary to comment on the terms *political economy* (used by Smith) and *economics* (used by Marshall). Rothschild (1989) does an excellent job of clearing up the confusion surrounding these two terms. For the purposes of this paper, two points made by Rothschild (and earlier authors cited by him) suffice. First, "[t]he introduction of the term 'economics' coincided with the switch from classical economics to marginal[ist] theory after 1870 and gained wide acceptance with Alfred Marshall's *Principles of Economics...*" Thus, the dominant term used by orthodox economic thought to denote its area of study changed from *political economy* to *economics* after 1870, and this terminological change coincided with a paradigm shift – the marginalists replaced the classical school as the dominant school of economic thought.[3] Second, *political economy* still appears to be the favored term for several heterodox schools of thought as well as a minority of mainstream economists to denote their discipline, while some economists use the two terms interchangeably.[4] However, there is little doubt that the dominant term since Marshall is *economics*.

After this inevitable terminological hassle, we are now ready for a brief discussion of the history of thought concerning the scope of economics. In the remainder

[2] This definition can be further elaborated by explicitly mentioning <u>intermediate</u> goods and services.

[3] There were, of course, important distinctions among the marginalist pioneers of Austria, France, Britain, and the United States, as well as between these and subsequent "neoclassical" thought (including Marshall's supply – demand synthesis). These distinctions appear to be irrelevant for this paper.

[4] Various other meanings of *political economy* (as a field or paradigm, rather than a synomym, of *economics*) are discussed by Rothschild (1989).

of this section, I will sketch the history of the provisioning conception. The next section sketches the history of alternative conceptions of economics in orthodox thought.

The provisioning conception of economics/political economy is arguably *in essence* the original one – the mother of all conceptions of economics. I say *in essence,* because the provisioning conception as endorsed by this paper embodies two refinements compared to many of the earliest conceptions of 'the economic' – that is, those from the first millenium BC through the mid-19th century. The first refinement involves avoidance of the adjective *material* in the definition of economics. Thus, according to this paper's favorite definition, economics studies the provisioning of goods *and services*, not just of *material* goods. The second refinement involves the classification of economics as a *social science*, which points to a complementarity between economics and engineering (see below). Both of these refinements are relatively uncontroversial today: Most heterodox as well as most orthodox economists would probably agree with them. What is interesting about these refinements today is that they help us interpret the history of conceptions of economics (see below).

The "provisioning" class of conceptions of economics has a long and venerable history and prehistory in economic thought. Sen (1987) discerns two traditions in early economic thought: an "ethical" tradition, dating back at least to Aristotle (4th century BC), and an "engineering" tradition, dating back at least to Aristotle's Indian contemporary Kautilya. Both authors were concerned with provisioning processes. Kautilya wrote of a wide variety of economic topics and used simple characterizations of human motivation, not unlike the self-interest and rationality of modern mainstream economics. Because economics did not exist as a separate discipline, its definition was not an issue in Kautilya's time.

As pointed out by Nelson (1993: 34), versions of the provisioning conception of political economy / economics as a discipline can be found in Adam Smith and Alfred Marshall. The definitions of Smith and other economists of the classical school centered on the term *wealth* (Kirzner 1976, Chapter 2). Smith (as quoted by Nelson 1993: 23) talked of *political economy* as the study of the creation and distribution of the "necessaries and conveniences of life", or, in short, of *wealth*. There was a strong tendency among classical and certain neoclassical economists to define political economy as being concerned with *material* wealth. For example, J.R. McCulloch argued that while good health is useful and delightful, this is the proper subject of medicine – another discipline. Kirzner (1976: 30-1) rightly points out that this same argument could be applied to the production of wheat, which involves biology. Even Marshall used the word *material* in his statement that economics is concerned with "the material requisites of life" (quoted by Kirzner 1976: 96). Alec L. Macfie (quoted by Kirzner 1976: 20) commented that "This fatal word 'material' is probably more responsible for the ignorant slanders on the 'dismal science' than any other economic description." The confinement of economics to the realm of material goods has been thoroughly discredited. The phrase *goods and services* has become standard usage in economics.

Recent proponents of the provisioning conception include Boulding (1981: 123-5; 1986, as cited by Nelson 1993), Nelson (1993) and Heilbroner (1988: 14). While it may not be the dominant conception within the economics profession, it is outside of the profession – judging by various dictionaries, which usually provide some version of the definition that *economics* is the study of the production, distribution and consumption of goods and services.

The provisioning conception's long history is unsurprising. Provisioning is an extremely straightforward concept, and it is what people care about. While people may be interested in questions such as "What are the consequences of rational choice?" or "How do markets operate?" or even "How much money will I earn?", these issues are usually only of instrumental concern. Ultimately, what people care about is the provision of "goodies" (food, shelter, clothing, health, security, luxuries, education, entertainment, culture, art, etc.) to themselves, their families and friends, societies, and humanity at large. Note that this argument can be used in favor of the scarcity conception of economics (to be formulated below) as well. This may partly explain the current situation, where the two remaining dominant conceptions of economics appear to be the ones centering on scarcity and provisioning.

III. OTHER DEFINITIONS USED IN ORTHODOX ECONOMICS

Compared to any other definition of economics considered here, provisioning-type definitions are less restrictive, as they merely state a *class of phenomena* to be studied, namely those involving provisioning. Other definitions tend to restrict *explanations used* for understanding certain phenomena. For instance, consider the phenomenon of stock market crashes. If economic theory were to be based exclusively on rational choice, then we would need some discipline other than economics to explain such crashes as soon as we wanted to invoke imperfect rationality or irrationality. Thus the idea of economics as being the logic of rational choice may strike experts who study stock market crashes (Shiller 2000, Thaler 1994) as *unnatural*. The same holds for a wide variety of definitions of 'the economic' which impose restrictions on methods, types of relationships – e.g. exchange versus gifts – and assumptions. As soon as alternative methods, relationship types, and assumptions need to be addressed in explaining phenomena, definitions that impose such restrictions become problematic and, in a sense, *unnatural*. For this reason a conception of economics which carefully avoids imposing such restrictions may have the most staying power in economic thought.

Two interrelated developments in the history of economic thought involved a narrowing of the scope of the discipline. First, in an effort to make economic theory more precise, economists were attracted to a deductivist methodology. This trend was apparently pioneered by David Ricardo, who built his theories on a set of simplifying assumptions (Landreth and Colander 1989: 86). While Ricardo did not define economics in terms of any of these assumptions, his exclusive focus on them lay the foundation for subsequent authors who did.[5] With the advent of utilitarianism in the second third, and marginalism in the last third, of the 19th century, economists' attention became more focused on the demand side of the economy. Associated with this shift in emphasis were definitions of economics that focus on human motivation. According to John Stuart Mill, political economy does not treat of the whole of human nature: "It is concerned with [man] solely as a being who desires to possess wealth ... It makes entire abstraction of every other human passion or motive; except ... aversion to labor, and desire of the present enjoyment of costly indulgences..." (quoted by Kirzner 1976: 54). Here we see an early version of *Economic Man*, in this case characterized by "the desire to possess wealth" and "aversion to labor". "The desire to possess wealth" is closely related, but not

[5] Ricardo considered political economy to be principally concerned with the *distribution* of wealth, not its production (Landreth and Colander 1989: 86-7, quoting Ricardo). This conception of economics has become outdated, in part because of economists' interest in endogenous technological change.

identical, to *self-interest*. Kirzner mentions two classical economists (Whately and Senior) who noted that wealth may be sought in order to be used for charitable purposes. However, it was more common for 19th-century economists – including Bagehot, Lowe, Cunningham, and Edgeworth – to consider self-interest to be "the first principle of pure economics" (Kirzner 1976: 55). At the end of the century, Wicksteed refined self-interest into the weaker assumption of *non-tuism*: He explained that for "economic laws" to hold, it is sufficient that economic actors do not care about those with whom they have direct economic relationships. Wicksteed's contribution was later hailed by Robbins as having "shattered" the "misconception" that "the whole structure of Economics depends upon the assumption of a world of economic men, each actuated by egocentric or hedonistic motives" (Kirzner 1976: 64-5, quoting Robbins).

A related class of definitions of economics centers on *utility, rational choice, maximization,* or the *economic principle.* The rise of this type of definitions to prominence in economics coincided with the development of a mathematical theory of rational choice. Jevons considered utility to be "the subject matter of economics" (quoted by Kirzner 1976: 47); on another occasion, he combined utility and self-interest in his definition of economics as "the mechanics of utility and self-interest" (quoted by Nelson 1993: 26). The rational-choice view of economics was most eloquently advocated by Robbins (1935: 16), according to whose much-quoted definition economics is "the science which studies human behavior as a relationship between ends and scarce means which have alternative uses." Note that rationality is not necessarily implied by this definition, but in practice it has been almost exclusively associated with it. Robbins enunciated a compelling – though not watertight – logic linking scarcity to rational choice. Robbins calls his conception of economics "analytical" (p. 16) (as opposed to "classificatory"): It leads straight into a specific theory. "It does not attempt to pick out certain *kinds* of behaviour, but focuses attention on a particular *aspect* of behaviour, the form imposed by the influence of scarcity" (pp. 16-7; italics in original). Robbins' definition of economics became very influential. It was and is still used in many – perhaps most – textbooks.

Economics has also been defined in terms of exchange and markets (Kirzner 1976, Chapters 4 and 5). Archbishop Whately wanted to rename economics as *catallactics*, or the science of exchanges. Several decades after Whately's 1831 book, Macleod "seized on the view of economics as the science of exchanges and enthusiastically launched the idea in his crusade to revolutionize the entire subject" (Kirzner 1976: 73). Other 19th-century economists that used similar definitions include Lawson, Perry, and Bastiat. Related to definitions that center on exchange and markets are those that focus on money. There is certainly a popular perception that economics is about money. More sophisticated definitions that fall in this class have been proposed by economists. Marshall and Pigou have stated the view that "economic analysis is concerned with that part of human activity ... which can be measured by the yardstick of money" (Kirzner 1976: 96; his formulation).

What all of these conceptions of economics – with the exception of the "pure" scarcity conception, without rationality, which will be discussed in section 5 – have in common is that they appear to be unnatural when confronted with their negations. Why should the study of self-interest as an actuating force be separated from the study of socially oriented motivations as an actuating force, if these may lead to the same products? Why should we be interested in the consequences of purely rational behavior and not be interested in the consequences of quasi-rational behavior in similar contexts? Why should we confine ourselves to studying the provision of goods through the market mechanism, if those same goods are sometimes provided through non-market mechanisms?

The point is this: What we care about is the provisioning of goods and services. Whether this happens through self-interest or prosocial motivations, through rational or quasi-rational decision-making, through exchanges or gifts, should be of great interest to people who call themselves economists.

Of the classes of definitions of economics discussed here, those that center on *material* wealth, self-interest, exchanges, and markets, have been largely jettisoned by the economics profession. All of these concepts, with the exception of materialism, still dominate mainstream economics discourse – perhaps excessively so. But at least they are no longer part of currently used definitions of economics.

In the case of rational choice, it is not so clear whether it is still considered a defining characteristic of economics. The scarcity-cum-rational-choice conception of economics is still used in some mainstream textbooks (while the provisioning conception of economics appears to be favored by dictionaries and non-mainstream textbooks). However, big cracks have begun to appear in the once-apparently-solid rock of rational choice. Experimental economics (Kagel and Roth 1997) has revealed imperfectly rational behaviors, and a theory of quasi-rational economics (Thaler 1994) has emerged. To suddenly place certain phenomena studied in these literatures outside of the realm of economics, just because they are explained by imperfect rationality, would be absurd. The people following these lines of research largely consider themselves economists and are accepted as such. Therefore, it is perhaps to be expected that definitions of economics as the study of rational choice will gradually wither away. It should also be noted that conceptions of economics that rely on money as a potential measuring rod depend on the assumption of rationality. Absent perfect rationality, money measures of willingness-to-pay and willingness-to-accept become ambiguous.

In summary, most of the aforementioned conceptions of economics have been abandoned by mainstream economics – excepting the scarcity and provisioning conceptions. These will be juxtaposed in section V.

Viewed through the lens of the provisioning conception, the history of economic thought can be interpreted as follows. Economics started out as the study of provisioning processes. However, so do the engineering disciplines. Thus, there must be some human element in the definition. This human element is easily taken care of by including “social science” in the definition of economics. However, Economic Man – characterized by rationality, exogenous preferences, self-interest or non-tuism, and some form of non-satiation – became so firmly entrenched at the core of orthodox economic theory that, instead, the human element in economics came to be identified with some aspect of Economic Man. Economists have often tended to summarize their paradigmatic core in a definition of economics – thereby shutting out other lines of inquiry. Restrictive definitions of economics can be seen as “blinders”. Mainstream economic thought may – on a charitable interpretation – be progressing through a successive shedding of these blinders. Gradually, economics, enriched with many insights, may return to its natural role as the social science that studies provisioning processes.

IV. RELATIONS BETWEEN DISCIPLINES[6]

The division of labor and relationships between economics and a range of other disciplines can be clearly understood in light of the provisioning concept.

Without the social science part ("Economics is the study of provisioning processes") engineering would be part and parcel of economics by definition. No wonder that engineers like Dupuit (Ekelund and Hébert 1999) and Walras (Sen 1988: 4) played an important role in the genesis of modern mainstream economics. The inclusion of "social science" in the definition of economics implies a complementarity between economics and engineering.

Once the scarcity / rational choice conception of economics was well-established, the logical next step was to extend its uses beyond the traditional realm of economics. Proponents of this "economic imperialism" do not allow much space for insights emanating from the other social sciences: "[I]t is ultimately impossible to carve off a distinct territory for economics, bordering on, but separated from other social sciences. Economics interpenetrates them all, and is reciprocally penetrated by them. There is only one social science. What gives economics its imperialist invasive power is that our analytical categories – scarcity, cost, preferences, opportunities, etc. – are truly universal in application. Even more important is our structured organization of these concepts into the distinct yet intertwined processes of optimization on the individual decision level and equilibrium on the social level. Thus economics really does constitute the universal grammar of social science" (Hirshleifer 1985, quoted by Heilbroner 1991: 457-8).

Such radical claims as are made by Hirshleifer are belied by an opposite movement that has gathered momentum over recent decades: that of modifying economic theory by incorporating insights from the other social sciences. Scholars who are clearly considered to be economists and are highly regarded as such in the (mainstream) profession have shown the relevance of alternative behavioral assumptions to economic theory as well as empirical economics. I already mentioned Thaler (1994), who draws directly on psychology. The recent Nobel laureate George Akerlof has repeatedly used stylized insights from psychology – e.g., cognitive dissonance – and sociology – e.g., the relevance of workers' perceptions of fair wages to labor economics. Matthew Rabin

[6] This topic is discussed in greater detail in Binenbaum (2004).

recently received both a McArthur "Genius Award" and the John Bates Clark Medal for his work on incorporating psychological and sociological – theoretical and experimental – insights into game theory.

The division of human experience and behavior into separate economic and social spheres is problematic (Nelson 1998, Hausman 1992). Provisioning systems and social systems are intertwined and interdependent, as they are essentially support systems for each other; hence, the provisioning conception is strongly conducive to interaction between economics and sociology.

The provisioning conception also points to a strong relationship between economics and ecology, as provisioning systems depend on natural ecosystems, which, in turn, are under pressure from provisioning systems and increasingly depend on them for their conservation.

The provisioning conception allows for mutually enlightening relationships with other disciplines. Because it does not impose *a priori* assumptions on rationality or self-interest, it leaves open the possibility of using insights from other social sciences as alternative assumptions.

One important aspect of orthodox conceptions of economics such as Robbins' is that they tend to treat preferences as *given.* Thus, mainstream economics tends to ignore the *formation* of preferences. This might seem to make sense in the context of a division of labor between the social sciences: While other social sciences investigate the content and formation of preferences, economics is concerned with their consequences in the economic realm. However, this line of reasoning ignores the potential effects of 'economic' decisions on preferences. For example, advertising affects consumer preferences.

Sociology is becoming even more relevant to economics in the Internet age. Due to the current revolution in information and communication technology (ICT), the costs of initiating, maintaining, and managing inter-personal and inter-organizational relations are decreasing dramatically. On the other hand, the development of new technologies typically involves many forms of specialized knowledge that are not typically present in one organization. Thus, almost any organization engaged in research needs to collaborate with other organizations to stay on the cutting edge. Due to both factors – rapid advances in ICT and the need to collaborate – networks of for-profit and nonprofit research organizations are rapidly proliferating in the world economy. This means that the traditional inter-firm relations – competition, exchange, collusion – studied by the economics of industrial organization must be complemented with collaborative relations. Moreover, relations can be simultaneously competitive, collusive, and collaborative. This greater importance of relationships is likely to be reflected in an increased importance of sociology for economics. In addition, endogenous preference formation often plays a role in collaborative relationships. Personnel interactions in research joint ventures can be structured in such a way that team effects occur – i.e., in such a way that people involved in the collaboration develop a commitment to it.

This brings us, finally, to the relationship between economics and management studies. Institutionally, the two are often separated between economics departments and business schools. However, as a consequence of the provisioning or scarcity conceptions, the study of decision-making by managers in firms and other productive organizations is a subset of economics, just as consumer economics or labor economics is. And if management studies are multidisciplinary, drawing on insights from the social sciences and from engineering, then so is economics.

V. SCARCITY, PROVISIONING, AND ECONOMIC PARADIGMS

As argued above, the scarcity-cum-rational-choice conception of economics is becoming untenable because quasi-rationality is increasingly invoked to explain phenomena that are commonly perceived as belonging to the economic realm. Shorn of the rationality assumption, what is left is an economics based on the problem of scarcity.

The distinction between the scarcity and provisioning conceptions is subtle. Provisioning, too, involves the relationship between resources and human ends. The difference between the two conceptions is that scarcity implies that the relationship is *problematic*. That is – say the textbooks – what makes economics interesting: that there is a *tension* between human ends and available resources. Economics deals with this universal problem. Absent this problem, there would be no useful role for economics.

The major question regarding scarcity is this: Can the problem of scarcity only be addressed by expanding the available set of goods and services? Or can it also be addressed by reducing desire? Typically, mainstream economics is concerned with the first type of solution to the scarcity problem. The second type of solution is practically completely ignored. Thus, implicit in the scarcity conception is a motivational assumption: some form of non-satiation. And this non-satiation is a given: it is part of the general tendency to presume given preferences.

If the second type of solution were allowed, then the scarcity and provisioning conceptions would be identical. However, in practice, the scarcity conception as it exists tends to ignore the second type of solution, thus shutting out inter-paradigmatic debate with adherents of environmentalist, Buddhist, or social economics. Thus, discussions of "voluntary simplicity" (Elgin 1993, Etzioni 2004) may be marginalized. In contrast, the provisioning conception has the potential to provide a common ground for all schools of economics to conduct their debates.

Environmentalist and Buddhist economics tend to stress the cultural and psychological factors in perceptions and sentiments of (non-)satiation. For example, The first sermon taught by the Buddha after his enlightenment concerned the Four Noble Truths (Koller 1985:136-40): (1) There is suffering; (2) Suffering has a cause, namely attachment to desire; (3) Suffering can be extinguished by giving up attachment to desire; (4) The way to give up attachment to desire and thus reduce suffering – and increase happiness – is constituted by the Noble Eightfold Path (right views, right intent, right speech, right conduct, right means of livelihood, right endeavor, right mindfulness, and right meditation). The Noble Eightfold Path defines a "Middle Way" between asceticism and indulgence. By assuming non-satiation of any kind, economists in effect deny the possibility of enlightenment as suggested by the Four Noble Truths. From a Buddhist perspective, this is due to ignorance. According to Buddhism, many people in our culture are simply not aware of the human capacity for attaining a very contented state of mind with limited means. In this view, people are deluded in that they take their own – seemingly insatiable – preferences as given.

Buddhism is but one example of a wide range of contemplative and meditative traditions – Oriental as well as Western and Islamic – which often stem from religious-monastic traditions. The reason Buddhist psychology is chosen as an example here is its independence of metaphysical or supernatural concepts; it does not depend on traditional

Buddhist beliefs in *karma* and reincarnation (Batchelor 1997). The key point here is this. Different cultures imply different sociological and psychological viewpoints, so an economics that makes psychological and sociological assumptions that are so aprioristic as to be embedded in the very definition of the discipline may alienate economists inspired by non-Western or non-mainstream cultures. Hence, the provisioning concept is more likely to be accepted by economists worldwide who espouse a large variety of views on society and the human mind.

VI. CONCLUDING COMMENTS

This paper does not ask mainstream economists to jettison their assumptions, methods, and theories. All it asks of them is that they recognize alternative assumptions, methods, and theories, as belonging to the realm of economics – that they do not monopolize economic thought by identifying their own paradigm with economics, period. To quote Nelson (1993: 34): "Let us start by speaking of the mathematical theory of individual choice' as 'the mathematical theory of individual choice' instead of as 'economic theory,' of the choice-theoretic approach as 'the choice-theoretic approach' instead of as '*the* economic approach'."

Various conceptions of economics as focusing exclusively on self-interest, exchange, markets, rational choice, or money, are past their prime. That leaves only the scarcity and provisioning conceptions. Without non-satiation as a built-in presupposition, the scarcity conception becomes indistinguishable from the provisioning conception. In this view, scarcity is not an inevitable fact of life, but depends in part on human psychology. We can study the problem of scarcity without taking scarcity to be inevitable. More generally, many people calling themselves economists do not take self-interest, social atomism, rationality, and non-satiation for granted. On the methodological front, many economists favor methodological pluralism and would not separate economics from, say, management studies, on the basis of economics being more 'rigorous.' Additionally, spurred on by feminist economists (Folbre 1994, Nelson 1997, Jochimsen and Knobloch 1997), the profession has come to recognize intra-household production and transactions as being economically relevant while not directly measurable in money terms.

This paper's key arguments can be summarized as three principles. First, when economists are careful to define their discipline without committing ourselves *a priori* to particular assumptions, methods and theories, but as merely focusing on a class of phenomena, then the result is a more thoughtful and richer economics. Second, the 'natural' choice for this class of phenomena is provisioning systems, because this is the one major niche in the social sciences not already occupied by one of the other social sciences – systems that nurture social systems are complementary to those systems. Third, as we want to understand as fully as possible provisioning systems, we ought to be interested in monetary and non-monetary mechanisms, self-interest as well as altruism, perfect rationality as well as quasi-rationality, exchange as well as gift relationships, non-satiation as well as satiation, etc. For these reasons, the provisioning conception is the natural 'home' for an economics in harmony with the other social sciences, philosophy, ecology, science, and the real world.

But will these arguments suffice to persuade mainstream economists to adopt the provisioning conception? Realistically, only small numbers of them are likely to give much thought to the present paper or other work on the topic. However, they will much more likely be influenced by their instincts and actual experience, especially the supply and demand for economics research. What use is it to test for one explanation of a given phenomenon if no alternative explanation is present? Alternative explanations of similar phenomena are best pitted against each other or integrated *within* a single discipline – otherwise insurmountable obstacles of communication and compatibility are bound to arise. Similarly, if economics is about the problem of scarcity, then it only makes sense to discuss alternative responses to this problem within the discipline. This might allow for satiation to gain more widespread acceptance in the profession as a valid research agenda item.

If the economics profession is to evolve towards the provisioning conception, it will be due to this logic which is intrinsic in economic research, rather than to direct persuasion via methodological or philosophical arguments. The economics profession has witnessed the decline of various restrictive but once-dominant conceptions of its subject matter. Will the same thing happen to the scarcity-as-a-fact-of-life conception of economics? Only time can tell. But among all visions of what economics is about, the provisioning conception has perhaps the greatest potential to be compelling to mainstream and non-mainstream economists alike.

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