Introduction

For several decades, modern economies have been service economies, and the point of no return has long been passed. The theoretical disputes as to how to explain and assess the expansion of the service sector, which pitted advocates of ‘post-industrialism’ against ‘neo-industrialists’, have gradually become blurred. While services (as a sector) and the service relationship (as a mode of coordination between economic agents) are now essential characteristics of contemporary economies, innovation is another (Baumol, 2002). Thus modern economies are both service economies and economies of innovation. Paradoxically, they are not regarded as economies of innovation in services, that is as economies in which service firms’ innovation efforts are proportional to their contribution to the major economic aggregates. It is as if services and innovation were two parallel universes that coexist in blissful ignorance of each other.

This paradox reflects the old concepts of services and the controversies that used to surround them (some of which have become myths) and, more generally, the inertia of our analytical and conceptual apparatus.

1. SERVICES: OLD MYTHS, NEW MYTHS, SPECIFICITIES

In order to understand properly the failure to recognize or the underestimation of innovation in services, we need, firstly, to reconsider certain myths (that is simplified and illusory images) associated with services and, secondly, to examine in a more analytical and concrete manner the specificities generally attributed to service activities. These two points are of course closely linked.

1.1 The Myths

Most of the views outlined here are relatively old. Some are rooted in the history of economic thought. There would be no difficulty at all in demonstrating that they continue to exert influence through those present-day economic and political discourses that incessantly warn us of the risks and limits of the service economy.
To simplify somewhat, three myths (artificially separated out here, but obviously linked) can be said still to be causing confusion in the analysis of innovation in services (for a detailed analysis of these myths, see Gallouj, 2001):

1. the myth of the unproductive, ‘third’ sector,
2. the myth of low productivity and low capital intensity in services, and
3. the myth of the service society as a society of ‘servants’.

The first of these myths is a (negative) general judgement on the nature of an activity and of a sector; the other two are (equally negative) assessments of the factors of production (capital, labor) that service activities draw on.

1.1.1 Unproductive services and the ‘third’ sector
The notion of services as an unproductive activity with no economic value has its origins in the history of economic thought, and in particular in the work of Adam Smith (1960), who makes a distinction between the productive work of manufacturing and the unproductive work that characterizes service activities, which fade away at the very moment they are realized. This analysis, developed for services reduced to little more than the work of domestic servants, servants of the state and artists, continues to influence many present-day approaches. While the accounting concerns of the first theorists of the service sector (particularly Fisher, 1935; Clark, 1940) led to a residual, negative definition of services (everything that is not agriculture or manufacturing) that does not constitute a value judgement on the economic worth of the tertiary sector, the same most definitely cannot be said of other, more recent analyses. These analyses contain a number of negative assessments of the service sector (‘peripheral’, ‘pathological’...) which, taken as a whole, contribute to what, by analogy with the third world, we describe as the myth of the ‘third sector’. There are numerous studies deploiring the growth of the service sector. We will confine ourselves here to citing just a few particularly suggestive examples. In a study revealingly entitled ‘Manufacturing matters’, Cohen and Zysman (1987) take the view that services are ‘peripheral’ activities that impede the functioning of manufacturing industry, which is regarded as the only engine of economic growth. Adam Smith’s vision of services as unproductive also lies at the heart of the study by Bacon and Eltis (1978) entitled ‘Too few producers’. The service sector is also suspected of having been the culprit in the economic crisis of the early 1970s (Aglietta and Brender, 1984; Lorenzi et al., 1980) and the image of services as a ‘pathology’ flourishes in the economic literature (cf. in particular Attali, 1981).
1.1.2 Low capital intensity and low productivity
The second myth conveys the notion that the service sector is characterized by low capital intensity and low productivity. The myth of low capital intensity is linked to the absence of factories and large-scale production lines in the service sector. This myth is very resistant even to those statistical investigations which, from the studies of Kutscher and Mark (1983) onwards, have concluded that capital intensity in services is in fact high. This has always been the case in some activities (particularly energy distribution and transport in its various forms) and has become so in others that are now the main users of information and communication technologies (banking and insurance, for example). When these analyses do bow to the statistical evidence, it is to reveal a new syndrome that condemns services. This is Solow's paradox, according to which increasing technological intensity is accompanied by a stagnation or even a decline in productivity. Now it is likely that a less 'industrialist' definition of productivity would cause us to revise our opinion of productivity in services and its evolution (Gadrey, 1996c).

1.1.3 A society of servants
The third myth concerns the quality of labor as a production factor in the service economy. It constitutes an attack on what might be considered one of the strengths of services, namely their job creating ability. The literature contains a large number of studies warning against such an error. Once again, we will not examine these studies in detail but confine ourselves to singling out a few particularly telling phrases. Thus as far as job creation is concerned, the service society is said to be nothing other than a 'society of servants', a 'hamburger society' and a 'bad jobs society' (Bluestone and Harrison, 1986; Cohen and Zysman, 1987; Gorz, 1988; Thurow, 1985; Mahar, 1992). Once again, there is no difficulty in adducing statistical evidence to give the lie to these analyses. While it is true that the service society creates deskilled jobs, it is equally true that it is now the main source of jobs for managerial staff and high-level professionals (Noyelle, 1986; Gadrey, 1996a; Meisenheimer, 1998; Illeris, 1996).

All these various myths, in their different ways and to differing extents, contribute to the underestimation of innovation in services. After all, innovation, the main engine of wealth creation, and such undervalued activities surely have little in common.

1.2 The Specificities of Services
The various myths outlined above can be regarded as the general context that helps to sustain the underestimation of innovation in services. Over and above this general context, there are also a certain number of particular concrete analytical problems (which will be examined in greater detail in
Chapter 2) that also (through the way in which they are apprehended) contribute to this underestimation. They arise out of the ill-defined nature of the output of service activities, the interactive nature of the act of service delivery and the heterogeneity of services.

1.2.1 The product is a ‘nebulous’ process
The first analytical problem raised by services is the relatively fuzzy and unstable nature of their product. Indeed a service is a process, a sequence of operations, a formula, a protocol, a mode of organization. It is difficult, in many cases, to locate the boundaries of a service in the same way as those of a good can be fixed.

They have to be considered within a three-dimensional space:

1. the time horizon of the service provided, which is made up of the delivery of the service in the short term, what Gadrey (1996a) calls the ‘service in actuality’, and its long-term effect;
2. the reference universe or ‘world’, in the sense of the term developed by Boltanski and Thévenot (1991), i.e. the ‘value system’ used to evaluate the ‘product’ in all its various dimensions;
3. the degree of materiality or tangibility in the service (which is often linked to its technological content).

1.2.2 Services are interactive
Services are consumed as they are being produced and involve some degree of customer participation. This characteristic has several theoretical consequences for the definition and the organization mode of innovation in services. For example, it would seem to prohibit a linear conception of innovation. On the other hand, it is particularly consistent with an interactive model, like that advanced by Kline and Rosenberg (1986).

1.2.3 The service sector is one of extreme diversity
Differences in respect of innovation sometimes seem greater within the service sector than between some service industries and some manufacturing industries. For example, the innovation behavior of computer services and telecommunications companies is relatively close to that of manufacturing firms and may, to some extent, be captured by the same survey arrangements. On the other hand, the types of ‘products’ vary widely from one service activity to another. Thus the content of product innovation is not necessarily the same for a hotel service, a consultancy service or a financial service. The difficulty of applying the traditional definitions seems to increase in the case of services whose target is information, knowledge or individuals. Customized or ad hoc innovation occupies an important place in consultancy services, for example. Particular attention should be focused on this type of activity and, more gene-
rally, on knowledge-intensive business services. They pose particular methodological problems, in that the providers of such services, while producing innovations in their own right, are also participants in the innovations produced by their clients.

It might well be asked whether the notion that services are activities with a high degree of specificity has not itself become a myth. After all, there are many exceptions to the characteristics outlined above, but in particular they also manifest themselves in the process of producing goods. Intangible elements and interactivity are becoming increasingly important in manufacturing. Thus an investigation into innovation in services should help not only to reconcile the two basic features of modern economies but also to enrich analysis of innovation in manufacturing.

2. IN SEARCH OF A THEORY OF INNOVATION IN SERVICES

The myths referred to above and the theoretical problems inherent in the very nature of services have conspired to produce a situation in which innovation in services is not properly recognized.

The predominant approach to innovation in services is one that draws on the myth of the ‘third sector’. Manufacturing industry, the driving force in the economy, produces technical systems from which service activities may indeed benefit. From this perspective, services are subordinate and dependent: they adopt, but they create nothing. In this respect, the ‘third sector’ behaves like the ‘third world’. This is not an entirely false notion. It is, as we will see, simply incomplete and unable fully to account for innovation in services in all its diversity.

The technological bias alluded to above can be avoided. Some studies have achieved this by emphasizing the specific forms of innovation in particular parts of the service sector or by producing local analyses or theories of innovation in services. Thus there are typologies of forms of innovation in consultancy, theories of commercial innovation and theories of financial innovation. These various studies adopt approaches that might be described as ‘service-oriented’, as opposed to technologist (or industrialist) approaches.

Our objective here must be to go beyond these local analyses in order to develop a more general interpretative framework that can account for technological and non-technological innovation in services and in manufacturing. Such a synthesis is necessary because of a tendency for goods and services to become increasingly similar in nature. This phenomenon manifests itself in various ways and in opposite directions, including an increase in the intangible component of the production of agricultural and industrial goods and the industrial rationalization taking place in certain service activities. This
convergence reflects the transition from the service economy to an economy based on the service relationship as a mode of coordination between economic agents (De Bandt and Gadrey, 1994). A characteristics-based approach derived from Lancaster’s work would appear to be capable of bringing about this synthesis or integration and of accounting for the diversity of forms of innovation.

It is precisely such an approach that is being advanced in this book. We will be drawing in particular on a certain number of our own studies, both empirical and theoretical, individual and collective. Since texts, as Callon (1991) suggests, are networks, we will of course be drawing also — directly or indirectly — on much of the economic, sociological and management literature devoted to innovation in services. Nevertheless, it is not the aim of this book, or at least not the principal one, simply to synthesize the various strands of this literature. More fundamentally, this literature will inform our attempts to develop a theory of innovation in services that takes account of the specificities of services without excluding goods. In the light of this objective, the paradoxical nature of the book’s title does not elude us. It seeks to register our particular interest in services rather than being a plea for a specific theory of innovation in the tertiary sector.

Our main sources of inspiration in this book are certain concepts and methodologies associated with two rapidly developing schools of thought: evolutionary theory and convention theory.

These two schools have developed independently of each other and of any reference to services. The first has its origins largely in the English-speaking world, while the second is predominantly French. Both constitute attempts to break into the ‘black box’ of the firm. They challenge the neo-classical notion of substantive rationality and expose the limitations of market-based coordination as the basis of economic behavior. They recognize and construct conceptually the heterogeneity of productive organizations (sectoral taxonomies of forms of technical change in evolutionary theory; cities and worlds of production in convention theory). In the course of the book, we will examine in greater detail the various elements of these theories and the exact nature of any actual or potential convergence between them. However, the principal object of investigation here is the way in which, as they converge, these two schools of thought can provide the foundations for an analytical framework, a theory even, of innovation in services.

3. AN OUTLINE OF THE BOOK

The book is divided into six chapters. The first chapter provides an ordered and critical survey of the literature devoted to innovation in services. Although such a survey is essential in order to reveal the gaps in this literature
and to lay the foundations for the construction of our theory, it was our desire to keep it relatively short and readers are referred to earlier, more comprehensive studies (Gallouj, 1994a; C. Gallouj and F. Gallouj, 1996). It will be remembered, for example, that a significant part of this literature takes the process or process innovation as a starting point and that such (technological) innovation tends to be considered in terms of how it contributes to the codification of the service relationship, thereby reducing, as it were, the degree of freedom or variety in that relationship.

In Chapter 2, conversely, we adopt the ‘product’ as our starting point, which is more consistent, as we will see, with an evolutionary and neo-Schumpeterian analysis. Thus this chapter is given over to an examination of the notion of the product and of the ways in which Lancaster’s characteristics-based approach might be transposed to services and the service relationship. We will see that, in reality, the approach adopted and the amendments we propose do not exclude the possibility of taking processes into account.

The various modes and models of innovation derived from this approach are then outlined, illustrated and linked to each other in Chapter 3. These are the radical, incremental, ad hoc, ameliorative, recombinative and objectifying (or formalization) modes of innovation. As we will see, these various models encompass a set of basic mechanisms for processing the technical and services characteristics as well as the competences that go to make up the ‘product’, namely addition, removal, association, dissociation, formalization (or formatting), evolution or variation, and so on.

Chapter 4 examines the actual conditions in which these various types of innovation are produced (sources and determining factors, modes of organization, examined from the perspective of the actors involved and of the processes brought into play, appropriation and protection regimes, etc.).

Chapter 5 seeks to demonstrate that the characteristics-based approach adopted and the models of innovation derived from it fall within the scope of an evolutionary approach to innovation. The main aim of this chapter is not merely to make this observation and to illustrate it in various ways but, more fundamentally, to enrich evolutionary analyses and thereby push them in new directions. For example, our approach opens up opportunities for constructing richer sectoral taxonomies of innovation (and not just of technical change in the strict sense of the term) that are closer to the reality of service firms and industries.

However, these ‘evolutionary’ concepts, which constitute an important step forwards in our understanding of the mechanisms of innovation in services, are still unable to account for the various justifiable forms of the product, which are more diverse in services than elsewhere. Thus Chapter 6 examines the way in which conventionist approaches might help to enrich the evolutionary approaches to the product and to innovation.
NOTES

1. For an overview of these debates, cf. Delaunay and Gadrey (1992); Petit (1986).
2. For a detailed analysis of the analytical and methodological consequences of these characteristics on the definition and measurement of innovation, cf. Djellal and Gallouj (1999).
3. Boltanski and Thévenot's approach emphasizes the diversity of 'worlds' i.e. of value systems and of criteria of legitimacy. According to the nature of the dominant value system it distinguishes six 'worlds': the industrial world, the market world, the domestic world, the civic world, the creative or inspirational world, the opinion-based world (in which the values are those of reputation and self-esteem).
4. Some of the developments presented in this book are an extension of an initial investigation conducted in collaboration with O. Weinstein (Gallouj and Weinstein, 1997).