

McMeekin, Andrew (Ed.); Green, Kenneth (Ed.); Tomlinson, Mark (Ed.); Walsh, Vivien (Ed.)

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Innovation by demand: An interdisciplinary approach to the study of demand and its role in innovation

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Innovation by demand

An interdisciplinary approach to the study
of demand and its role in innovation

Andrew McMeekin, Mark Tomlinson, Ken Green and Vivien Walsh



Innovation by demand



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New Dynamics of Innovation and Competition

The series New Dynamics of Innovation and Competition, published in association with the ESRC Centre for Research in Innovation and Competition at the University of Manchester and UMIST emanates from an engagement of the Centre's research agenda with a wide range of internationally renowned scholars in the field. The series casts new light on the significance of demand and consumption, markets and competition, and the complex inter-organisational basis for innovation processes. The volumes are multi-disciplinary and comparative in perspective.

Series editor:

Mark Harvey, Senior Research Fellow at CRIC

Innovation by demand

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to the study of demand
and its role in innovation

edited by

Andrew McMeekin

Ken Green

Mark Tomlinson

Vivien Walsh

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Series foreword

The CRIC–MUP series *New Dynamics of Innovation and Competition* is designed to make an important contribution to this continually expanding field of research and scholarship. As a series of edited volumes, it combines approaches and perspectives developed by CRIC's own research agenda with those of a wide range of internationally renowned scholars. A distinctive emphasis on processes of economic and social transformation frames the CRIC research programme. Research on the significance of demand and consumption, on the empirical and theoretical understanding of competition and markets, and on the complex inter-organisational basis of innovation processes, provides the thematic linkage between the successive volumes of the series. At the interface between the different disciplines of economics, sociology, management studies and geography, the development of economic sociology lends a unifying methodological approach. A strong comparative and historical dimension to the variety of innovation processes in different capitalist economies and societies is supported by the international character of the contributions.

The series is based on international workshops hosted by CRIC which have encouraged debate and diversity at the leading edge of innovation studies.

CRIC is an ESRC funded research centre based in the University of Manchester and UMIST.

Contributors

- Carole Cohen* Centre d'enseignement et de recherche appliqués au management, Nice
- Bonnie Erickson* Department of Sociology, University of Toronto
- Ken Green* Manchester School of Management, UMIST
- Leslie Haddon* London School of Economics
- Mark Harvey* Centre for Research in Innovation and Competition, Manchester
- Michele Lamont* Department of Sociology, Princeton University
- Andrew McMeekin* Centre for Research in Innovation and Competition, Manchester
- Virag Molnar* Department of Sociology, Princeton University
- Barbara Morton* Manchester School of Management, UMIST
- Steve New* Said Business School, University of Oxford
- Albert Richards* Manchester School of Management, UMIST
- Wilhelm Ruprecht* Max-Planck-Institut zur Erforschung von Wirtschaftssystemen, Jena
- Pier Paolo Saviotti* Institut national de la recherche agronomique– Sociologie et économie de la recherche et développement, Grenoble
- G. M. Peter Swann* Manchester Business School
- Mark Tomlinson* Centre for Research in Innovation and Competition, Manchester
- Vivien Walsh* Manchester School of Management, UMIST
- Alan Warde* Centre for Research in Innovation and Competition, Manchester

1

Innovation by demand? An introduction

Andrew McMeekin, Ken Green, Mark Tomlinson and Vivien Walsh

Sociologists and economists on consumption and demand

The structure and regulation of consumption and demand have recently become of great interest to sociologists and economists alike, 'consumption' being the focus of sociological accounts, whilst 'demand' has been the preserve of economists' analyses. At the same time, there is growing interest, especially among economists, in trying to understand the patterns and drivers of technological innovation. The connection between consumption/demand and innovation suggests a number of interesting questions. How do macro-social shifts influence patterns of consumption? How do firms and other organisations structure markets and create demand? How do perceptions of demand influence the innovative activities of firms? How do consumers respond to the innovative offerings of firms?

In 1999 the Centre for Research in Innovation and Competition (at Manchester University and UMIST) ran an international workshop to explore these themes. The primary aim of the workshop was to bring together sociologists and economists to look at how they study the role of demand and consumption in the innovation process. There have been few attempts to find points of contact between the diverse approaches. So the focus of the workshop was on identifying differences and complementarities in approach, with a view to finding possible common ground and new interdisciplinary research directions. This book presents some of the papers from the workshop and others of CRIC researchers that explore the same theme.

The first two chapters set the scene for the whole volume. They offer broad conceptual overviews of ways that the sociological and economics literatures address issues of innovation, demand and consumption. Alan Warde, in Chapter 2, reviews the sociological literature on consumption, focusing in particular on research that offers alternative or complementary views to the concepts of 'conspicuous consumption' and individual choice, which has dominated much work in this area. From this, he proposes a research agenda for examining everyday consumption, that is, consumption that is unremarkable, bound by habit and routine, and which takes place in the context of social networks and institutions, by which it is also constrained. As he points

out, many things can be consumed only within the boundaries of practices that are social, cumulative and governed by convention. Furthermore, his approach is sufficiently embracing to include *public and institutional* consumption, as well as individual consumption. It also allows consideration of the downstream generation of demand for infrastructural and complementary products, and hence of environmental sustainability in consumption.

In Chapter 3, Peter Swann offers a companion piece to Alan Warde's. He examines the way in which economists have understood demand. Mainstream, neoclassical or 'standard' economists, he maintains, focus on demand as a process in which selections are made among commodities, typically assuming 'rational' and profit-maximising behaviour on the part of the actors making the selections. On the other hand, sociology offers an understanding of the personal appropriation of goods and services via multiple and social uses, and the consumption of output from non-market as well as market sources. Swann surveys the major contributors to the economics of consumption: in addition to the mainstream (the econometric paradigm, Gorman, Deaton and Muellbauer) he considers the contributions of 'the giants' (Smith, Senior, Marx, Marshall, Ruskin, Keynes, Veblen, Mill and Jevons), and 'the travellers' (Scitovsky, Galbraith, Earl, Arthur Lewis). He concludes that there is more to the economics of consumption than the mainstream economists' paradigm of utility maximisation. Indeed, he argues, economists should look to other disciplines for inspiration. Evolutionary economics in particular has taken on board some of the preoccupations of sociologists in its concept of the selection environment, in which non-market as well as market factors play a significant role in the selection process. To this end, Swann lastly reviews the contribution from the 'Revival', or recent economic writings building on insights from other social sciences (e.g. Becker, Akerlof, Cowan, van Weizacker and Swann himself).

Different perspectives on consumption and demand

The next two chapters offer different approaches to the economics of demand and innovation through an evolutionary framework.

In previous papers, Paolo Saviotti has studied the relation between the composition of the economic system and its capacity to generate long-run economic development. Saviotti has concluded that an important concept is 'variety growth', which is a requirement for the continuation of long-run economic development and leads to the creation of new sectors. The role that variety can play in economic development has important implications for economic theory, including the theory of demand. Some of the assumptions that are made in demand theory are appropriate only for a static, short-run analysis. They need to be modified for the analysis of long-run development. Moreover, the evolution of demand can represent a bottleneck in economic development. If the economic system is changing continuously, preferences cannot be taken as given; the *formation* of preference has to become a

legitimate subject for economics. Saviotti offers a theory of wants and preferences which assumes that consumers will start consuming a given good/service only when they achieve a critical income. In order for variety to increase in the course of economic development, new goods/services must be 'added' to existing ones. Saviotti's analytical treatment offers some insight into the conditions under which variety can contribute to economic development.

Wilhelm Ruprecht, in Chapter 5, offers a different slant on an understanding of demand by reviewing how consumption fits into 'evolutionary' models of economic development. He addresses two questions. As Saviotti argues, when only the supply side of growth is looked at in the presence of market satiation, both product and process innovations are complementary preconditions for sustainable economic growth. Without the introduction of new products, an increasing share of resources would remain unemployed. Neo-classical theory finds thinking about the case of consumer goods novelty particularly difficult, because the adoption of only a subset of new commodities can only be reconciled with an assumption of given preferences. Thus a critical question is how preferences for new commodities come into being, how new goods are adopted. Ruprecht explores the thinking on this topic of a number of writers, from a range of disciplines, including neoclassical economists, psychologists and socio-biologists. He concludes that biological and psychological perspectives, fitted into frameworks of evolutionary economics, have much to tell us about the formation of preferences, and economists should be open to such diverse approaches if they are to understand the relationship between innovation and demand.

Chapter 6, by Mark Tomlinson and Andrew McMeekin, looks at the routine nature of food consumption. The existence of consumption routines is particularly significant for those interested in the diffusion of innovative consumer products. The implication is that existing routines need to be modified or broken for innovations to succeed. This is reflected in practice, as advertisers and market research attempt both to reinforce routine consumption behaviour and to bend it in new directions. This they frequently do through activities that are based on stratified populations of consumers. Consequently, product ranges are designed so that a hierarchy of products are offered to different social groups. Advertisements too are created and presented in a manner to make clear the social significance of consuming a certain good. The chapter examines the dynamic nature of socially constituted consumption *routines*. The authors define a consumption routine as an executable capability for repeated consumption that has been learned or acquired by groups of consumers in response to social pressures or contexts. This notion of routine is taken from evolutionary economics, but is modified to take account of the sociology of consumption, in an explicit attempt to combine insights from both economic and sociological approaches.

The chapter operationalises the concept of socially based consumption routines by conducting statistical analysis of national data sets that include data on food consumption. Different foods are found to hold different social

significance. Both persistent social class and social mobility are significant determinants of changing routines, but they operate in different ways for different foods.

Chapter 7, by Virág Molnár and Michèle Lamont, analyses how black Americans use consumption to express collective identity. Two processes of 'group identification' and 'social categorisation' are explored through interviews conducted with black marketing experts who specialise in the African-American market place. These interviews provide a rich data source, giving insights into the meaning of consumption for blacks. The marketing experts are viewed both as individual consumers and as members of an occupational group that is built on increasing the importance of consumption in creating individual social identities. They argue that for African-Americans the formation of collective identity is centred on defining their place in US society, finding ways through consumption behaviour to demonstrate social membership. Furthermore, the concepts of group identification and social categorisation improve our understanding of the meaning of consumption for this group. The role of the marketing specialists is found to have a crucial role in defining what it means to belong in black society in terms of defining the space of black consumption itself and also in shaping the wider public's perceptions of blacks through intermediaries such as the advertising industry.

Leslie Haddon, in Chapter 10, looks at the involvement of consumers in innovation. Two case studies are presented which detail a number of interesting issues regarding ways that consumers become involved in new product development or longer-term R&D in the Information and Communication Technology (ICT) sector. In some cases, consumers have been actively involved during new product development. Much more common was later involvement, in the form of product testing and evaluation of interfaces. In other cases, consumers are 'represented' through perceptions of consumer behaviour built up by designers and product managers. There are also differences with respect to the formality of these arrangements; in some cases, dedicated units have been established by (usually larger) firms to achieve consumer involvement.

Despite there being activities geared towards integrating consumers (or representations of consumers) into innovation processes, Haddon finds that the impact is often limited. For what are perceived as more radical innovations, consumer input often takes place relatively late in the whole process, although in some firms there is now more involvement of consumers at the conceptual stages. Given that many product ideas stem from awareness of technological possibilities, consumers' feedback is more usually in the form of reaction to product proposals rather than generating them. Even in more incremental new product development projects, the information that is collected about consumers can become marginalised relative to other considerations. In short, Haddon shows that there is evidence of firms attempting to learn about consumers as input to their innovation processes, but that to date these efforts are rather underdeveloped.

Vivien Walsh, Carole Cohen and Albert Richards, in Chapter 11, also focus on users and how their needs may be incorporated (successfully or otherwise) in the design of high-tech products. After first surveying the evolution of user orientation, user-friendliness, user-centred design and human-machine interaction in the ICT industry, they report an ethnographic study of telecom product design. They found that the job of the design team in a high-tech industry where firms collaborate was just as likely to be the design of the organisational arrangements for the development and delivery of new products and services as the design of the products and services themselves. Design as an activity links many of the functions in the business enterprise and its environment; building such links is an essential part of the design and innovation process. The authors found that usability testing took a very particular form in which to pay attention to users' needs: on the whole the trials acted as a confirmation and justification of decisions more or less firmly made, rather than being a more open-ended exercise. But, as a result, some unexpected findings were made that either had to be taken into account with downstream consequences, or could not be taken into account, and had to be incorporated into a future product design. The study also provided some interesting insights into the way in which engineer-designers take 'situated' actions, that is, actions which have to be adapted to the unforeseeable contingencies of particular situations.

The final three chapters look at demand-innovation relations within matrices or chains of producers and users and other actors (these differ in each of the cases).

Bonnie Erickson (Chapter 8) argues that, for example, in service industries such as security, demand for a service is inseparable from the demand for the kind of people seen as suitable for providing the service. One important example is women providing services in sectors that were once dominated by men. (There has been a large literature on gender segregation in social science.) The massive movement of women into paid employment can be considered as a significant innovation, involving many people and many industries. Erickson traces such variability of innovation to the complexity of a 'relational matrix' within which innovation is embedded. The matrix includes several kinds of key actors such as employers, service providers, potential employees, clients and targets to whom service work is directed on behalf of clients.

Innovation varies with both real and perceived gender distributions and what is termed gender 'homophily' within the matrix. Gender distributions either limit or enable innovations. For instance, employers can use female labour in innovative ways only to the extent that they have female service providers on hand or can recruit them from potential employees as well taking into account the appropriateness of gendered roles in the market. An analysis of the Canadian security industry is used to explore these issues using various data sources.

In Chapter 9, Ken Green, Barbara Morton and Steve New are interested in whether the use of 'consumer' pressure in improving the environmental

performance of companies, a tactic long advocated by environmentalists, stands critical scrutiny. An important aspect of this criticism is to examine the concept of 'the consumer'. The traditional image of who is meant by 'the consumer' is inadequate, they argue, both in economics and sociology and as an agent of environmental change. Efforts to 'green' the economy require an understanding of corporations and public organisations, as well as individuals, as consumers. Their chapter examines the deficiencies of traditional definitions of consumption and sets out the arguments for treating corporate organisations as consumers, and develops a framework for examining the differences and similarities between the two categories. Using the concept of the 'supply chain', they suggest that more attention needs to be paid to the mechanisms, both between and within firms and organisations, through which they engage in buying and selling. Such mechanisms are the organisation sites for the articulation of 'demand' and 'consumption'. Their study should add both to theories of how innovation takes place and to a better understanding of the best methods of intervention for governments and activists who wish to improve environmental performance.

In Chapter 12, Mark Harvey argues for the need to build an economic sociology/political economy of demand that goes from micro-individual through to macro-structural features. To achieve this, an 'instituted economic process' approach to the study of demand and innovation is developed to account for processes of institutionalisation and deinstitutionalisation. Within this framework, the concept of a 'production–distribution–retail–consumption' configuration is seen as shaping innovation. The empirical investigations of this chapter involve analysis of how retail markets link demand with supply, and how that link is a structured one: the interface facing both ways. Harvey argues that markets are more than black boxes through which products pass, and that they are more than spaces for exchange, thus getting away from the dualism of supply and demand.

He explores three empirical cases. The first involves the near disappearance of wholesale markets (in this case, New Covent Garden) for fresh fruit and vegetables to retail markets, and the particular questions raised in terms of range and quality of products that flow through them. The second deals with an equally significant reconfiguration of the retail–distribution–production configuration reflected in the emergence of supermarket own-label products. The third raises the question of how the organisation of retail markets, and their transformation, alters the way demand is instituted between end consumer and retailer. Circuits or spirals of supply and demand are more 'elemental' than either of these two moments taken separately. So the analysis needs to be one of changing and comparative configurations of these circuits and spirals. The separation of demand from supply, rather than either term taken separately, is the fundamental object of analysis.

Some commentary

The chapters in this book are diverse in approach, method and empirical object of study. Various drawing on economic and sociological approaches, they take firms or consumers or both as objects of study; in some the analysis is micro-oriented, in others a macro-structural explanation is preferred. All the chapters reveal the limitations of neoclassical economics, sometimes explicitly, sometimes not, by arguing that consumption (and purchase) cannot be assumed to be governed by utility maximisation or 'Olympian rationality' as in the orthodox neoclassical economics tradition. They also argue that it is the dynamic properties of consumption and demand in relation to innovation that are of interest (in contrast to notions of static equilibrium). Further, consumers cannot be seen to have immanent, *a priori* defined preferences, a point made both by economists (Saviotti, Ruprecht) and sociologists.

There are also limitations to sociologists' accounts of consumption as they have developed over the last ten years. Though such accounts see consumption as 'socially constructed', they limit what is included in the 'social' sphere, especially omitting or underplaying the importance of incomes and prices in determining what is bought and consumed. In addition, they rarely include the *firm* as a unit of analysis, losing any understanding of one of the main sources of innovation which, to greater or lesser extents, sets the limits to what consumption can take place. This lack especially rules out any analysis of consumption *between* firms in business-to-business relations. In addition, sociologists' accounts have focused so far on a narrow range of products, linked with notions of fashion and overt displays of 'lifestyle'. Most of these are innovative only in their form, with the technologies that underpin them relatively unchanging. However, there is a huge range of other purchases (e.g. consumer durables) and these are much more susceptible to technological innovations. Taken together, these gaps mean that sociologists of consumption only weakly analyse the relation between consumption and production in firms, and the ways in which the development and design of new products require interaction between (imagined) consumers and the innovators and designers. (See Chapter 10 by Haddon and Chapter 11 by Walsh *et al.* for elaborations of this.)

So the economics-dominated accounts view the consumers as individuals, and examine consumers' propensity to consume as determined by incomes, the price of products and evolving preferences. In contrast, the more sociological accounts are based on a fundamental rejection of this methodological individualism and consider consumption as a collective activity, rooted in social structures. They put the emphasis, therefore, on the social group in a social hierarchy, acting in relation to other social groups: competition, distinction, association and aspiration. Consumption is seen to be contingent on social factors of gender, race and occupational class. In some of the studies, the behaviour of consumers is studied as autonomous to the actions of firms. In other cases, it is the relationship between consumers and firms

that is of interest (and in one of the studies, the ‘consumers’ in question are actually firms).

The ‘mainstream’ innovation literature has long stressed the importance of demand in understanding innovation processes. However, there has been comparatively little analysis of these connections, with the majority of studies focusing on the co-ordination and management of the supply side. This neglect perhaps stems from the work of Joseph Schumpeter, an economist of technological change, who wrote several defining texts in the twentieth century. In his analysis, innovation was treated as a major driving force of economic growth, emanating from the risk-taking investments of ‘heroic’ entrepreneurs, and later by large companies. The motivation to invest was based on a perceived technological opportunity. In this model, final consumers were simply seen as the passive recipients of new products.

In the middle of the century, a body of empirical work emerged to counter this ‘technology push’ model. The proponents of the ‘demand pull’ position argued that technological innovation, like the majority of other economic activities, was driven by responses to market signals. These alternative positions fuelled a number of empirical studies seeking to demonstrate the relative importance of technological opportunity and demand factors in determining the rate and direction of innovation. The debates culminated with an influential article by Mowery and Rosenberg (1979), who argued strongly against the demand-pull position. In particular, they questioned what was meant by demand in relation to needs or market signals. There has been very little attention to this issue since.

The user–producer approach proposed by Lundvall (1988) is one explicit attempt to resolve the disputes:

One of the classic disputes in innovation theory refers to the role of demand and supply in determining the rate and direction of the process of innovation. The user–producer approach puts this question in a new perspective. On the one hand, it demonstrates that demand does play an important role in the process of innovation. On the other hand, it puts the emphasis more upon the quality of demand than upon demand as a quantitative variable. (Lundvall, 1988, p. 357)

However, despite the important contribution of this work, the emphasis has been placed predominantly on interactions between firms as producers and users. Final consumers have rarely been considered in the mainstream innovation literature.

The main exception is the *diffusion of innovation* literature. However, these studies have offered oversimplified accounts by treating populations of potential adopters as being socially homogeneous. One of the most well known models of adoption distinguishes between innovative adopters, the early majority, the late majority and laggards (Rogers, 1962). In other words, they are simply defined by their propensity to adopt. The explanation is typically a combination of income and a notion of motivation towards things novel. Social factors and processes have been dealt with tangentially, if at all.

Essentially, then, the model is individualistic, with no consideration of relations between different social groups. This, we believe, is inadequate for understanding the diffusion of products in consumer markets.

We suggest that to understand better the relationships between consumption, demand and innovation we need to pay attention to the *dynamic* nature of final and intermediate consumption. The dynamics of interest are evident at a number of interrelated levels. First, there are changes in *patterns* of consumption that emerge through macro-social shifts, changing relationships between different social groups. Second, there are changes in the *structure* of consumption brought about by shifts in the structure of production and retailing. Third, there are changes in *practices* of consumption with the innovation of new goods and services. Through a combination of economic and sociological approaches, the contributions to this volume make a significant advance to understanding these processes and relationships.

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2

Social mechanisms generating demand: a review and manifesto

Alan Warde

This chapter reflects on the development of sociological approaches to consumption and their contribution to the explanation of consumer behaviour. Tentative and programmatic, it is concerned with defining some of the ways in which sociology might proceed in analysing consumption. It offers some record of recent developments and achievements. It is cast as a reflection on the limits of a key concept, conspicuous consumption, arguing that sociological explanations have paid too much attention to the visible and the remarkable and have therefore generalised too widely from acts of conspicuous consumption. A number of mechanisms which generate ordinary and inconspicuous consumption are reviewed. This permits the identification of some important and neglected inconspicuous features of final consumption. Processes examined include habituation, routinisation, normalisation, appropriation and singularisation, putative bases for understanding the dull compulsion to consume. Asserting a distinction in the ways that economists and sociologists use the concepts of demand and consumption, the chapter contributes to interdisciplinary dialogue. In conclusion, I speculate briefly on some implications of the canvassed approach for understanding innovation and the growth of consumer demand.

Conspicuous consumption and the origins of the sociological approach

One of the distinguishing features of the sociological arsenal is its understanding of conspicuous consumption, the possession and display of goods as a means to demonstrate superiority in a system of social status. This is perhaps still the principal mechanism that scholars outside the discipline associate with the sociological understanding of consumption (e.g. Fine and Leopold, 1993).

The early, and indeed much of the later, sociology attempting to explain the role of consumption in the creation and maintenance of social boundaries and social divisions put great stress on analysing the visible and the remarkable. There was, and still is, good reason to explore conspicuous consumption.

Veblen reasoned, you will remember, that in earlier times it was conspicuous leisure that distinguished the gentleman from the rest of the society. With the collapse of local communities in which all members were familiar with one another's position, money became a more effective means of marking social superiority and inferiority. The powerful and well resourced began to demonstrate their privilege through the display of items which could be observed to be expensive. Clothing, including most particularly that of the wife of the bourgeois gentleman, was a primary mode of expression.

This basic idea was developed, without much discipline, in a variety of directions. Among the mechanisms that were added, and which actually resulted in a rather complex and contradictory series of variants, included Hirsch's notion of positional goods, emulation, the trickle-down effect, distinction, the aestheticisation of everyday life, lifestyle and neo-tribalism.

This tradition in sociology has concentrated on the visible and the remarkable, and interprets consumption behaviour largely in terms of its conspicuous attributes. It is a tradition which identifies the differences between social groups and classes and is valuable because of that. It does isolate some motives and mechanisms that we can see operating in contemporary consumption practice (see Schor, 1998, and Chapter 7 of this volume). It is also determinedly social rather than individual: consumption is about groups and the relationship between them, about belonging rather more than about individual distinction. Only in its most recent, especially postmodern, phase has it turned to individualised choice.

The approach does, however, have some deficiencies. It ineptly specifies the limitations of the central mechanisms, in that it tends to suggest that the same processes operate in all fields and affect all persons. It is forced into complete silence on that which is invisible and unremarkable. It encourages semiotic analysis of consumption at the expense of other methodological approaches. It concentrates mostly on possession through purchase. And it prioritises identity-enhancing features and possession over use.

The dull compulsion to consume

The multivalent nature of consumption is captured in Gabriel and Lang's (1995) catalogue of types of consumer whose behaviour variously appears as expressive, artistic, rebellious, manipulated, essential for survival, as well as a channel for display of social status. As a contribution to understanding the multiple roles of consumption, I want to turn attention to matters other than the visible and the remarkable. I advance, illustrating briefly, eight propositions implicit in some recent developments in sociological approaches, which I seek to promote as a manifesto for the study of inconspicuous and mundane consumption.¹

Abhor the notion of individual choice

There is now an extensive, increasingly multifaceted critique of the idea of individual choice. Sociologists traditionally were never very keen on the idea, and this maxim is perhaps the one that most strongly defines a sociological perspective. Though, as Swann (Chapter 3 of this volume) shows, there is much overlap in the understanding of consumption by sociologists and less orthodox economists, a principal difference from neoclassical economics is the ontological priority that sociology puts upon groups and social contexts. Behaviour is collective and situational, and the appropriate methodological stance is collectivist or institutional. As was said in an earlier paper with Lydia Martens (Warde and Martens, 1998, p. 130), 'Material constraints, moral codes, social pressure, aesthetic sensibilities and situational logics all steer consumer behaviour along predictable paths.'

In that paper some attempt was made to elaborate and illustrate the importance of such sociological presuppositions by explicitly examining the concept of food choice. The dictionary conveys four different shades of meaning for the term 'choice': (1) to select; (2) to pick in preference; (3) to consider fit, or suitable; (4) to will or determine. The ideological danger, ever present with respect to consumption, is to conflate the first two meanings with the fourth, which implies the existence of freedom for an individual to determine his or her own fate. These distinctions can be formalised in such a way as to eliminate from social scientific language confusion over the application of the term 'choice'.

The paper proceeded to examine some circumstances and some mechanisms which serve to restrict individual discretion in the activity of eating out. Elaborating a 'logic of restricted choice', we considered four ways in which choice is effectively limited. First, we identified the impact of limited resources upon the capacity and likelihood of any individual to eat out. Second, we isolated some social processes which restrict any individual's control over decisions regarding particular eating-out episodes. The extent to which people were often not in control was underscored in survey results, many people claiming to have had no say in whether or not to eat out. Only 45 per cent of respondents claimed to have been involved in the decision about whether to eat out on the last occasion that they had taken a main meal away from home. And the question 'Did you have any say in the decision to eat there?' elicited a negative reply in 20 per cent of instances. Third, we showed the ways in which judgements about suitability and preference operated to eliminate options. Finally, we isolated some instances of a process that might be called 'situational entailment', where every 'decision' taken narrows the range of subsequent options. We concluded that 'The term choice inflates the importance of individual decisions and conflates qualitatively different aspects and levels of discretion' and that 'Availability of resources, systemic inequalities of power in decision-making, shared cultural and aesthetic judgement, and "situational entailment", all constrain the individual' (Warde and Martens, 1998, p. 144).

Re-examine concepts of habit and routine

Consumption, because of its primary association with shopping, tends to be seen in decisionistic terms, as people making decisions about what they want. It has often been pointed out that if people were thoroughly reflexive, and pondered every act where in principle they might do one thing or another, daily life would become intolerable. In fact, there are many different points on a continuum from deeply reflected and considered selection among alternatives to unconscious replacement and repetition (see Gronow, 1998; Ilmonen, 2000; Chapter 6 of this volume). My carnivorousness, while routinely reproduced, is not consciously reaffirmed every time I go shopping for food. Much purchasing and much consumption practice have been determined at some previous juncture and remain subject to the proviso 'for the time being', 'until I reassess my principles'. Empirically, Halkier (2000) demonstrates that some decisions are more reflective than others. Some alternatives are considered, other options ignored. It is therefore incorrect to treat all consumption as decision; though nor is it right to imagine that habits had no beginning, since yesterday's decisions may become today's habits. So, while some purchasing may be reflective, other escapades occur completely without mental input. What we need to know are which is which; what proportion of purchases, and what types of purchase, follow a model of habit, as opposed to conscious reflection.

The absence of reflection is particularly marked with respect to what I would like to call 'subsidiary consumption'. Much consumption is incidental, or coincidental. If I go to a restaurant I will wear clothes, expect electric lighting, probably buy drinks that I would otherwise not, pay for a taxi to get there, eat more courses than I would at home. If I go to the cinema I will travel, eat popcorn, have bought the local newspaper to see what movies are being shown and take a pre-film snack. To imagine that the consumption moment within these activities can be reduced to the cost of the meal or cinema ticket would be naive. Moreover, I also require appropriate company and a capacity to make conversation about film afterwards.

Another aspect of subsidiary consumption is the complementary items, say in the home, that are required to be able to consume what is purchased. Cooking equipment; heat, light and electricity; comfortable surroundings; cookery books; kitchen table: all are subsidiaries, necessary supports for a trip to the shops to buy food. Of course, different groups will require different subsidiary items. Significantly, the subsidiaries (though also the context) may announce the social meanings involved, and permit social classification, more than does the apparently most central item.

Pay more attention to the inconspicuous and the unremarkable

Much of what is consumed and is generally harmful to the environment of the planet is largely impervious to mechanisms such as status enhancement or the pursuit of fashion (see Shove and Ward, 1998). It is the petrol rather than the car, the electricity rather than the light fittings, the water rather than

the new bathroom suite, which pose the major problems of waste and destruction of scarce resources. Environmentalists have measured the amount of energy consumed by central heating and air conditioning, by refrigerators and commuting by car, in the daily use of water in plumbing systems, etc. But the social aspects of concern with comfort, convenience and cleanliness (Shove, 1997) remain largely unexplored.

These ideas are particularly germane to understanding processes of normalisation. How do things come to be defined as necessities, to be expected in all households and available to all people? This is a primary way in which demand is ratcheted upwards. It is a type of change which goes unnoticed, the process is one of accretion rather than conscious acquisition, and is one almost impossible to reverse. Of course, some things which once were necessities, obligatory in daily life, are no longer: hats, coal, hot water bottles and three square meals per day are among them. Yet accretion outruns deletion.

The normalisation of items, their shifting from 'hot' to 'cold' items, is captured in the work of Pantzar (1993; Pantzar and Heiskanen, 1996). Pantzar and Heiskanen's figure 1, 'The domestication of everyday life things', neatly illustrates a way of conceptualising the changing states and statuses of goods. It identifies different motives for the possession of goods, and thus different mechanisms for their incorporation into daily life. In that matrix we can see that, at their origin, different items were expected to fill different functions – the telephone, for example, was strictly for business use. But these functions change over time and this too is mapped on to the matrix. These transformations of the role of goods in everyday life suggest that there are many possible trajectories for commodities, but that some are more probable or typical than others. Elsewhere Pantzar (1997) speculates on the tendency for new items to be invented and first utilised as playthings, then to become instrumental as technology, and finally to become subject to aesthetic reflection as art (as with enthusiasms for making collections of almost anything (see Belk, 1996)). Nevertheless, many things have their most forceful, because mass, presence in the middle phase. They then are simply unremarkable. As they become available to all, any magic, or social symbolic significance, is drained from them. For example, the telephone is almost universal in British homes. It is acutely normal, its existence probably remarkable only in its absence. Except, of course, in its reincarnation as the 'mobile', the subject of any number of conversations, jokes and complaints.

Investigate the real social processes of shopping

Shou-Cheng Lai (2000), developing a distinction between extraordinary and ordinary consumption, identifies the importance of the social relations of purchase. His evidence from Taiwan shows that for certain types of 'extraordinary' purchase people consult their extended social networks, asking for advice and relinquishing all personal discretion in making the decision to the person in the network best qualified to make a judgement. Not only are extraordinary purchases delegated, so are many routine ones, which are typically made by less

powerful social actors. Only a comparatively limited proportion of purchases (though the proportion is increasing with the extension of the practices of Western consumer culture) can actually be understood as made by an autonomous individual on his or her own behalf.

Which items are extraordinary is historically and contextually specific. It is not the item itself which is important or definitive. Rather it is its particular significance for the social relations of people in a given network. Understanding the network of social relations within which the purchaser is located is essential in order to determine the social significance of the item. So instead of doing a semiotic analysis – say, of advertisements – to determine which goods are extraordinary or socially symbolic, it is more appropriate to investigate the social relations governing their acquisition. To examine who buys particular items, after what form of consultation, and with whom, is the best means of determining an item's social meaning. An implication of this may be that in a consumer society it should be possible to predict people's friends by their purchasing patterns.

The process of shopping is probably more individualised in Western societies. Nevertheless, we know far too little about who goes shopping, with whom, for what. We would do well to consider acts of consumption in which the final consumer has no involvement in the process of securing the item consumed. One of the most insightful and interesting expressions of this maxim is Miller's (1998) development of a theory of shopping as sacrifice, which challenges the idea that, even when there is no one around to enforce a particular choice, the shopper actually consults the interests of others. Shopping is less a reflexive, proactive, self-regarding activity than a form of ritual, the elements of which are determined by notions of care, the interests of others, the integrity of the household, etc. The important point is that people mostly shop for others; if this were not the case, under current domestic institutional arrangements, most men would starve and freeze to death!

Examine appropriation through use

Debates about the social consequences of commodification have for a decade or more recognised that the specific relations of exchange do not determine the meaning or use of goods. Miller's (1987) and Appadurai's (1986) notions of appropriation and Kopytoff's (1986) concept of singularisation point out that while people buy mass-produced goods they appropriate them as their own belongings, whereupon the goods often acquire particular personal significance, either by modification, incorporation into a personalised ensemble of items, or simply through familiarity. This is less likely to occur with commodities than, for example, with gifts, but it happens very frequently nonetheless. Commodities become singularised, such that their personal or their social symbolic significance overrides, or obliterates, the fact that they were once purchased. McCracken (1988) offers the example of 'patina' on silverware in the early modern period, where tangible evidence of use by previous generations of the family was highly esteemed.

The implications of this were explored tellingly by Dant (1998), who told a story of the career of a kitchen knife which served as a mirror to personal biography – where the passage of time, altered personal relationships, different forms of domestic arrangements and changing consumer taste could be registered through this particular material artefact. His argument was for the importance of material culture as an object of sociological analysis in its own right, but made the point forcefully that this particular object carried enormous personal autobiographical meaning, none of which might be read off by semiotic analysis, since there was no mark visible to the public which could allow anyone else to diagnose its meaning. Moreover its meaning was not determined by the fact that, once upon a time, it had been purchased. Its symbolic significance was invisible. Persistent use, intermittent use, or indeed maybe just long ownership, are means by which objects accrue meaning.

It is perhaps no accident that tools become personally meaningful symbols because they involve the mingling of human skill with goods; they imply working purposefully with the tool to achieve particular ends; they are the instruments of heteronomous work; the mastery of the tools implies an accumulation of skill and knowledge and competence, which are achievements – and most people are pleased by their achievements.

The theoretical implication is that attention to purchase, if it were to be considered the sole moment of consumption, becomes transparently unsatisfactory in such instances. The personal and social meanings of things become a function of their history or biography, or arise from the intersection of a person's biography and the history of things. This has led to some valuable speculation, some in the form of actor network theory, about how objects become prostheses, extensions of the self, part of the environment of everyday life and even means to define and constrain their owners (see Munro, 1996; Shove and Southerton, 1998).

Examine consumption as practice

Sassatelli (2000) observes how apparently spectacularly deviant consumption (of drugs) is regularised and contained. Her argument draws on notions of carnival – where people can do unconventional and otherwise unacceptable things, for the duration, because the event itself gives licence. The carnival has been celebrated as a blueprint for new forms of collective behaviour, it being argued that the postmodern world is inherently carnivalesque, a social world turned upside down not just occasionally but chronically. However, the 'inventiveness' of postmodern carnival could just as easily be looked upon as ritual. As with its medieval precursors, it may be liminal if considered in relation to daily life; but it has prescribed conventions, a fixed duration, a regularity and rule-governed aspect which make it as much repetitive play as invention.

The use of drugs at a rave is a case of situational entailment, a case of appropriate things being consumed in an appropriate place. Though not exactly legitimate, and though not everyone is forced to consume, there is

permission to be deviant. The same behaviour in other contexts would be considered unacceptable, foolhardy, dangerous, and so forth. Nevertheless, in their place, inebriation and drug taking are not threatening to the social fabric or the general public. This is one of many forms of 'contained' consumption practice. If there is an autonomous decision to be made it is more whether to become an adherent of the practice – of the rave – than whether to take experience-enhancing chemicals.

Analyse collective rather than individual identity

We should also take more notice of collective, public and non-symbolic consumption. This is partly a matter of reconsidering the role of collective provision as a determinant of patterns of private and domestic consumption. As Wilska (2000) shows in a comparison of Finland and Britain, different systems of welfare provision and redistributive taxation make for fundamentally different patterns of consumption among people with basically similar levels of economic and cultural capital. It is also a matter of appreciating that much of that which is symbolic is so for the creation of collective rather than individual identity. For example, public buildings are certainly symbolic, but are not means of attributing individual identity. At the same time, it is important to observe that many public goods are unremarkable, in the sense that publicly allocated items are often judged inferior because they confer no personal distinction upon their recipients. There remains much to be done by exploring social and collective identity, identification with groups through consumption with a view to establishing collective belonging.

Avoid overestimating the social significance of consumption

Finally, consumption is often not an end in itself. While social theorists are increasingly prone to claim that consumption has become the most important integrating aspect of contemporary social life (e.g. Bauman, 1998), particularly as a substitute for the work ethic, we should remain sceptical. There are many alternative ways to evaluate the social role of consumption which do not place it (certainly not in its restricted form as the purchase of commodities) at the centre of daily life. Moreover, we should not only recognise the extent of habitual consumption, but also take into account people's reservations about consumption, as marked by indifference or dislike of shopping (Lunt and Livingstone, 1992). In many instances, consumption is itself more important as practice and use; and even then it is not self-evidently more important than work or religion or family relations. Indeed, it is probably just as plausible to claim that the primary function of consumption is to reproduce social relations in these other spheres. Theses about the 'work and spend' culture have a point when they observe that people's attachment to paid work, at least as measured by their preparedness to work long hours, seems to be increasing rather than reducing (Schor, 1992). Similarly, the role of consumption in the creation, sedimentation and reproduction of family relations has been demonstrated with great perspicacity by DeVault (1991), who shows

that making meals is coterminous with the making of families. In many respects, consumption is not so much for its own sake as a means to oil the wheels of social interaction, a claim which analysis of the pleasures of eating out demonstrates (Warde and Martens, 2000).

Conclusion

The propositions of my 'manifesto' suggest that there is much to be gained from training the sociological eye on matters other than conspicuous consumption and exercises of individual decision making in the market place. This is not to advocate abandoning sociological concern with conspicuous consumption and its role in establishing social distinction and displaying social status; social classificatory schemes continue to function as tools of social recognition, with the role of bad taste and cultural hostility particularly important. Rather it is to make the claim that much consumption is surreptitious, highly constrained and unremarkable. Everyone's consumption is characterised, among other things, by acquiescence to external pressures, routinisation, normalised expectations, various acquisition, personalised appropriation, the dictates of convention and framing by public provision. These are processes which cannot be grasped, and indeed would normally be considered irrelevant, in economists' accounts of demand. For while demand concerns selection, in accordance with preferences, among commodities, consumption addresses in addition the appropriation, through multiple and social uses, of goods and services emanating from non-market as well as market sources. The range of concepts and the methodologies appropriate to investigating consumption are many and various.

The concept of inconspicuous consumption highlights many neglected aspects of behaviour. It raises issues of environmental sustainability. It emphasises the way in which demand for particular items depends on both technical and social infrastructures. It registers the central importance of habitual, repetitive and routine behaviour; recall that economic competition is as often about preventing as promoting innovation, for much demand is repetitive. Also it restores a focus on the use values of consumption. In sum, it redresses excessive contemporary emphasis on individual choice and the role of consumption in the formation of personal identity.

Attention to these aspects suggests the importance of the concept of practice for analysing consumption. Collective practices, reproduced and improvised upon by the agents conducting them, lie at the centre of the recommended approach of consumption. Many things can be meaningfully consumed only within the boundaries of practices which are social, cumulative and governed by convention. Outside of social practices, much consumer behaviour does not make sense. The collective development of a practice is a source of innovation in demand. As Swann (Chapter 3 of this volume) notes, Alfred Marshall conceived of the expansion of demand as a process whereby activities generated wants, rather than vice versa. Progressively, practices

generate new wants which, often, come to be satisfied through commercial channels. Practices, by definition inventive, result in objects developing uses and meanings that were never intended by their designers and manufacturers. Further adaptation brings forth yet more new products, sometimes commercially sourced, sometimes the outcome of private and communal endeavour.

Anticipating future demand, a profoundly difficult task, requires insight into the development and logic of social practices. Several of the mechanisms identified elaborate on the accretive aspects of practices. Much consumption is situationally entailed, where convention requires a particular elaborate course of action. Demand will often be generated indirectly, as when new tools require complementary products for their effective adoption. Modern domestic appliances imply an infrastructure of water and electricity supply, fast cars beg for motorways, electronic retailing requires an extensive network of reception equipment. Subsidiary consumption also escalates general demand. Demand increases as the social rules governing subsidiary consumption change; for instance, when different forms of sport and exercise each require special clothing, participation entails new types and levels of purchasing of garments. Another source of increasing demand is the insertion of old or established products into practices which previously had no place for them. The instalment of radios, cassette players and CDs into automobiles incorporated cultural consumption into the practice of motoring. The enhanced compatibility between personal mobility and telecommunication, permitted by the mobile phone, has transformed expectations regarding where and when people make and receive telephone calls. This is part of the intensification of simultaneous consumption, an inescapably normal process because people typically engage in several consumption practices at the same time, but one which helps explain the vast expansion of the items conventionally defined as necessary for anyone to live a normal life.

Practices are fed by social interaction. Mundane shopping behaviour, purchasing on behalf of others, the giving of gifts, and so forth, are far removed from the model of behaviour associated with the sovereign, self-regarding, individual consumer. In this regard, we might usefully consider more carefully the interdependence among and across groups of people in the determination of consumption patterns. One merit of the study of conspicuous consumption was its recognition of the place of consumption in group dynamics. Now additional ways to approach the collective behaviour of consumption are required. One such is to consider social networks as incubators of demand.

It is banal to claim that interpersonal contacts influence consumption behaviour, that friends, colleagues and family shape tastes. Yet this aspect of the explanation of consumption is comparatively underdeveloped, especially given the availability of sophisticated techniques of network analysis. Network analysis might restore a social and structural perspective to the study of consumption (see Wellman, 1997), particularly valuable because of the greater than average likelihood that analysis will operate with voluntaristic models of action. Social networks might explain preferences, why people

select what they select. This is demonstrated by Erickson's (1996) estimation of the role of social capital – an indicator of who knows whom, one key feature of a social network – as a determinant of knowledge of consumption options. Arguably, different types of network, and certainly different networks of acquaintances, will result in different patterns of consumption. They might also explain the diffusion of innovations. It probably depends on which network a person belongs to how quickly he or she may adopt a particular innovative item, the take-up of the telephone being an obvious case in point. Both avenues of inquiry might improve understandings of the importance of interpersonal connections. Networks exert social closure, sometimes enhancing competitive capacity while on other occasions encouraging collaboration and mutual support. A study of the networks of connections used in consumption decisions promises to increase the explanatory power of models of aggregate and groups explanations of preferences and tastes. Understanding the complexities of social networks may explain how the people you know influence your taste.

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The themes emerged from some seminars and conference sessions (of the European Sociological Association Working Group on Consumption and the British Sociological Association Study Group on Consumption) in the late 1990s which were devoted to exploring 'routine' and 'ordinary' consumption. At the time of initially composing this chapter I was reflecting on unpublished material. Much of that has now been published, a large proportion in a volume of essays (Gronow and Warde, 2000). Where possible I refer to the revised and published versions of the papers.

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3

There's more to the economics of consumption than (almost) unconstrained utility maximisation

G. M. Peter Swann

This chapter was written in response to the presentation given at the CRIC workshop by Warde (Chapter 2 in this book). In summarising, Warde said that the main message of his paper was, perhaps, that there is more to the sociology of consumption than Thorstein Veblen. This is an important message, and relevant for two groups. First, to his fellow sociologists, that they should not be preoccupied with the exceptional and conspicuous forms of consumption. Second, to other social scientists – economists like this author, for example – that we should not form the wrong impression of where the sociology of consumption is going.

Moreover, it seems that it is of equal importance that this book should contain a chapter emphasising that there is more to the economics of consumption than the free choice and utility maximisation of 'modern' neoclassical consumer theory. Again this chapter should address two audiences: those mainstream economists who understand this message in principle, but still focus their energies on deriving ever more elaborate optimisation algorithms; and the other social scientists who still, mistakenly, believe that 'there is nothing more to the economics of consumption than utility maximisation'.

Between this introduction and the conclusion the chapter is divided into five sections. The first looks at the hard core of modern economics of consumption. In this, consumer behaviour *is* about utility maximisation – or, to be more precise, it is about an axiomatic theory of demand. If these axioms are accepted, then modern demand theory shows that the consumer behaves as if he or she were maximising an ordinal utility function. This ordinal function is very different from the cardinal utility function of Bentham. How can we characterise this modern theory? The theory is rigorous, certainly, and it has offered many professional economists the opportunity to demonstrate their technical bravura. But it is shallow in two senses: it seems to imply a very simplistic notion of how the consumer behaves but at the same time it actually contains very little empirical content.

The second section looks back at the writings on consumption by the 'giants' – the nineteenth and early twentieth-century pioneers of economics.

Many of the ‘giants’ had a much richer conception of the consumer, even if none of them managed to develop such a sophisticated theory as that described in section one. Given these rich foundations, why did economics converge on analysing one very special (and perhaps implausible) view of consumption behaviour? The work of Marshall gives part of the answer. In his classic *Principles of Economics* (1920) Marshall gives a rich account of a consumer who exhibits many of the more subtle forms of consumer behaviour that interest us now. But Marshall was also determined to go beyond description and to develop a more rigorous theory, and he felt able to do that only for the (analytically) simplest, utility-maximising kinds of behaviour.

The third section turns to some of the ‘travellers’: post-war economists who have visited other disciplines and returned to take issue with the modern mainstream. Some have shown how economics would do well to learn from other social sciences – psychology, anthropology and sociology, and indeed from the business management disciplines (notably marketing). Others have argued that microeconomic theory based on utility-maximising consumers leads to a range of anomalies. Most prominent among these is a possible fallacy in the rationale of economic growth. As Galbraith (1958) argues, proponents of growth argue that economic growth is good because it satisfies consumer wants. But, he continues, if consumer wants are created by marketers – created, indeed, by those who want to sell economic growth – then we should have serious doubts about the value of growth.

The fourth section looks at some of the relatively recent work in economics (the last twenty-five years or so) in which economists have started to take the subtleties of consumption behaviour more seriously. Many of these contributions draw heavily on the findings of other social sciences that have taken a more comprehensive view of consumption, even if these findings are not acknowledged explicitly. The contributions listed here are all ones in which attention to subtleties does not compromise the mainstream ideal of rigour. They indicate that mainstream economics is now taking consumption seriously, even if the core of demand theory still has a very strong hold.

The fifth and final section takes a brief look at the future. One of the most exciting developments of the last ten to fifteen years has been the increasing attention paid to dynamic increasing returns, or ‘path dependence’, in economic phenomena. This is a huge change from the traditional view of economic equilibrium. In the traditional view, the economic system has a state of grace to which it will converge, and any disturbances simply delay the achievement of that state. In economies with dynamic increasing returns, the final outcome of an economic process is not like this state of grace: indeed, the character of the outcome is dependent on all the disturbances that have taken place along the line. Such thinking has started to permeate economic analysis of consumption. One particularly interesting development is the application of agent-based modelling to the analysis of consumption – especially waves in consumption, or ‘hits’. An intriguing prospect emerges from the convergence of virtual reality modelling and agent-based modelling of consumption.

The mainstream: rigour and revealed preference

Let us start with the hard core of the modern mainstream economics of consumption. But remember – as noted above – that this is not to start at the beginning, chronologically speaking. The next section will revisit the work of the nineteenth- and early twentieth-century pioneers and asks why economics got stuck on the particular track described in this section.

Gorman (1976) recounts how Mary Douglas, after hearing an account of recent developments in the mainstream economic theory of consumption, said, ‘Utility theory is empty, so we can fill it.’ Some sociologists find this puzzling: is not utility theory based on many strong assumptions? Actually, Douglas’s perspective is spot-on. Utility theory is based on a very small number of axioms. These may be strong and they may sometimes be unwarranted, but they are not many.

The core theory is as follows. The consumer is assumed to have a *complete, transitive, reflexive* preference ordering over all possible bundles of goods and services. *Complete* means that, for any pair of bundles i and j , either i is preferred to j (iPj), or j is preferred to i (jPi), or else the consumer is indifferent as between i and j (iIj). There are no instances where the consumer is incapable of ranking alternatives. *Transitive* means that if i is preferred to j (iPj), and j is preferred to k (jPk), then i is preferred to k (iPk). *Reflexive* means that i is as good as itself, so that (iIi) – a seemingly trivial requirement, but a mathematical necessity. These are the three core axioms of utility theory, though, as Deaton and Muellbauer (1980, pp. 26–9) point out, they are generally supplemented by additional axioms of *continuity*, *non-satiation* and *convexity*.

If these axioms hold, then this preference ordering can be summarised by the function $u(x)$, which is defined over all possible bundles described by the vector x . Confusingly, perhaps, $u(x)$ is often called a ‘utility’ function, though its alternative name – the ‘preference function’ is perhaps more appropriate. So the modern ‘utility’ function – the object of much suspicion among other social scientists – does not rest on an elaborate Benthamite utilitarian calculus, but simply defines a preference ordering. Indeed, a very important property of this modern preference function is the fact that any other function $u^*(x) = f\{u(x)\}$ where $f\{.\}$ is a continuous, monotonically increasing function, is also a perfectly good representation of the consumer’s preferences. In simple terms this means that the preference function is simply an ordering: if the consumer’s first, second and third choices from a particular set are (respectively) a , b , c , then this preferences ordering is conveyed equally well by the function $u(a) = 3$, $u(b) = 2$, $u(c) = 1$ or by the function $u^*(a) = 10$, $u^*(b) = 8$, $u^*(c) = 3$.

As the important work of Gorman (1976), among others, went on to show, the economically interesting part of preferences can be defined by the dual cost functions which define the cost of reaching a certain value of u as a function of prices (Deaton and Muellbauer, 1980). This is especially useful in the

light of Shephard's lemma, which shows that the derivative of a cost function with respect to a particular price (say i) defines the demand function for product i . Strictly this is a Hicksian demand function – that is, it defines demand as a function of prices and real income.

This has been hugely important for the development of empirical studies of demand in mainstream economics. It meant that the empirical tradition of estimating demand functions from actual market data with the use of econometrics could be integrated with the mainstream theory of consumer demand. Setting aside the small matter of aggregation¹ – that is, whether market demand functions can be interpreted as the demand function of a *representative* consumer – this gave a strong theoretical underpinning to common empirical practice.

In this neoclassical theory of consumption, stemming from Marshall (1920) and surveyed most comprehensively in Deaton and Muellbauer (1980),² the consumer is an isolated optimiser. Choice is constrained maximisation, and while the constraints always bite, the consumer nevertheless has a large degree of discretion. Deaton and Muellbauer (1980) show how the theory can be extended to human capital and labour supply, durable goods, choice under uncertainty, consumer index numbers, household characteristics and household welfare comparisons, and social welfare and inequality. While the main focus of Deaton and Muellbauer is on circumstances in which consumers have a lot of choice, they also examine consumer behaviour under familial or life-cycle constraints.

Two of the classic econometric studies of consumer demand build on these foundations. Stone's (1954) study of consumer behaviour in the United Kingdom is one of the great works of applied econometrics. Throughout, he consistently uses economic theory to guide his applied econometric method. While subsequent studies have had access to better and more voluminous data and have refined the econometric techniques used, Stone's study makes major advances in estimating price and income elasticities for a wide variety of consumer goods. Equally, Houthakker and Taylor's (1970) study of consumption in the United States is another major econometric benchmark.

Empirical economists have for the most part had a strong preference for what is called the technique of revealed preference. The aim is to make inferences about preferences from observed market behaviour. Many sociologists, of course, would dispute whether observed behaviour does actually reveal much about preferences. As Warde makes clear (in Chapter 2 of this book), this is not a view with which sociologists have much sympathy. This difference in perspectives is beautifully summarised by Duesenberry: 'economics is all about choices, while sociology is about why people have no choices'.³ But let's park that issue for now, and return to it below. For now, let's focus on the economic mainstream on its own terms.

Why do economists prefer revealed preference as a technique? Why do economists still make relatively little use of the *stated preference* methods used in marketing, and elsewhere? There are several reasons for this, and

there is not space to cover them all here. But the two most important are probably these.

First, applied economists have traditionally been sceptical of explanations offered by consumers (or businessmen, for that matter). Typically economists believe that if a consumer (or other actor) is asked to account for his behaviour he will give a distorted response. The reasons for distortion are twofold. There may be randomness: if asked how they would respond to a particular stimulus, the respondent may just give an unreliable answer. A hypothetical question yields a hypothetical answer. Probably more serious, the respondent may deliberately adjust his answer, as the following example suggests. Suppose a consumer is surveyed about his attitude to rail services, and it is clear that (part of) the purpose of the survey is to explore the scope to increase fares. Then it is reasonable to expect that many respondents will modify their answers to imply that demand exhibits a sensitivity to price, which in reality it may not. Respondents do this in the hope that such responses will deter the rail operator from raising prices. This issue of respondent bias has been studied in the literature. Marketers are usually aware of it, but consider that the biases arising from it may be less serious than the difficulties encountered in the indirect inference required in revealed preference analysis – see below.

The second reason why economists are sceptical about consumer ‘accounts’ lies much deeper in the fundamental methodological character of economics. To understand this we need to take a little detour. In 1933 the Econometric Society was founded – a society that has been hugely influential on the subsequent evolution of economics, so much so that that Popper (1957, p. 60 n.) for one considered that economics went through a ‘Newtonian revolution’. The Econometric Society’s founding fathers believed that the future of economics as a *science* lay with the application of mathematical and statistical methods to economic theory and applied economics.⁴ In particular, the applied programme would apply statistical techniques of indirect inference to market data. Other ‘softer’ methods, including case studies and historical methods, became less prominent as statistical analysis became more prominent.

Not all economists thought the research programme of the Econometric Society was a good thing. Keynes (1939), for one, famously described econometrics as a ‘brand of statistical alchemy’. Indeed, one of the most influential founding fathers, Ragnar Frisch, who shared the first Nobel Prize in Economics in 1969, had by the late 1950s come to the view that econometric techniques alone would not unlock the relationships of economics. (The evolution of his thinking on this matter is summarised in Swann, 1989.)

The purpose of taking this detour is not to assess the success or otherwise of the Econometric Society experiment. Rather, it is to describe the setting in which revealed preference became the preferred empirical approach to analysing questions of consumption. Revealed preference required methodologies that are consistent with the Econometric Society vision: stated preference and ethnographic work did not.

Revealed preference is, however, a problematic technique, for at least three reasons. First, as noted above, it is based on the assumption that consumption behaviour reveals something about preferences – an assumption that is challenged by many (most?) sociologists. The economists would usually respond thus: certainly, choices are constrained, and the economic consumer choice theory can embody more and more subtle constraints if need be. But in most economic models of consumption there have to be some degrees of freedom: the consumer still has to have some – even if not very much – discretion.

The second reason is that revealed preference, like other methods of indirect inference, tries to make inferences about one magnitude by inference from the pattern of correlation among other magnitudes. Even if this is technically possible, it can – as a practical matter – be very difficult to disentangle the different effects of multiple influences on consumption.

The third reason is perhaps the most serious of all. To use revealed preference, it is necessary to assume that the preference *function* to be revealed is the same for all the data used in its estimation. But if the data come from different years, or represent the aggregate behaviour of an aggregate whose composition changes from one data point to the next, then this is a strong assumption. Moreover it has had the unfortunate effect (unfortunate, at least, in the opinion of this author) of focusing attention on fixed consumer tastes and away from the reasons why tastes may change. Indeed, it was really only in the 1950s and 1960s, notably with the work of Becker and others, that the endogeneity of tastes came back on to the mainstream economic agenda – and then, essentially, only in theoretical work, and much less so in empirical work.

The consumer of mainstream economic theory, as described here, is an unexciting individual. He or she is an asocial hermit of fixed tastes. His or her behaviour is not, apparently, influenced by others. He or she has no need to experiment but, given the same products, prices and income, would continue to consume in the same way indefinitely. In that sense he or she has little need of variety, though the standard assumption of convexity in consumer theory will tend to mean that the consumer consumes a collection of different goods, and does not just consume one good to the exclusion of all others. In short, he or she is probably not very exciting company. However, not all the consumers that populate the economist's world are quite this dull – as we shall see!

The giants

So far, the reader may be forgiven for thinking, 'But there is *no* more to the economics of consumption than (almost unconstrained) utility maximisation.' But this reflects the deliberate choice to start with a hard core of mainstream economic theory (as it evolved between about 1930 and 1980). This has to be placed in the broader history of economic thought. When that has been done, it will become clear that the picture is much more interesting.

We start in this section with some of the pioneers of political economy, from Smith (1776) – the ‘giants’ of our subject.⁵ Although Smith is widely thought of as one of the founder of free-market economics, his consumers are capable of greater flamboyance than the consumer of the last section. Indeed, Smith was well aware of some of the interdependences in demand, in a passage anticipating Veblen’s (1899) concept of conspicuous consumption:

With the greater part of rich people, the chief enjoyment of riches consists in the parade of riches, which in their eye is never so complete as when they appear to possess those decisive marks of opulence which nobody can possess but themselves. (Smith, 1776, Book 1, chapter 11, part 2, p. 277)

Senior (1863), an influential classical economist, and first holder of the Drummond Chair of Political Economy at Oxford, recognised two important features of the consumer. First: ‘Strong as is the desire for variety, it is weak compared with the demand for distinction, a feeling which ... may be pronounced to be the most powerful of human passions.’⁶

Distinction, of course, has become a central focus in some of the modern sociological analyses of consumption (Bourdieu, 1984). Senior also drew attention to ‘The desire to build, to ornament and to furnish – tastes which, where they exist, are absolutely insatiable and seem to increase with every improvement in civilisation’.⁷

It may seem to stretch the boundaries of economics to include the work of John Ruskin. But Ruskin himself considered his ‘economical essays’, *Unto this Last*, the best things he had ever written, and some of his followers classed him firmly as a political economist. As Geddes (1884) puts it, Ruskin believed that the good consumer has ‘[A] primary duty of regulating expenditure with studied reference to its effect on the mind and body of the labourer, so at once seeking the minimum service from the lower occupations, and maximising that from the higher ones’ (Geddes, 1884, p. 37).

Thus the desirability of a particular good for consumption cannot be detached from the means of production, a perspective in interesting contrast to Marx’s (1859) observation ‘We cannot say from the taste of the wheat whether it was raised by Russian serf, French smallholder or English capitalist.’

And it is of course quite justified to include Veblen, and his concept of conspicuous consumption, within this group of pioneering economists of consumption. For, although his contribution to sociology has exceeded his contribution to economics, at the time he wrote *The Theory of the Leisure Class* (1899) Veblen was the first editor of the *Journal of Political Economy*. This journal, edited at the University of Chicago, is one of the very most influential and mainstream of economics journals, and its editor is by definition an economist!

In view of these illustrious and imaginative origins, it may be puzzling why economics found itself going along the track described in section one. An important part of the answer is the immensely influential contribution of Alfred Marshall on the development of economics.⁸ There is an inherent

tension in Marshall's book. For, while he took pains to describe some subtle and rich consumer behaviour, he felt it was imperative that economics should develop a rigorous theory of consumer behaviour, and to do that he had to start with the simplest case.

The early discussion in his *Principles of Economics* (Book III, chapter II) is tantalising. Marshall describes a consumer with some of the behavioural traits recognised in much more recent work on consumption. An important characteristic of Marshall's consumer is that the way in which he achieves higher 'utility' may change significantly as the target rises. Marshall recognised this in an important passage about the consumer:

Every step in his progress upwards increases the variety of his needs together with the variety in his methods of satisfying them. He desires not merely larger *quantities* of the things he has been accustomed to consume, but better qualities of those things; he desires a greater choice of things, and things that will satisfy new wants growing up in him. (Marshall, 1920, Book III, chapter II, section 1, para. 1)

Marshall's consumer becomes more subtle and varied in his consumption: 'As ... Man rises in civilisation, as his mind becomes developed ... his wants become rapidly more subtle and more various; and in the minor details of life he begins to desire change for the sake of change' (Marshall, 1920, III, II, 1, 2).

This is not simply an emergent demand for variety: Marshall's consumer becomes more social and conspicuous. Marshall is struck by the quotation from Senior, listed above. Despite this, Marshall's consumer is selective in those areas in which he seeks distinction. What starts as a demand to enable Marshall's consumer to take part in some 'higher activities' may in due course turn into a demand for more conspicuous purposes. Moreover, Marshall's consumer will not be satisfied with distinction alone. In due course he aspires to excellence for its own sake, even in private consumption: 'For, indeed, the desire for excellence for its own sake is almost as wide in its ranges as the lower desire for distinction' (Marshall, 1920, III, II, 4, 2).

Marshall anticipates Galbraith (1958) in arguing that, when consumption progresses beyond its simplest forms, the wants of Marshall's consumer are driven by his activities, and not vice versa: 'Each new step upwards is to be regarded as the development of new activities giving rise to new wants rather than of new wants giving rise to new activities' (Marshall, 1920, III, II, 4, 3).

This observation has methodological as well as substantive implications. Marshall uses it to explain why a more sophisticated analysis of consumption – which is not possible in the *Principles* – calls for prior developments in the analysis of production: 'Much that is of chief interest in the science of wants is borrowed from the science of efforts and activities' (Marshall, 1920, III, II, 4, 5).

Economists see this as a remarkable observation, because it anticipates the development of modern consumer theory. As Deaton and Muellbauer (1980) show, the modern neoclassical theory of demand has a very close

formal similarity to that of production. This similarity is further exploited in household production theory, developed by Becker (1991). In household production theory, the household manager(s) combine purchased goods and services together with household labour to provide services to members of the household. Becker's work on the family shows how this approach can be applied to a variety of household decisions, though his approach is not to everyone's taste.

Moreover, in quoting McCulloch's (1849) discussion of the progressive nature of mankind, Marshall comes closest to describing the consumer as an innovator:

The gratification of a want or a desire is merely a step to some new pursuit. In every stage of his progress he is destined to contrive and invent, to engage in new undertakings; and when these are accomplished to enter with fresh energy upon others. (Marshall, 1920, III, II, 4, 5, quoting from McCulloch, 1849, chapter II)

But having whetted our appetite by sketching this picture of the subtleties of consumer behaviour, Marshall then set it aside to concentrate on his rigorous economic analysis. In his own words, Marshall's treatment of demand in *Principles of Economics* was 'an elementary analysis of an almost purely formal kind' (Marshall, 1920, III, II, 4, 6). While Marshall perhaps thought that the rigorous analysis of this particular aspect of consumer behaviour might take no more than a few years, it did in fact take many people much longer than that. Whether this is a case of lock-in to an uninteresting special case, or an indication of the sheer difficulty of developing theory in even this simple case, is hard to say. But it was only really in the 1970s that economics started in earnest to move back to (what economists would consider) rigorous analysis of some of the other facets of Marshall's behaviour.

One of the influences was the recognition in some of the macroeconomic studies of consumption⁹ that decent modelling of consumption required certain developments beyond core micro theory. Another was that some of the 'travellers' who had explored the development of theories of consumption in other social sciences had come home to the economics community, and their findings were starting to shake things up.

The travellers

A prophet is not without honour, but in his own country, and among his own kin, and in his own house. (Mark, 6:4)

Even some economists of distinction have spoken of a cool reception on their return from journeys to meet other social science disciplines. Scitovsky (1976), for example, explored what the psychology of human motivation could teach the economist about consumption behaviour. Drawing on Berlyne's (1960) research on motivation, he explored how psychological concepts of arousal, personality, the pursuit of novelty, comfort and pleasure can be harnessed to build a much more subtle economic understanding of

consumer behaviour. In the preface to his book, Scitovsky (1976) describes how his early ideas met with a uniform wave of hostility from economists: 'I was taken aback at first by such an unbroken string of negative reactions, but then took comfort in its fitting in so well with one of the main points I make here: that man wants novelty but cannot take, and gets disturbed by, too much of it.'

The economists seemed to consider that it was not their business to probe into the determinants of consumer tastes. Instead, it was enough to assume that these existed and that the consumer made rational, maximising choices consistent with those tastes. The fruits of Scitovsky's travels are very interesting, and have led to a stream of research that could best be described as an economic psychology of consumer behaviour – see, for example, the discussions in Furnham and Lewis (1986) and Bianchi (1998).

Another influential 'traveller' was Galbraith. While he has been one of the most influential economists in the wider world, his work has not always been met with enthusiasm by his professional colleagues. But Galbraith has been a traveller to the real world, holding major US government positions and acting as Kennedy's ambassador to India. In *The Affluent Society* Galbraith (1958, pp. 152–3) takes a very sceptical view of the preoccupation with productivity growth: 'As a society becomes increasingly affluent, wants are increasingly created by the process by which they are satisfied.'

Galbraith calls this a *dependence effect*, and notes that if production creates the wants it seeks to satisfy then it is unclear that welfare is higher at a greater level of production: it could just be the same. Galbraith notes that the businessman and lay reader may be puzzled over his continual emphasis on what may, to them, seem an obvious point. But it does not sit easily with the notion of fixed tastes, and the role of economic growth in satisfying such fixed tastes.

Lewis (1955), one of the great development economists, could also be described as a 'traveller'. He brought back to economics a deeper and richer understanding of the role of consumption in different societies. It is interesting that development economics has perhaps been the area of economics most closely connected with the work of other disciplines, notably anthropology. And, finally, Earl (1986, 1988a, b) provides a compelling account of lifestyle economics, gathered by working at the interface of economics and marketing.

It is interesting to find that some travellers from outside economics have been treated with reverence within the economics community. As noted above, Mary Douglas has left an important legacy in economic thought on consumption, and has written of how positively she felt about these travels (in Douglas and Isherwood, 1980).

The revival

The previous section was about the contributions made by travellers who on their return have remained outside the mainstream of economic analysis of

consumption. This section picks up some of the subsequent contributions in this vein from authors who are still essentially part of the mainstream. What follows is no more than a small and rather idiosyncratic selection drawing heavily on earlier (joint) surveys by this author: Cowan *et al.* (1997, 1998), Swann (1999).

The papers collected in Becker (1996) show how far one of the leading economists in this field has moved beyond the narrow modern mainstream of section one. Half his papers in that collection are concerned with personal consumption capital, or routine and habit; the rest are concerned with social capital, or consumption as a social activity. The former describe a theory of rational addiction, and an analysis of the effect of price on consumption when there is rational addiction. The latter provide an economic theory of social interactions, of social influences on price, and of how social norms shape preferences.

Cowan *et al.* (1997, 1998) in the same way organise the recent literature into two parts: the effects of a consumer's own consumption history on his or her current consumption; and the effects of the consumption patterns of peers and rivals. This mirrors the distinction made by Becker (1996) between the roles of personal capital and social capital in shaping tastes in consumption.

The consumer's past consumption history

The central idea here is the obvious one that a consumer's history can create inertia in consumption patterns. One of the post-war pioneers, Duesenberry (1949), recognised that when incomes fall, families don't necessarily cut consumption right away, but run savings down to maintain the standard of consumption to which they have become accustomed. This basic observation has been variously interpreted as inertia or habit formation.

Brown (1952) modelled habit formation in demand behaviour as a positive autoregressive component in a traditional demand model. Friedman's (1957) concept of permanent income can also be seen in this tradition. Several of the more important subsequent contributions on the endogeneity of preferences have taken a similar perspective: for example, Becker and Murphy (1988), Donckner and Feichtinger (1993), Feichtinger *et al.* (1995), Gorman (1967), Gintis (1974), Pollak (1970), Weizacker (1971).

By contrast, some areas of economic theory explicitly recognise the individual consumer's demand for variety (for example, Dasgupta and Stiglitz, 1980). While the origin of the demand for diversity is not developed in detail, it has sometimes been interpreted in the current context as a desire on the part of the consumer to differentiate her current consumption pattern from her past.

Finally, the papers in Bianchi (1998) explore the active consumer: this is really the counterpart in consumption to the innovator in production. The active consumer does not rely on the producer to create new products and services to satisfy his or her desire for variety and novelty. Rather, the active consumer plays an important part in creating his or her own innovations,

whether by 'journeys into the unknown' or by creating valuable collections from items of low individual value.

Most of the literature in this tradition has focused on microeconomic results, with less concern on detailed macroeconomic consequences (and especially dynamic consequences), that follow from them.

Consumption patterns of peers and rivals

The consumer of mainstream theory was an asocial hermit. Such an individual doesn't really need to signal to others. But not all economic thinking has seen the consumer that way. Veblen's (1899) theory of conspicuous consumption saw consumption as an activity undertaken to transmit a signal rather than simply to satisfy needs. Conspicuous consumption requires that individuals indulge in consumption activities recognised by their peers. But it also requires that they distinguish their consumption from that of ordinary people. And, indeed, it is not enough that consumption simply imitates that of the peer group: there must be imitation and innovation, so that the individual occupies a distinct place in the group. Several more recent contributions have re-examined this basic idea: Liebenstein (1950), Mason (1981), Earl (1986), Bagwell and Bernheim (1996) and Ireland (1994).

Kirman (1997) and Durlauf (1997) have reviewed recent economic literature on direct interaction between different economic 'agents'. Much of the literature is not focused exclusively on consumption as such, but is broader and more abstract in conception. But the same basic ideas surface, namely that non-market interactions can affect the utilities (or productivities) of 'agents'. Some important contributions are by Durlauf (1993), Kirman (1993), An and Kiefer (1995), Cowan and Cowan (1998) and Cowan *et al.* (1998).

A recent strand in the economics literature on conformity and conventions has revisited the phenomenon of 'fad' behaviour – Banerjee (1992), Bernheim (1994), Corneo and Jeanne (1999), Young (1993).¹⁰ Other contributions to the economic analysis of fashion cycles include Bikhchandani *et al.* (1992), Coelho and McClure (1993) and Pesendorfer (1995). Much of this work, admittedly, has focused essentially on equilibria, and has much less to say about dynamics. Much of the literature, moreover, focuses on information contagion: fads and imitation take place because private information is considered inadequate for decision making. Cowan *et al.* (1998) move beyond this by studying situations in which surges and waves in behaviour arise even if all consumers have good information about the properties of the good.

The literature on *de facto* standards makes a very explicit recognition of how one consumer's choice depends on the past and expected future choices of others – see Arthur (1989), David (1985), Farrell and Saloner (1985), Cowan (1991). The concept of network externalities (Katz and Shapiro, 1985) is of central importance in this context. As Farrell and Saloner put it, standards emerge because there are economies of scale in joint consumption. This was also recognised by Gaertner (1974). But in general this literature has a very simple concept of externality: the externality is positive, and

applies equally to all members of the economy. Put another way, there are only (positive) peer effects, and every agent is the peer of every other. Two papers that advance beyond this simple assumption are Cowan and Cowan (1998) and David *et al.* (1998). Akerlof (1997) has made an unusual and very welcome attempt to link ethnographic studies and interpretations of peer effects with some of these theories.

This is no more than a selection. Indeed, a scan of many of the major journals in mainstream economics in the last few years would show just how much energy has gone into developing an economic theory of the consumer that goes well beyond the hard core described in section two. Even if the casual observer restricts his or her attention to the absolute mainstream, it is simply no longer tenable to say that *there is nothing more to the economics of consumption than utility maximisation*.

Conclusion: the future?

The last section should convince the reader that, at the beginning of the new century, there is certainly more to the economics of consumption than utility maximisation. There always was, though it has to be conceded that the preoccupation with econometric methods and revealed preference until the 1980s meant that economics was slow to revisit some of the subtleties of Marshall's consumer. But thanks in some degree to the travellers, who visited other disciplines and brought back rather richer insights into consumer behaviour, the last ten to twenty years have seen a proliferation of studies that recognise the endogeneity of tastes, strong interdependence in consumption patterns, and the many constraints on consumption behaviour (private and social) which limit consumer choice.

Any wild guesses about the future of the economics of consumption would be unwise. However, let us venture one speculation. There is growing interest in some parts of economics in agent-based simulation modelling. That is, where each consumer's behaviour is modelled at an individual level, and a simulation model collects all these virtual consumers together and allows them to interact. This moves away from the representative consumer described above to recognise, and indeed to celebrate consumer diversity.

Farrell (1998) describes applications of agent-based modelling to a variety of consumer behaviour. One application is to modelling record-buying behaviour. The simulation model has some 50,000 imaginary fad-following record buyers inside it. The behaviour patterns of these virtual people are based on real data collected by a market research company from record shops and radio stations. More generally, Epstein and Axtell (1996) and Epstein *et al.* (1999) use agent-based models to study emergent economic behaviour.

One very exciting possibility arriving from outside economics is the scope to use virtual reality technologies to present 'lifelike' representations of the outputs from the agent-based simulations. Thus, for example, Thalmann and

Thalmann (1999) have created a ‘virtual reality’ representation of crowd behaviour, where the behaviour of each individual in the crowd, and how s/he interacts with the others, is modelled separately. Ten years ago, simulation was unpopular in the mainstream of economics, though more widely used by evolutionary economists and in the economics of innovation. That is changing, and some exciting possibilities exist if economists can harness the potential of virtual reality and other visualisation technologies to illuminate their simulations.

Acknowledgement

This chapter reflects my work with Robin Cowan on ‘new’ models of consumption, but he is not responsible for any infelicities here. The word ‘almost’ is inserted in the title because, of course, completely unconstrained utility maximisation is meaningless.

Notes

- 1 The irony is intentional: aggregation is not a trivial matter. The aggregate of different consumer behaviours will look like the behaviour of a single representative consumer only under very strong assumptions. It seems more promising to seek to represent aggregate consumption by a *set* of representative consumers (Swann and Tavakoli, 1994).
- 2 Deaton (1988) gives a summary of other more recent work in this tradition.
- 3 Duesenberry (1960, p. 233), here quoted from Becker (1996, p. 17).
- 4 Indeed, they thought it essential that theory and applied work must progress in tandem, but from the 1950s and (especially) 1960s a major split appeared between theory and applied work.
- 5 The selection here has a rather European bias. Langlois (2001) also explores the important contribution of the American economist Wesley Mitchell, among others.
- 6 Here quoted from Marshall (1920, Book III, chapter II, section 1, para. 4).
- 7 Here quoted from Jevons (1871, p. 103).
- 8 The discussion of Marshall draws on a more detailed article by the present author (Swann, 1999).
- 9 Notably Friedman (1957), Duesenberry (1949) and Liebenstein (1950).
- 10 This has something in common with the work of Granovetter and Soong (1986) from sociology and Miller *et al.* (1993) from marketing.

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4

Variety, growth and demand

Pier Paolo Saviotti

Modern economies contain a large number of entities (products, services, methods of production, competences, individual and organisational actors, institutions), which are qualitatively novel and different with respect to those existing in previous economic systems. In other words, the composition of the economic system has changed enormously during economic development. The observation that there has been a great deal of qualitative change in economic development would probably not be denied by any economist. Where, however, there would be differences is about the role of qualitative change. In order to facilitate the discussion two extreme hypotheses can be introduced: first, qualitative change is an accidental by-product of economic development; second, qualitative change is an essential component of economic development. The first hypothesis is the one implicitly present in most economic growth models, where qualitative change is not denied, but it can be accepted only *ex post*. The second hypothesis is central to a Schumpeterian approach, in which radical innovations change the nature of the economic system and allow the long-term continuation of economic development.

In some previous papers by this author it was argued that the concept of variety is crucial in order to overcome the gap between modelling without qualitative change and more descriptive approaches which can encompass this phenomenon (Saviotti, 1994, 1996). The most important considerations about variety contained in those papers are summarised in the following section. The main objective of this chapter, however, is the analysis of the implications of variety for demand. However, demand is seen here not on its own but as one of the components of economic development. As it will be pointed out in the section after next, one of the possible bottlenecks in economic development is constituted by the imbalance between productivity growth and demand growth within given sectors. A way to overcome such a bottleneck is represented by the emergence of new sectors, providing compensation for the displacements caused by the imbalance in existing sectors. Long-term economic development and growth then depend on the ability of the economic system to create the new goods and services leading to new sectors.

Yet such new goods/services must be purchased by consumers if they are to contribute to economic development. The dynamics of development of demand is thus a fundamental determinant of economic development.

The role of variety in economic development

Qualitative change is here represented by variety, defined as ‘the number of actors, activities and objects necessary to characterise the economic system’. Such a definition, while not being perfect, captures the essential features of qualitative change and can be the basis of quantitative and analytical treatments of economic development. The relationship between qualitative change and economic development is based on two hypotheses:

- 1 The growth in variety is a necessary requirement for long-term economic development.
- 2 Variety growth, leading to new sectors, and productivity growth in existing sectors, are complementary and not independent aspects of economic development.

These have to be considered very strong working hypotheses, having a considerable empirical and theoretical support, but not yet definitively proved. Furthermore, these hypotheses can be valid in the long run and at sufficiently high levels of aggregation, for example that of a national economy.

The justification for these hypotheses comes mainly from Pasinetti’s work (1981, 1993). The bottleneck created by the imbalance between demand saturation and continuous productivity growth in existing sectors can be compensated for by the emergence of new sectors. On the other hand, the resources required to perform search activities and thus to create new sectors can come only from productivity improvements in existing sectors. In this sense the complementarity between variety growth and productivity growth in existing sectors bears a considerable similarity to that between productivity growth in agriculture and investment in the new industries during the process of industrialisation (see Kuznets, 1965; Landes, 1998). Further support for the role of variety in economic development comes from Romer’s models (1987, 1990) that include a growth in the number of capital goods among the consequences of innovation.

Variety and demand

If the overall variety of the economic system has to increase in the course of time then not only have entrepreneurs and producers to create new goods/services but consumers and user must buy them. The net variety of the economic system, that is, the variety that survives the process of selection, is constituted by the goods/services that are produced and consumed. Furthermore, as it will be seen later, goods/services created by an innovation go through a life cycle during which they are improved and can appeal to a

growth market. Thus, demand is involved in an essential way in the long-term growth of variety.

The consumer as an innovator

The qualitative change taking place in economic development creates new goods/services. Consumers have available a much wider range of these than was the case in previous economies. The demand theory that is normally presented in textbooks can deduce the behaviour that follows from a given set of preferences. Preference formation is not considered a legitimate subject of analysis for economics, but it is left to other disciplines in the social sciences. Such an approach would be perfectly adequate if consumers did not change. However, if we are concerned with long-term economic development the assumption of static consumers is inadequate. As Georgescu-Roegen (1954) remarked a long time ago, 'man is a continuously changing structure'. Unless we assume that they were already present in humankind before objects of consumption came into existence, wants and preferences have to be formed during the process of economic development.

The problem of wants and preference formation becomes particularly urgent, if, as Schumpeter tells us, radical innovations are essential to the long-term continuation of economic development. In fact we can argue that the more radical an innovation is, the less predictable its properties and uses are. Neither consumers and users on the one hand, nor producers on the other, can always estimate what goods/services will be demanded. Perhaps the most spectacular example of failure to estimate demand occurred in the case of mainframe computers, the total demand for which in both the United States and the United Kingdom was assessed at four or five machines, to be greatly outperformed by real demand. This was not just a failure by producers or marketing experts to estimate a demand which was clearly there, but a case in which the demand itself was not formed because the potential users did not know about the properties of the object they were later to demand. In general, we can assume that the mental categories required to understand the properties of a good or service and the ways in which it can be used are not there before the good or service is created. Therefore, wants and preferences will be created gradually during the life cycle of a good or service, and the mechanisms of their formation are a problem at least as interesting as the behaviour that can be deduced from them, if we are interested in long-term economic development. (On this point see also Teubal, 1979; Teubal *et al.*, 1991, 1994.)

Aversi *et al.* (1999) summarise the considerable evidence that preferences are constructed through the very process of deliberation (p. 362) and that their construction corresponds to a satisficing inferential machinery (p. 362). Moreover, habits and routines coexist with deliberative decision processes (p. 363). In general we can say that demand theory may require a number of modifications if our main emphasis is on long-term behaviour. We can

imagine preferences to be an internal ranking order based on the individual's past consumption activity. The process of choice can then be described as the encounter of an object of consumption followed by the comparison of the object with the internal ranking order and by the decision whether to purchase and what level of resources to allocate. In this context an object of consumption can be a good or a service and the encounter with it consists of information about the object and its properties. The theory of demand usually found in economics textbooks amounts to considering that the internal ranking order is given *ex ante* and that it is sufficiently accurate to allow an unambiguous allocation of resources to different objects of consumption. Such a perspective may be entirely adequate if the choice is to be made among a set of objects of consumption which are known and for which individuals have a definite ranking order. The same perspective becomes insufficient if the problem to be analysed is long-term economic development, in the course of which entirely new and unpredictable new objects of consumption emerge.

Thus the consumer cannot be considered constant and invariant with respect to economic development. On the contrary, we need to consider the consumer as an innovator (Earl, 1986), although the meaning of the word will be somewhat different here with respect to that customarily used in innovation studies. The consumer is an innovator when he/she encounters a new object of consumption of which he/she has only incomplete or no knowledge. The process of consumption has to be preceded by a period of learning about the properties of the new object. At the beginning of the life cycle of a completely new product a consumer cannot easily understand its properties and the contribution that it can make to his/her utility. The process of learning is gradual, and at the beginning it is generally stimulated by the initiative of the producers and by the example of other consumers. Adopting a terminology used in innovation studies, the consumer needs to acquire an *absorption capacity* (Cohen and Levinthal, 1989, 1990) for the new object.

Consumers endowed with an absorption capacity are able to evaluate the properties of the new object and its contribution to their utility. Alternatively, we can say that the consumer must have a knowledge base sufficiently developed in the fields underlying the new object. For example, the use of computers requires a minimum level of knowledge in information technology and the use of photographic cameras knowledge of the principles of photography. Of course, this means that the human capital of consumers must continuously increase in order to be able to incorporate the knowledge base required for the consumption of the new objects. The new preferences created through this process of learning are not immediately accurate, but they are fuzzy. That is, if the same consumer were to be faced with the choice of the same object twice he/she would not necessarily repeat the same choice. In other words, the greater the degree of novelty of the new object of consumption, the greater the uncertainty involved in its choice. One way in which this uncertainty can be reduced

is by observing the behaviour of other consumers and by imitating them. Imitative behaviour has two consequences: it reduces the uncertainty involved in the choice and it enhances the convergence among the choices of different consumers. We can then expect the internal ranking order of different consumers to become more accurate as a consequence of imitative behaviour. The ranking orders of different consumers will thus be interdependent, particularly if consumers share the same culture (Georgescu-Roegen, 1954, p. 517).

The interdependence of the preferences and of the utility functions of different consumers does not imply complete convergence of their preferences and wants. One of the most common trends observed in consumption is the growing differentiation, or even individualisation, of consumers' choices as their income grows. Thus we have to acknowledge that as new objects of consumption are created there are forces leading both to the convergence and to the divergence of individual ranking orders.

The previous considerations imply that the creation of a radical innovation cannot be stimulated by existing demand. If preferences cannot pre-exist objects of consumption, consumers cannot have a demand for goods or services that do not exist and of which in some cases they do not even imagine the existence. It is then the role of producers to imagine some potential demand and to create an innovation that can satisfy it. Since consumers may not have the ability to evaluate the new innovation, it is also the role of producers to 'educate' them, that is, to supply consumers with enough knowledge for them to be able to evaluate the new object of consumption. Yet producers themselves do not have a very sophisticated knowledge of the user environment of the innovation. They themselves are learning in the process of producing and subsequently modifying the new object of consumption. In other words, during the life cycle of a good or service a gradual process of learning takes place both on the producer's and on the consumer's side. During this process demand as we know it is created. Producers learn how to produce goods or services better adapted to consumer requirements and consumers improve their ability to use the new good or service. In general we can then expect the initiative for the creation of a radical innovation to be taken by producers and demand to become progressively more important as the innovation matures. Schumpeter was then right in predicting that producers would have to 'educate' consumers to use new goods/services, but the role of demand becomes gradually more important as the goods/services mature, thus confirming Schmookler's ideas about innovation. This pattern of a gradual shift of importance away from the supply side and towards the demand side was confirmed by Walsh (1984) for the synthetic materials industry.

A hierarchical theory of wants and preferences

A hierarchical theory of wants has been discussed by several among the leading neoclassical economists, such as Walras (1896), Jevons (1924), Marshall (1949), but it has received its most explicit and detailed treatment in the

work of Menger (1950). Such theory implies that wants can be ranked in order of absolute importance, with the most basic wants at the bottom of the list (lower wants) and with the most sophisticated (higher wants) at the top. For example, the uses of corn for an isolated farmer can be ranked in order of importance (Menger, 1950, p. 129): food, seed for next season, alcoholic beverages, fodder, rearing parrots. Of course, we expect that the list of wants of the average individual will grow longer as his/her income rises during economic development. In this sense we can imagine preferences to be a pre-established ranking order that consumers apply to any choice they make. For example, when they have to choose between two goods they compare the goods with the ranking order and allocate to them a corresponding share of their income. A problem arises when a new good is encountered. Then the ranking order has to be modified to include the new good. The problem would be relatively simple if all new goods/services corresponded to higher wants, that is, if they had to be added 'on top' of the existing ones. However, we cannot expect the actual ranking order of goods/services to be the same for all individuals. Like other types of economic agents, consumers are heterogeneous. Furthermore, we can expect that as income per head rises individual consumption will become more and more differentiated, giving rise to a diversity of consumer's choices, thus increasing their heterogeneity.

Even though this diversity will be limited by imitation, and even though the wants of individuals will tend to converge more if they live within the same culture than in different ones (Georgescu-Roegen, 1954, p. 517), we cannot assume that at higher levels of economic development the order of wants will be the same for all individuals. Second, if mechanisms of demand formation show increasing returns to adoption, demand development is likely to show path dependence (Arthur, 1989). Thus an initial choice of some wants, however 'rational', may lead to a non-uniform demand development path. Moreover, another form of path dependence may be induced by past patterns of consumption. If the goods/services that were consumed in the past increase differentially the probability of consumption of some present goods, then a form of path dependence which originated in the past can be extended to the future (David, 1985). In summary, and remembering that these are preliminary considerations, we can point to the non-uniformity of the ranking order of wants at high levels of economic development. A number of other implications for demand theory follow from the hypotheses on growing variety.

A hierarchical theory of wants and preferences can be translated into an analytical treatment by means of the concept of *critical income*. Critical income is defined (Bonus, 1973) as the minimum income level that a consumer would need to purchase a given good. There will be a critical income associated with each type of differentiated good or service and the value of the critical income can be expected to increase as we move away from basic goods or services and towards higher levels on the hierarchical scale. Thus international travel, photography or theatre are likely to correspond to

higher values of critical income than housing or food. However, we can also expect that while everyone consumes food not everyone will rank theatre or photography equally high, even at equivalent income per head. As income per head grows we can expect the hierarchical scale to become progressively more uncertain: the ranking order of different consumers will differ more the higher the hierarchical level. In other words, the higher the level of the want, the higher the uncertainty attached to it, this uncertainty being a measure of consumer heterogeneity.

Other types of barriers to consumption exist in addition to critical income. As will be pointed out later, consumers need to have a minimum level of knowledge and hence of human capital in order to understand the properties of a new object of consumption. Furthermore, the new good or service needs to have a minimum level of efficiency in order to attract consumers. In this chapter efficiency will be represented by fitness, that is, by the ability of the good or service to adapt to its intended user environment. Consumers will then need to have at least the critical value of human capital, and the new object of consumption will need to have at least the critical value of fitness. Here it must be pointed out that the fitness of a particular good or service varies in different parts of characteristics space. If we take a good supplying particular services, measure the corresponding service characteristics (Saviotti and Metcalfe, 1984), the fitness of such goods can be very high in a small sub-set of characteristics space while being lower than average fitness everywhere else. For example, large jet aircraft will be the most suitable means of transport over distances of at least several hundred kilometres. For shorter distances, trains or buses constitute fitter means of transport. Likewise, the size of the sub-set of characteristics space in which a new good or service has a high fitness can increase in the course of time. At the beginning of their life cycle many new goods and services occupy a niche in which their fitness is sufficiently high to interest a small population of users/consumers. In the course of the life cycle of the good or service its properties improve and its price falls, thus increasing the size of the population of consumers that can use it. In other words, starting from the very small niche in which it begins, an innovation, by means of subsequent improvements, can appeal to a much larger population of consumers/users. (For a similar treatment of innovation diffusion see Metcalfe, 1988.) In this process what was initially a niche becomes a market.

Convergence and divergence in consumer choice

As previously pointed out, in general we can observe increasing differentiation in the outputs of the economy. The choice behaviour of consumers needs to become increasingly differentiated in order to support these trends. However, such increasing differentiation is the result of the balance between forces leading to convergence and to divergence in consumers' tastes and preferences. The nature of these forces will now be discussed.

Consumers' wants can be placed in a hierarchical order, with more basic wants occupying lower levels and more 'sophisticated' wants occupying gradually higher levels. It was also pointed out that the presence of basic wants was virtually universal, while the presence of higher wants is likely to show greater variation among consumers. Thus everyone needs some food while not everyone needs to be a classical music lover. We can then say that the degree of convergence among consumers' choices is likely to be greater for 'low' than for high levels of consumption. It must be pointed out that even for a low-level category of consumption, such as food, internal differentiation of the category can take place: although everyone consumes food, the kind of food consumed is becoming increasingly differentiated. Thus we need to distinguish between convergence of categories and convergence within categories of consumption.

What then are the forces leading to convergence of consumer choice? At low hierarchical levels strong physical constraints determine consumer behaviour. No one can remain without food or shelter. However, if consumer choices were purely individual these strong structural determinants of consumer behaviour would become gradually less important as we move up the hierarchical ladder. This corresponds to the observed increase of differentiation of consumer choice for higher hierarchical levels. Does this mean that at higher hierarchical levels the interdependence of consumers falls and that utility functions become purely individual? Hirsch's (1976) observation that in high-income societies poverty is relative gives us a clue here. Only if consumers observe other consumers' behaviour can poverty become relative. A consumer who has not yet adopted will then observe those who have already become adopters of a new good or service and try to imitate them. Imitative behaviour then becomes a powerful force leading to convergence in consumption. In fact not all consumers need to replicate the choices of those who have already become adopters. According to Cowan *et al.* (1997) consumers can attempt to imitate some groups and differentiate themselves sharply from others. Thus convergence is not necessarily general, but limited to particular social groups. In this sense imitation can be a force leading to both convergence and divergence: by imitating certain consumers one joins them and constitutes with them a group, but different groups are created when consumers differentiate themselves from others.

Another force leading to convergence is scale economies. A trade-off has to be reached between increasing variety and scale economies (Lancaster, 1975). However, the effect of scale economies is likely to fall both as we move towards higher income per head and as a result of the increasing flexibility of production methods.

We conclude the analysis of the forces leading to convergence by pointing out that although structural determinants leading to convergence are likely to be stronger at low hierarchical levels of consumption they are by no means absent at higher hierarchical levels. For example, purchases of cars or household appliances are not uniquely the result of individual choice but have to

do with the increasing distance travelled to work, a result of urban geography or of the increasing frequency of households where all adults work. Thus the forces leading to convergence of consumer choices will be a combination of structural constraints, scale economies and imitative behaviour.

Amongst the forces leading to divergence, the saturation of consumption is probably the most fundamental. Not only does marginal utility fall with increasing consumption, it can even become negative. Thus total utility would increase more by beginning to consume a new good or service than by increasing the quantity consumed of an existing one. Thus if consumers maximise their utility subject to constraints they are likely to differentiate their consumption gradually as their income per head grows. This increasing differentiation determined by the saturation of demand corresponds to a natural differentiation existing amongst consumers. In fact the limited differentiation in consumer choices that existed in the past could be attributed to the high costs of producing such very limited amounts of differentiation.

A population approach

In this chapter demand will be represented by means of a population of consumers. A particular consumer population will be created as a new object of consumption becomes available and as the first consumer starts purchasing it. After the population has been created it will have a dynamic, constituted by the entry of new consumers and by the exit of some existing consumers. As was previously pointed out, entry into a population of consumers will take place only after certain barriers have been overcome: the consumer needs to have income and human capital at least equal to the critical values required, and the new good or service needs to have reached a minimum level of efficiency or fitness. Once these barriers have been overcome entry will be determined by the excess of income, human capital and fitness with respect to their critical values and by the example of other consumers. However high the level of human capital of the consumer, it can never remove completely the uncertainty involved in the new good or service. Imitative behaviour considerably reduces the impact of uncertainty on decision making.

Exit from a consumer population occurs when a consumer stops purchasing the corresponding good or service. The most likely cause of that is the emergence of a newer good or service that has more attractive properties for the consumer. Of course, exit here means both the complete exit of a consumer or a reduction in the fraction of income that he/she allocates to the particular good or service. The dynamics of this population is described in a more analytical way in Saviotti (2000), to which the interested reader is referred.

Demand is seen here as a part of the process of economic development. A population of consumers is created when a new object of consumption is available and the first consumer starts purchasing it. Here we must take into account explicitly three populations: (1) the population of the new good or service, constituted by the distribution of the differentiated product models in

characteristics space; (2) the population of firms producing such product models; (3) the population of consumers consuming these product models. Of course, these three populations are interacting. The dynamics of demand then interacts with that of the creation of new goods and services. The innovation constituted by a new good or service is introduced owing to a combination of the saturation of existing populations and to a number of positive inducements to the creation of a new population.

As pointed out by Andersen (1999), when using railways as a prototype of the introduction of a wide-ranging innovation, Schumpeter maintained that such innovation at the beginning of its life cycle would exert powerful inducements on entrepreneurs to enter its production, but it would eventually lose this initial momentum and be transformed into a routine of the economic system. In this chapter, two types of factors slow down and in the end completely eliminate the inducement for producers to enter a given population. First, as more and more firms imitate the initial entrepreneur(s) who created the new population, the *intensity of competition* increases. If we remember that the expectation of a temporary monopoly was a very important inducement for entrepreneurs to create an innovation (Schumpeter, 1934), we will realise that the gradual erosion of this temporary monopoly, leading the sector created by the innovation to become a more routine part of the economic system, reduces the inducements for imitators to enter and may induce incumbent firms to exit. Of course, the increasing intensity of competition is likely to reduce profit margins to the levels that are enjoyed in the routine sectors of the economy. Second, a similar effect is created by the gradual *saturation of demand*. When all possible consumers have purchased one unit of the new good or service, sales do not become merely repeat sales, owing to the possibility of qualitative improvements of the good or service itself, so further inducements to enter can be expected to disappear and inducements to emerge for incumbents to exit. Thus the combination of increasing intensity of competition and of the saturation of demand gradually slows down the rate of entry and may even lead to a net rate of exit during certain phases of the life cycle of a good or service.

In order to lead to growing overall variety in the production system innovations need to create new populations of goods and services together with the related populations of producers and of consumers. Negative inducements to enter existing populations need to be coupled with positive inducements to create niches in which innovations can begin their diffusion process. Whether such a niche subsequently becomes a market and what size the market will be depend on the range of performance of the new good or service and on its rate of improvement. Rapidly falling costs and prices and improving performance will substantially widen the population of consumers that can purchase the good or service and hence its market.

The process of creation of new populations of good and services interacts with that of creation of their producers and consumers. In particular, as far as the present discussion is concerned, the population of a new good or service

would never emerge and develop unless a population of consumers was ready to purchase it. The size and properties of the two populations are likely to change interactively in the course of time. If the properties of the new good or service improve and its price falls more consumers are going to purchase it. On the other hand the rate of increase of demand is likely to exert a powerful influence on the investment and entry decisions of producers.

In summary, in this chapter we have emphasised the dynamics of a population of consumers. Such dynamics interact with that of the population of the new good or service and of its producers. The interaction can be represented in the form of a life cycle in which an innovation after creating a niche gradually evolves into a market, thus becoming an additional routine element of the economic system.

On the conditions for variety growth

In order for the overall variety of the system to increase at least a part of the new goods/services created by innovators must survive together with the pre-existing goods/services. Alternatively, not all the new goods/services must be functional substitutes for existing goods/services. The conditions for variety growth are then the conditions for the coexistence of new and existing goods/services. This problem demands an analytical solution, which is beyond the scope of this chapter. Such an analytical solution is provided in Saviotti (2000). In what follows we give a qualitative representation of it.

We can concentrate on two populations of goods/services, an old one (Old) and a new one (New). First, we can apply to these populations a general result that can be obtained by means of the so-called Lotka–Volterra equation (Saviotti, 2000; Saviotti and Mani, 1995). Coexistence will be possible if the intensity of competition within each of the two populations (intra-group competition) is higher than the intensity of competition between them (inter-group competition). Such a general result is applicable to any type of population constituted by potentially competing ‘species’. It is, however, possible to translate this result into a form related to the specific nature of the populations of goods/services that we are considering. We can expect the decision of a consumer to add a new good/service to those that he/she is already consuming or to substitute an old good/service with a new one to be determined by the relative fitness of Old and of New. Yet we can demonstrate analytically that even if New has a higher fitness than Old, consumers will not necessarily discard Old for New. Two variables determine whether, when New is superior to Old, consumers adopt New and discard Old (exclusion) or whether, while adopting New, they continue to buy Old (coexistence). The two variables represent the extent of differentiation of New with respect to Old and the knowledge that consumers have of New. The more differentiated New is with respect to Old, the less likely that they are going to be substitutes. Consumers would discard Old in favour of New if they were perfect substitutes, but could purchase both of them if they were different. Second, even if

New were a very close and superior substitute for Old, if consumers did not understand fully the properties of New they could, at least for a while, keep purchasing Old while adopting New.

These results can be summarised in the following way. Variety growth requires the coexistence of New and Old. Such coexistence can take place if two conditions are satisfied:

- 1 Old and new are not substitutable but are different goods/services.
- 2 Consumers have a limited knowledge of the properties of New and cannot decide whether to purchase it.

Thus differentiation of new goods/services with respect to existing ones and a degree of ignorance about the properties of new goods/services are important factors contributing to the growth in the overall variety of the economic system. According to hypothesis 1 we can conclude that long-term economic development will be better served by differentiation and by a degree of consumer ignorance about the properties of an emerging good/service than by superior substitutes for old goods/services of which consumers know accurately all the properties.

The more general result stating that intra-group competition must be greater than inter-group competition if variety is to grow has interesting implications. It is customarily assumed that a more competitive economy is likely to be more efficient. Yet this result tells us that the best conditions for economic development do not coincide with the maximum possible intensity of competition. In fact, prospects for long-term economic development are better if inter-group competition is less intense than intra-group competition. This condition can be interpreted as a relative 'blindness' of the incumbent firms producing Old to the competitive threat posed by New. This relative blindness reduces the barriers to the introduction of New in the early phases of its life cycle and facilitates the emergence of New as a stable economic species. Alternatively, the greater the differentiation of New with respect to Old the smaller the competitive threat that it will pose. We can then see that the dynamics of demand in the long run is intimately linked with the competition between new and old goods/services.

Summary and conclusions

The main objective of this chapter was to discuss the role of demand in variety growth and thus in long-term economic development. Variety grows owing to the introduction of new goods/services qualitatively different from those that preceded them. These new goods/services can contribute to variety growth if they are produced and consumed. A dynamic theory of demand compatible with the analysis of long-term economic development needs to take into account the formation of preferences and wants corresponding to the new goods/services. In this chapter the dynamics of demand is analysed by a combination of a hierarchical theory of demand and of a population

approach. Wants can be classified in a hierarchical order, with the most basic ones corresponding to lower levels and the more sophisticated ones to higher levels. In order to start purchasing a new good/service and thus to create a new population, consumers must overcome a number of barriers: they must have at least the critical income and the critical human capital corresponding to the new good/service, and the good/service itself must have at least the critical fitness.

The analytical treatment of the dynamics of consumer populations leads to the conclusion that variety is likely to grow if the new good/service is not a substitute for old ones but is different from them, and if consumers' knowledge of the properties of the new good/service is so limited as not to allow them to evaluate its contribution to their utility. Alternatively, variety can grow if the intensity of competition within each population of goods/services is higher than the intensity of competition between different populations.

We can then conclude that the analysis of demand is inseparable from that of economic development and that economic development itself proceeds more by creating a wider range of distinguishable types of goods/services whose properties are only imperfectly known by consumers at the beginning of their life cycle than by creating superior substitutes for existing goods/services about which consumers have perfect knowledge.

Acknowledgement

The considerations in the section entitled 'The role of variety in economic development' are a summary of previous papers (Saviotti, 1994, 1996).

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5

Preferences and novelty: a multidisciplinary perspective

Wilhelm Ruprecht

The literature on technological change and economic growth is implicitly biased towards the supply side. Research is mainly concerned with the question of how productive factors are accumulated. It matters less what companies produce or how they go about selling it. As Witt puts it:

a sustained growth of *per capita* consumption is explained by a continued relaxation of the budget constraint, i.e. by rising real income, explicitly or implicitly assuming that the demand for at least some of the consumption items on which the preference ordering is defined has not yet been satiated by current consumption or is not satiable in general. (Witt, 1998a, p. 2)

In economic consumer theory, novelty is broadly neglected. Even though there are time allocation models (e.g. Linder, 1970) explaining changing patterns of consumption in the context of increasing income, their focus is not on the adoption of new goods. The consumer has to maximise total utility across time. When income increases, substitution of time-intensive activities by less time-intensive activities occurs. The goods applied in these activities, however, are not made explicit – they may have already been on the market for a long time.

In the context of economic growth, the role of novelty in consumption comes into sharper focus when, as Saviotti (1996) does, you switch the perspective from micro to macro-economics: taking market satiation seriously, rising productivity leaves more and more resources unemployed. One of two ways to avoid macro-economic satiation is a vertical extension of the production chain. Facing productivity gains in existing production segments, the number of production processes cannot be stable if resources are fully employed. In addition to this vertical extension of the production chain leading to quality change, the number of production processes can also be increased by the introduction of novelties enlarging the range of consumer goods and services. Taking these considerations as a starting point, the question of how new goods are to be adopted might be considered a worthy issue for economic research. The widespread neglect of these questions in the

economic literature does not seem to be surprising, since they present rather large challenges to standard consumption and preference theory.

However, Kelvin Lancaster (1966) managed to fit the adoption of new consumer goods within a neoclassical framework. In the next section his approach is assessed and related to recent approaches addressing the same phenomenon from a behavioural economics perspective, allowing for preference change. While preference change no longer seems to be a non-issue for economists, the question for the biological foundations enabling and constraining preference change presumably still is. Starting from Witt's (1997a) contribution, in the following section I propose a Darwinian framework in which the objective features of preferences are highlighted. Two alternative views of how such a Darwinian perspective of preferences might look like are sketched.

Alternative adoption theories

A major problem of the standard economic model in approaching the adoption of new goods is its assumption of given preferences combined with the direct assignment of preferences to goods. Since new goods by definition are unknown and a preference for something unknown is implausible, at least one of these two features has to be sacrificed if the adoption issue is to be addressed. Because there is more than one theory of adoption in the social science literature, as we shall see below, I propose an analytical distinction going back to the economist Carl Menger to classify these approaches. While attempting to explain how user value comes into being, Menger enumerated the following prerequisites:

If a thing is to become a good, or in other words, if it is to acquire goods-character, all four of the following prerequisites must be simultaneously present:

- 1 A human need.
- 2 Such properties as render the thing capable of being brought into a causal connection with the satisfaction of this need.
- 3 Human knowledge of this causal connection.
- 4 Command of the thing sufficient to direct it to the satisfaction of the need (Menger, 1950, p. 52).

Just focusing on the conditions for adoption, Menger distinguishes four elements, the first three of which we consider as constitutive for adoption: motivation, the objective properties of the good, and cognition. Since the fourth criterion in market economies is a matter of income, which is provided by supply-side processes, we can neglect it here. Taking this catalogue as a classification tool, we discuss two different approaches to modelling the adoption of novelty.

The Lancasterian production analogy

Kelvin Lancaster (1966) makes some modifications of preference theory that allow him to apply the standard rational choice framework. Consequently, in accordance with a dogma later formulated by Stigler and Becker (1977), he presumes preferences to be given. Since direct assignment of preferences to new goods is not possible, he introduces the concept of ‘characteristics’, which he calls in an earlier version ‘satisfactions’. In doing so, he applies an analogy from production theory: goods are seen as inputs to a process in which satisfactions/characteristics are the outputs. There is a given, objective relationship between consumer items and wants described by the concept ‘consumption technology’. In a developed economy, the number of goods is much higher than the number of characteristics – meaning simply that one good can serve more than one want. In Lancaster’s terminology, a consumer good produces, by means of its consumption technology, a combination of characteristics in certain amounts.

How do preferences enter the picture? Lancaster argues, ‘The consumer is assumed to have a preference ordering over the set of all possible characteristics vectors, and his aim is to attain his most desired bundle of characteristics subject to the constraints of the situation’ (Lancaster, 1966, p. 14).

Thus, instead of goods, characteristics become the units of choice. In a two-dimensional characteristics space, consumers choose along an ‘efficient frontier’ which can be considered as identical for all individuals. Income changes can be conceived as scalar enlargements or reductions of this frontier. The relative distance of two goods to the origin is determined by their relative prices.

Because of the production analogy, the introduction of new goods by suppliers can now be modelled as process innovations affecting the relative prices of characteristics, that is, some characteristics have become cheaper and the efficiency frontier shifts to the outside. From the sub-set of efficient bundles of characteristics, the consumer chooses according to given preferences. The system has become fully determined.

In the Lancaster approach, adopting new goods appears as a matter of the objective criterion ‘efficiency superiority’ which is provided by the supply side. Novelty, here, refers to the connection between consumer items and needs, i.e. the second aspect in Menger’s list. In other words, consumption technologies can become more efficient. There is no cognitive problem involved in adoption. Thus a remarkable implication of Lancaster’s approach is that the concept of consumer sovereignty holds even within the context of novelty. However, since novelty by definition has to be something unknown, to constrain the perspective on efficiency changes, and to neglect the third criterion of Menger’s list, cognition seems inadequate.

Even if one accepts the existence of an objective relationship between goods and wants, the analogy between producers and consumers drawn by Lancaster appears to be a rather loose one. Lancaster does not answer the question why consumers in general can be modelled as optimisers. Within

the context of the theory of the firm, maximising behaviour is justified by the 'as if' argument (Friedman, 1953). Under the pressure of competition, any agent acting irrationally is selected out. Thus, although agents are not optimising consciously, due to the selection process, the outcomes look *ex post* as if the agents were optimisers. In the case of consumption, however, this logic certainly does not apply, since neither for natural nor for sexual selection can a plausible reason be found. So the idea of an efficiency frontier may be less adequate than in production theory.

In Lancaster's modified neoclassical approach, economics is the discipline dealing with the problem of scarcity. Such a position takes the concepts of given preferences, rational choice and the efficiency norm as its analytical centrepiece. Consumption theories following this tradition focus on the exchange activity rather than on the consumption activity itself. This feature may be explained historically by the fact that economic theory was influenced by mechanical physics (Mirowski, 1989). However, for the reasons outlined above, it is questionable whether a rational choice framework is apt to address the adoption of novelty, although rational choice theory is often assigned a constitutive meaning for economics. Witt (1996) presents an alternative perspective, in which economics is defined as a theory of social behaviour in the context of what are usually considered economic activities, e.g. consumption. This redefinition transfers the emphasis from methodological aspects to the research object itself.

Cognitive learning in consumption

To be able to address the issue of adoption, we now abandon the realm of choice theory and enter psychology. In contrast to economists, psychologists are used to dealing with changing valuations. Thus, rather than focusing on exchange processes, we now look at processes which may precede choice activities. Witt (1987b) and Woo (1992) – independently of each other – have chosen similar approaches in order to explain the adoption of novelty. Instead of sticking to rational choice theory, they allow for preference change. In so doing, they stress Menger's third aspect, i.e. cognition of the causal connection between consumption items and needs. The two approaches are in the 'behavioural economics' tradition (Earl, 1986) and are discussed simultaneously in this section because of their common features.

Their common starting point is the concept of bounded rationality developed by Simon. Because of cognitive restrictions of the human mind, attention is selectively directed. Since attention is a scarce resource, it is seen as having great economic relevance. The allocation of attention is not considered as a matter of conscious decision – this is exactly the reason why manipulation in the form of directing attention is possible and powerful: 'because it attacks the initial section of the causal chain leading to final consumer decisions, namely the deep basic source of value and preference formation' (Woo, 1992, p. 97). This implies that consumer behaviour cannot be regarded as sovereign.

The strict neoclassical separation between preferences on the one hand and knowledge or perceived behavioural opportunities on the other hand is abandoned (Witt, 1987b). The perception of opportunities itself is considered a problem: 'In forming her expectations and deciding what to do, a decision maker first faces the problem that the lists of what she might do, and of what might happen as a result of, or despite her choice, are not given but have to be constructed' (Earl, 1986, p. 9).

Consequently, Witt and Woo apply a model that stresses the co-evolution of valuations and the perceived behavioural opportunities. On the one hand, humans can value only what they perceive; on the other, they prefer to perceive what they already appreciate. In contrast to the routine concept applied by Nelson and Winter in the evolutionary theory of the firm that is equally based on bounded rationality, in this approach behavioural dynamics enters the picture.

Using the metaphor of a photographic lens, Witt (1987b) distinguishes two ways of how attention can be directed. The first way, *shifting* the whole focus of attention, for example by advertisements, has been already mentioned. That is what Witt calls the 'agenda-setting effect'. Because retrieval works sequentially, manipulation is more effective the more often advertising messages are repeated: 'the more memory is dominated by repetitive messages, the more chances these repetitions stand of being retrieved' (Woo, 1992, p. 97).

The second way to direct attention is to *sharpen* the focus of attention – by what Witt calls the 'refinement effect'. How the refinement effect works can be illustrated by Woo's considerations about information storage within the human brain. According to him, humans do not perceive bits of information but rather whole messages. Support for the holistic character of representations can be found in Gestalt theory (see e.g. Kosslyn, 1980). For adaptational advantages in the human evolutionary development, the storage of these messages is organised in a modular way instead of within a consistent single whole. These fragmented messages, he argues, are linked by associations in broader networks:

because our mental data are distributively deposited, the more concrete encounters and instances of the same theme we deposit into our memory, the more likely these materials will be organised into a wider network, accounting thereby for the sticky conceptions we develop for certain value themes. This explains why values related to life-styles, which are invariably formed over long periods, are at once deep and influential. (Woo, 1992, p. 88)

As a consequence of this organisation, it does not seem to be very far-fetched to attribute to the concept of value a holistic dimension: '[User] value ... can be conceived to consist in a conglomeration of objects of consumption that collectively constitute or define a life theme or life-style that an individual wants to participate in' (Woo, 1992, p. 85).¹ Clearly, there is a strong semantic aspect involved in this systemic organisation.

How the behaviourist approach contrasts with Lancaster's rational choice model may best be illustrated by comparing the concepts of 'intentionality'

and 'causality'. While Lancaster separates preferences from goods, and still assumes consumer ends to be given and explains behavioural changes as intentional reactions to shifts in restrictions or prices, Witt and Woo assume a path-dependent and co-evolutionary process of valuation and perceived behavioural opportunities. By abandoning choice theory, they apply an alternative possibility to address the adoption of new goods: preference change. Focusing explicitly on the way information is stored and retrieved not only helps to address the adoption of novelty. It may also shed some light on an issue that cannot be dealt easily with by the Lancaster model, namely the question of how the variety of goods making up an economy's structure increases. As described above, the Lancaster approach is essentially a story about one consumption technology replacing an objectively less efficient technology without any variety increase. This is because it fails to explain how new properties and relations between goods come into being. In contrast, the co-evolution model assumes a positive feedback relation between the first and the third aspect of Menger's list; the second aspect, objective functionality, is replaced by cognitive construction, allowing for the emergence of new properties.

Why these construction processes take place may be explained by regarding cognitive recombination activities as pleasure-generating: 'To consume is to learn to control and to produce novelty. To consume is also to enjoy the process' (Bianchi, 1997, p. 284; similar statements can be found in Levinsohn, 1977, and already in Gossen, 1854, p. 7). Collecting activities are telling examples of such a pleasure-generating production of novelty (Bianchi, 1997; Witt, 1998b). According to Bianchi, these activities are characterised by seriality (that is, 'the fact that the material or immaterial objects of the collection are organised in a recognisable whole') combined with openness of the collection set, allowing new cognitive connections to be subjectively constructed. The contrast with Menger's objective property criterion becomes evident when Troilo (1999) describes a condition preceding all collection activities: 'The object is generally divested of its functions and made relative to a subject.' Or, to put it differently, 'All the internal factors of a good, as well as its external interrelations with other goods, are decomposed, isolated and recomposed in different fashions' (Bianchi, 1997, p. 278).

How does the consumer select and enlarge the collection set? While the agenda-setting effect may help to explain selection, the refinement effect may be related to the recomposition processes. In this process, strictly functional properties may be less important than morals, peer pressure, rules of fashion or personal history (Bianchi, 1997, p. 279). Consequently it is possible to possess, for example, twelve different sewing machines or 200 different pairs of shoes without individual satiation taking place. The refinement effect allows the issue of increasing variety to be addressed at the level of the individual, since the holistic dimension typical of complements is taken into account. It is a subjectively constructed form of complementarity, and not a complementarity caused by objective functionality (as in the case of cars and fuel).

Considering postmodern consumption patterns, Bianchi's argument for collecting as a 'paradigmatic case in consumption' does not seem too far-fetched. 'Consumers may perceive themselves as marketable items and manage their images as perceived by others, both in the job and in the social environment' (van Raaj, 1993). Thus individual consumption patterns may be used as means to gain public attention not only by politicians and celebrities, for which the semantic dimension of consumption is obvious, but by the average person as well.

Normally it is the role of the consumer to detect and to expand the collection set. But the pleasure-generating features of collecting can be exploited by suppliers as well. The example of Swatch watches demonstrates that the collection sets do not necessarily have to consist of old items. Here the marketing executives have obviously understood both features constituting collection activities: openness is taken account of as well as seriality, since twice a year the range of models is slightly varied (Bianchi, 1997, p. 280). Though, in this case, the detection of the collection set is vicariously conducted by the supplier.

Objective features of preferences: a Darwinian perspective

In the neoclassical model we have a fixed preference ordering described by formal axioms. The material content of these preferences is not only unspecified, the relevance of such knowledge is even denied. Max Weber (1909, p. 388), for instance, completely denies the necessity of a psychological foundation of marginal utility theory, arguing that these axioms do not intend to give a realistic representation of human nature. According to him and others, the aim of economics is rather prediction by what, in Popperian terms, might be called 'situation analysis'. In a similar vein, we may understand the statement of one major representative of ordinal utility theory: 'Let others concern themselves with the nature, the essence of "value". I am interested only in seeing whether I can discover which regularities are presented by prices' (Pareto, cited in Lewin, 1996).

The unquestionable strength of the rational choice approach in situational analysis has to be balanced against a certain weakness: There are claims that neoclassical economics cannot fail to explain reality (e.g. Witt, 1987a), as it has a tendency to explain everything without excluding anything.

However, it is not only ordinal utility theory that lacks material hypotheses about the contents of preferences. It is equally true of the cognitive learning processes sketched above. This leads us to the issue of interaction between supply and demand in innovative consumption activities. The perspective that '*tabula rasa* consumers' are victims of manipulative suppliers pushing whatever products they wish is most prominently represented by Galbraith (1958). Other authors such as Callon (1987) stress the role of social power relations inhibiting technological developments. Smart advertisers, at least in principle, can gain influence through agenda setting.² Thus,

if agenda setting is taken into account, preference change seems to be a process which can be directed by external influences in an arbitrary way. However, if we allow for changing preferences it seems quite legitimate to ask whether there are limits to this preference change. If unlimited preference change were possible, and manipulation of preferences were to take place, the dynamics of technological knowledge could drive history in an arbitrary way.

Witt (1997a, 2000) takes a Darwinian perspective on this, considering biology to be the 'anti-discipline' of economics. Following Tietzel (1983), an anti-discipline explains the problems of another discipline equally well or even better than the discipline it refers to. However, there exists more than one way to relate biology to economics. In order to clarify the way in which a Darwinian perspective refers to biology, I briefly compare it with the analogical application of biology. For illustration purposes I take an example from the context of patterned evolution. Schlicht (1997) and Kubon-Gilke and Schlicht (1998) distinguish two sorts of evolution:³

The notion of *blind evolution* describes a combination of random variation and selection whereas the concept of *patterned variation* presumes regularities in the variation process as features inherent to evolutionary processes.

Schlicht mentions path dependence as the main cause of patterned variation in biology. Present genetic endowments are the base for future developments, i.e. the latter do not start from scratch. The phenomenon of path dependence can be observed in the evolution of artefacts as well. Some authors even strongly emphasise the analogy with biology by constructing a genealogy of artefacts (e.g. Fischer, 1998; Saviotti, 1996), suggesting that 'descent' also takes place. However, the underlying causes responsible for path dependence in the design of artefacts are different from those prevailing in biology. Firstly, in biology, the biparental principle of reproduction constrains change, whereas, in technology, conservative associative patterns can – but do not have to – provide path dependence. This allows the range of possibilities of variation to be much larger, at least in principle. Secondly, in contrast to genes, due to different storage possibilities, technological and design knowledge is less likely to become extinct: when a specific design does not sell any more, it can re-emerge 100 years later by imitation in a shape whose physical properties do not differ from those of the original. Therefore, path dependence can be interrupted at some stage and continue at another stage in history.

Recognising these differences, analogy-thinking does not seem to be a promising way to gain new insights into the directedness of human behaviour. As an alternative, a more direct application of biological thought is chosen by means of the homeomorphic approach coming from sociobiology. In recent years, sociobiology has triggered the idea of founding theories of social behaviour on natural sciences. To put it in Wilson's (1998) words: there is a pursuit of 'consilience'. A common starting point of sociobiological theorising is the

simple idea that the human species can be considered as a result of evolution. With this background, sociobiologists are convinced that the nature and content of preferences are scientifically analysable (Hirshleifer, 1977). This essentialist view, of course, challenges standard economics' position, according to which preferences are entirely subjective entities. In contrast to the notion of a subjective perspective on preference change, a Darwinian perspective focuses on super-individual features which may result from innate fixed properties of human behaviour. To put it differently: we want to avoid subjectivity and pursue hypotheses about the internal structure of humans which guide and constrain technological change.

A Darwinian perspective on consumption theory implies the application of the concept of natural selection. Thus it has to be chosen among the several potential units of selection. Neither the consumer himself/herself (as Miller, 1999, suggests) nor artefacts (as proposed by Fischer, 1998, or Eldredge, 1998) are seen as the unit of selection. As Witt (1997a, 2000) emphasises, it is *wants* which have evolved and been selected for during human phylogeny. Thus selection operates in a more indirect way on economic development:

The starting point for social evolution is ... provided by those patterned features of human behaviour, thinking and feeling that remain unaffected by processes of social evolution. The theory of social evolution, unlike the theory of biological evolution, can start with these givens. (Schlicht, 1997, p. 731)

In contrast to neoclassical theory, such an approach cannot be classified as having any *a priori* assumptions; biology explains the emergence of preferences. Therefore the consilience approach to evolutionary theorising shows features of self-referentiality: the preference apparatus generating or constraining economic change is itself a product of evolution.

Although we have sketched some general features characterising a Darwinian approach, it should be noticed that, so far, no fully fledged Darwinian theory has been developed. In the following section we compare two Darwinian approaches. The criteria of comparison are the following questions, which are strongly related to each other:

- 1 How does the selection mechanism affect economic development?
- 2 To what extent are preferences objective givens and to what extent a product of idiosyncratic learning processes? How do these approaches connect nature and nurture?
- 3 What may be the implications of such an objective perspective on preferences for empirical research? Can we expect to detect regularities and directions within long-term consumption patterns reflecting these objective features?

Innate wants and innate learning mechanisms

The way Witt (1997a) approaches the problem is connected with Menger's first category: wants and needs. It starts from a list of innate needs common to

human and non-human mammals: hunger, thirst, the need for sleep and maintenance of body temperature, etc. From nutrition science it is well known that information about certain food items (e.g. their sugar and fat content) is genetically coded (see Diedrichsen, 1990; Schneider and Schmalt, 1994; Pudel and Westenhöfer, 1998). Such items satisfying innate wants and needs motivate and reinforce behaviour. They can be called *unconditioned reinforcers*. Starting from these genetic endowments, additional wants can be learned by innate mechanisms. Items which appear regularly with unconditioned reinforcers can, after some time, get a positive valuation. However, when the pairing is interrupted, this valuation fades. Cognition is not considered at all – basically it is a behaviouristic model of operant conditioning that is supported by many laboratory experiments with mammals and non-mammals.

As a result, we have to distinguish between two different classes of wants: on the one hand, there are wants which are products of biological evolution and as such are part of the shared genetic heritage; on the other there are others which have been learned individually. There is no knowledge problem concerning the items' properties involved in this kind of learning process. From its theoretical outline, operant conditioning is compatible with the 'equipotentiality hypotheses of learning'. Since 'want learning' consists in an arbitrary pairing of a reinforcer with a neutral stimulus which is independent of the latter's quality, there are no contents more likely to be learned than others. Want learning follows individual conditioning history. However, by social reinforcement mechanisms working within families and small groups, a certain convergence in preferences among individuals may be achieved and transferred between generations. This mechanism is responsible for the emergence of culture, here understood as commonly shared preferences which are socially acquired.

The framework presented here offers an additional way to approach the novelty issue. Witt's sociobiological approach has the advantage of providing an essentialist explanation of what the contents of preferences are and how they come into being. Moreover, as with Lancaster, it is possible that an item can achieve several stimulus qualities in several dimensions, becoming paired with more than one reinforcer. To look at novelty as a new combination of stimuli unified in one consumption item is certainly different from conceiving novelty as an efficiency gain in consumption technology or as a result of cognitive refinement as discussed above.

What are the implications of this for empirical research? Witt (1997a) proposes an empirical research programme that focuses on the Darwinian innateness of wants and needs:

An inspection of long-term economic development can, however, help identify certain regularities which can be explained by evolutionary concepts as long as these are defined in a broader sense...The question that remains is whether, in spite of all the variance resulting from the individual influences, it can be argued that a general tendency can arise in the grand total of human choices in a way that is significant for characterising economic evolution and, if so, whether

such a tendency has something to do with the basic innate preferences of man.
(Witt, 1997a)

Does this theory give any clue for empirical research on whether – besides the immediate genetic level – we can expect some regularities of want learning? Are there any hints of a hierarchical relationship between reinforcers, as, for example, the famous Maslowian pyramid or Georgescu-Roegen's (1954) 'principle of subordination of wants' suggest?⁴

In operant conditioning theory the genetic level is limited to primary reinforcers and the random pairing procedure following the 'equipotentiality hypothesis of learning'. From these features, path dependence can be concluded but not any inter-culturally observable direction of preference learning. The order in which wants are acquired according to conditioning theory is entirely individual. Thus the question whether this synthesis of operant conditioning and a recombination approach could provide a case for patterned evolution seems to be an empirical one. A historical investigation of consumption attitudes applying catalogue series or inventories as sources which starts with the objective reinforcers common to all humans could reflect typical patterns of wants and want learning. This kind of investigation can show whether some recombinations may have higher frequencies than others over time. We conclude that conditioning theory as presented here may offer a starting point for empirical research designed to detect super-individual and inter-cultural tendencies in the evolution of wants. In principle, a phenomenological approach using the history of artefacts as a source seems to be a viable approach, though serious methodological questions would have to be solved.

Evolutionary psychology

Now we can abandon the narrow framework of operant conditioning. While, on the supply side, specific cognitive allowances of humans enable them to develop tools and to achieve technological progress, it seems strange that it should be entirely missing on the demand side. Otherwise, human consumption behaviour would be entirely equivalent to the consumption behaviour of other mammals. Conditioning theory, for this reason, should be supplemented by considerations of cognitively influenced behaviour. Thus we are back to Menger's third category. However, in contrast to the hypotheses of Witt and Woo presented above, in this section a Darwinian perspective on cognition is applied. Its basic idea, the overcoming of the equipotentiality of learning, allowing for any content, may be best understood when compared with the approaches of Witt and Woo presented above.

Although Woo has a modular idea about the architecture of the human mind, he does not consider content-specific storage of information. He rather applies what Tooby and Cosmides (1992) call the 'standard social science model'. In such a model the role of the architecture of the human mind is limited to embodying 'the capacity for culture. Human nature is

merely the indeterminate material that the social factor moulds and transforms' (Tooby and Cosmides, 1992, p. 28). Within the standard social science framework, unconstrained preference change as well as arbitrary manipulation of mental contents – resembling strongly Galbraith's critique of the concept of consumer sovereignty – are viable. Thus material hypotheses are not possible because material contents vary between the cultures according to their different socialisation.

Therefore I propose as an alternative the evolutionary psychologist's view of the human mind developed by Leda Cosmides and James Tooby, which is equally genetically based like the primary reinforcer concept presented in the previous section. The research object in evolutionary psychology is the human mind, which is considered to be the result of human phylogeny.⁵ Thus the cognitive modules are adaptations of the organism to its past environment. By means of genetic information, mental mechanisms are still connected with the shape and the problems of an earlier world.

Tooby and Cosmides consider the human mind not as a general-purpose mechanism of adaptation; it is assembled, made of many domain-specific mechanisms for specific problems like the search for food, social exchange, etc.⁶ This means that humans share some innate '*a priori* categories', such as capabilities for language acquisition. From their perspective, the mind is not a *tabula rasa* like in the Woo model; its modular architecture already contains pre-existing contents, the fundamental on which social learning can be built. Thus the focus of attention is neither exclusively on the genetic level, propagating a primitive determinism, nor on the cultural level. The power of this approach consists in the particular way nature and nurture are connected. It helps to deal with the 'subjectivity problem' (see e.g. Witt, 1989) by offering a causal explanation for mental representations of the world, which shape the expectations of economic agents.

This feature seems to be crucial to the design of an empirical research strategy. Tooby and Cosmides start from a statement about observed human behaviour which can be assumed to be broadly accepted among social scientists: 'observations of patterns of similarities and differences do not establish that the substance of human life is created by social learning' (Tooby and Cosmides, 1992, p. 117).

In place of the usual dichotomy of nature and nurture, they place three different notions of culture (1992, p. 121):

- 1 *Meta-culture*. Mechanisms are functionally organised to use cross-cultural regularities in the social and non-social environment; these give rise to pan-human mental contents and organisation.
- 2 *Evoked culture*. Alternatively, functionally organised, domain-specific mechanisms are triggered by local circumstances, leading to within-group similarities and between-group differences.
- 3 *Epidemiological culture*. Observers' inferential mechanisms construct representations similar to those present in others; domain-specific mechanisms

influence which representations spread through a population easily and which do not.

The general definition of culture connecting these three terms starts from the phenomenon instead of from the cause: 'culture refers ... to any mental, behavioural, or material commonalties shared across individuals, from those that are shared across the entire species down to the limiting case of those shared only by a dyad, regardless of why these commonalties exist' (Tooby and Cosmides, 1992, p. 117).

In order to design a research strategy to detect universal features restricting and underlying all human behaviour, this threefold concept of culture seems to be quite important. However, while it is intuitively plausible that commonalties between groups could be caused by either cultural or genetic factors, because of the evoked culture's context-dependence observed differences can be caused by both factors as well. Cosmides and Tooby exemplify these context-dependent decision rules in their explanation of empirical evidence on food-sharing practices in hunter-gatherer societies:⁷ under circumstances of high variance for individual foragers, a cognitive programme of wide food sharing is activated. This is individually functional, since it helps to avoid feast-or-famine cycles. Under low-variance conditions a switch to alternative sharing programmes takes place. In this light, an empirical research strategy based on the observation of inter-cultural commonalties and differences is doomed to failure.

A thorough understanding of how the selection mechanism affects economic development can improve the situation. Both metaculture and evoked culture have a genetic base which may constrain behavioural variation. This holds also for the approach presented in the last section. However, there it was unclear how learned wants might superpose the genetic ones in a direction-generating way. 'Epidemiological culture' may be a clearer case of patterned evolution, since it starts not from the variation process but from the diffusion process. In fact this perspective does not rule out that, in general, any kind of cognitive recombination is possible. But diffusion by social learning mechanisms seems to be more likely if it takes place along the lines of what can be cognitively reconstructed. A precondition for these reconstruction processes involved in social learning is something *a priori*, shared by the observer and the observed: 'if two individuals have not shared assumptions about the world, communication between them is impossible. If human minds truly were initially *tabula rasa* ... then no anthropologist or immigrant to a culture could learn about it' (Tooby and Cosmides, 1992, p. 208).

For this reason, it is more appropriate to talk about diffusion constraints than about constraints on variations. These prevent a new representation from raising its share within a population:

If a representation is easy to successfully reconstruct and is evaluated positively, then it will tend to spread through interindividual chains of inference, becoming widely shared. If it is difficult to reconstruct or evaluated as not valuable, it

will have only a restricted distribution or will disappear. (Tooby and Cosmides, 1992, p. 120)

Unlike institutional constraints or selection criteria in perception which are founded on individual learning and are variable, the reconstruction mechanisms Tooby and Cosmides have in mind are genetically fixed. Thus the way natural selection influences economic development is by affecting the reconstruction capabilities through enabling the reconstruction of certain contents while preventing the reconstruction of others.

Tooby and Cosmides consider these innate criteria to be the solution to the problem of adapting to the social environment. Without being endowed with these innate criteria, humans would not be able to predict their other humans' friendly or hostile behaviour:

this task of reconstruction would be unsolvable if the child did not come equipped with a rich battery of domain-specific inferential mechanisms, a faculty of social cognition, a large set of frames about humans and the world drawn from the common stock of human metaculture, and other specialised psychological adaptations designed to solve the problems involved in this task. (Tooby and Cosmides, 1992, p. 119)

In order to get an idea of these innate diffusion constraints, identification of the reconstruction criteria is necessary. At present, evolutionary psychology is a research programme rather than any sort of fully fledged stock of knowledge. To the author's knowledge, very little research has yet been conducted in this field. Thus, instead of results, evolutionary psychology's general empirical research strategy is sketched here. It can best be described by what Tooby and Cosmides call 'design experiments': 'If one knows what adaptive functions the human mind was designed to accomplish, one can make many educated guesses about what design features it should have, and can then design experiments to test for them.' The ambitious pursuit is a 'list of human universal preferences, and of the procedures by which additional preferences are acquired or reordered' (Cosmides and Tooby, 1994, p. 331).

Starting from adaptive problems in a Pleistocene environment which are assumed to be known, an engineering-like reconstruction process allows possible architectures to be designed. For their evaluation Tooby and Cosmides propose a two-step procedure:

- 1 The *solvability* analysis, in which 'the researcher asks whether a proposed architecture is capable of generating a behaviour that we know humans regularly engage in, whether adaptive or not ... (Tooby and Cosmides, 1992, p. 108). In the solvability analysis one asks what range of outcomes is actually produced by a specific design. The better the outcomes hit an adaptive target the more likely it is that a real adaptation has been identified.
- 2 In order to avoid pure functionalism it is supplemented by the *evolvability* analysis. 'Because non-human and human minds ... were produced by the evolutionary process operating over vast expanses of time, tenable

hypotheses about their design must be drawn from the class of designs that evolution could plausibly – or at least possibly – have produced’ (Tooby and Cosmides, 1992, p. 108). An evolvability analysis contains qualifying principles as the aptitude to solve problems related to reproduction, the avoidance of unnecessary complexity, etc.

Endowed with this toolbox, and assuming that the human mind’s design constraints do not prevent the detection of how itself it was shaped, the task remains to design and to conduct a design experiment capable of detecting the innate diffusion constraints.

Evolutionary psychology could be of considerable use for evolutionary economics if the identification of specific cognitive mechanisms holding independently of situations becomes possible. However, what about the implications for predicting behaviour? When only the prediction of a behaviour’s direction is possible but the result can be superposed by other influences the causality is, of course, rather weak. This feature, which Tietzel (1983) complains of as a disadvantage, can be transformed into a virtue as soon as situational analysis is abandoned. Within the framework of an evolutionary theory addressing innovation and change, situational analysis could be replaced by pre-revelation analysis. This concept is described by Witt:

Unfortunately, novelty is an amorphous concept. By definition, the informational content, the meaning and the properties of what newly emerges, cannot be anticipated. It is therefore sometimes thought that theoretical constraints cannot be imposed on the infinite realm of possible novelty, which thus implies that novelty must be treated as exogenous. Yet this view is unnecessarily restrictive. It is true that theory cannot positively anticipate the results of evolution. On the other hand, hypotheses can always be developed that exclude certain kinds of novelty from occurring. This implies empirically meaningful, testable predictions even though they may be rather weak ones. Theoretical considerations of the latter inquiry will be called here prerevelation analysis. (Witt, 1993, p. 92)

Once design experiments have been conducted successfully, evolutionary psychology may produce *ex ante* hypotheses about the functioning and constraints of social learning which should be interesting for diffusion research. In a long-term historical perspective a ‘possibility corridor’ channelling technological change may become visible.

Conclusion

In this chapter the role of preferences in economic change has been highlighted. Based on criteria going back to Carl Menger, a classification of concepts dealing with novelty in consumption has been proposed. It seems that novelty can be conceived in different ways: either as the efficiency increase of a consumption technology, or with reference to changes in the subjective cognition of consumers or to new wants learned by operant conditioning.

The second part of the chapter was concerned with the objective part of preferences, implicit traces of which can be detected already in Lancaster's concept of characteristics. In order to strengthen this perspective on preferences, a Darwinian view was sketched, emphasising the evolved biological foundations of human behaviour, simultaneously enabling and constraining preference change. Two different versions of a Darwinian perspective were presented: reinforcement learning presupposing some basic wants, and evolutionary psychology presuming the adaptedness of cognitive mechanisms.

Moreover, it has been argued that looking at preferences from a biological and psychological perspective can give rise to new research questions. Taking the concept of 'patterned variation' from evolutionary biology as a heuristic metaphor, one can speculate whether the Darwinian approaches give any clue to something equivalent in consumption. Before empirical investigations into long-term regularities in consumption can be conducted, however, clarification is needed on whether and how the three aspects of the Menger scheme – wants, technology and cognition – are interrelated.

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Notes

- 1 The systemic character of this lifestyle concept resembles Dosi's (1982) concept of technological paradigms, though the rules governing its evolution and its constraints on possible expansion are less clear.
- 2 How marketing campaigns can even overcome technological lock-ins is shown by Witt (1997b).
- 3 Their aim is to show parallels between biological evolution and institutional evolution.
- 4 This principle is what psychologists call a 'structured motivation theory', i.e. a theory dealing with the relationship between different motivations (Lea *et al.*, 1993, p. 496). In this concept there is an implicit idea of a hierarchical pattern of wants resulting from the fact that only after the satisfaction of the more basic want is the next want revealed.
- 5 The declared aim of evolutionary psychologists is the integration of psychology and the social sciences into evolutionary biology (Tooby and Cosmides, 1992) and it can therefore be considered to be within the sociobiological tradition.
- 6 This modular view of the human mind is supported by the literature on framing, which emphasises the context dependence of behaviour, e.g. Ortmann and Gigerenzer (1997).
- 7 These context-dependent decision rules are related to the concept of 'ecological rationality' (Gigerenzer *et al.*, 1999).

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6

Social routines and the consumption of food

Mark Tomlinson and Andrew McMeekin

In this chapter we argue that considerations of routine behaviour are essential in order to gain a realistic understanding of consumption. There are useful insights from the evolutionary accounts of decision making in firms that can be transferred to the realm of consumer behaviour. To augment the notion of routine that emerges from this literature, and specifically to explore what is social about routines, we also draw on sociological accounts of consumption that identify the extent to which tastes are shared among groups within society. This conceptualisation is reinforced by recourse to statistical analysis of real consumption data from Great Britain.

The notion of the social routine behaviour of individuals is important for scholars interested in studies of innovation, but has received little attention. After all, product innovation requires consumers to adapt or break their consumption routines. Therefore, understanding the nature of these routines is crucial for a complete understanding of innovation processes.

The notion of routines in studies of organisations

A routine is an executable *capability* for repeated performance in some *context* that [has] been *learned* by an organization in response to *selective pressures*. (Cohen *et al.*, 1996, p. 683, emphasis in original)

In studies of organisations there has been a tradition of looking at routines as the basis for understanding organisational action (March and Simon, 1958; Cyert and March, 1963). In this tradition, routines arise out of a tendency to reduce continued deliberation in repetitive situations. When analysing business decision making, Nelson and Winter (1982) emphasise the role of social routines, which are at once partly inherited and partly adaptive. That is, the routine may be partly the result of learned behaviour, either within or outside a group, or partly a new response to a changing environment. Cohen and Bacdayan (1994) see organisational routines as patterned sequences of learned behaviour, involving multiple actors who are linked by relations of communication and/or authority.

Thus many neo-Schumpeterian and evolutionary theorists have examined the nature of routines within organisations (especially firms), looking at the degree to which they are stable, the extent to which they change and the implications of these dynamics. In particular, the notion of routines has been used to understand apparent path dependence in the technological innovations that emerge from the firm.

The central motivation for studying routines comes from empirical observations of recurrent action, which do not easily fit into a neoclassical utility-maximising framework. Hodgson has written several papers that question the validity of theories of rational action stemming from the work of Milton Friedman. He argues that Friedman sidestepped issues of 'realistic analyses of the way in which business people decide and act. He disregarded empirical evidence of the routine-driven nature of business activity ...' (Hodgson, 1997, p. 663). Hodgson argues that analyses of decision making should consider the importance of habits and rules. Specifically, his interest lies in understanding the circumstances in which agents are required to exhibit habitual behaviour.

Old institutional economics saw habits as central to their understanding of institutions and human agency in general. Veblen (1898), for example, saw habits as essential to an understanding of behaviour. Habits were seen as non-reflective repeated patterns of activity that in some sense saved the individual from having to repeatedly 'rationally' calculate optimal decisions from a range of choices. Old institutional economics stands in sharp contrast to the utility-maximising theories of consumption that are central to mainstream neoclassical economics. Veblen also noted the tension between purposive action and habit as the defining characteristic of human beings. A more detailed account of the importance of habits in understanding the behaviour of agents can be found in Hodgson (1997, pp. 664 ff.).

The path-dependent nature of habitual action suggests that the actions of today are predicated on previous behaviour. There is an accumulation of knowledge related to the repetition of actions that leads to the strengthening of a particular habit. (Early psychologists, such as Hull, 1930, 1942, have explored how habit strength varies with the number of reinforcements.) Once an agent accumulates sufficient knowledge about a certain action, the action is performed without recourse to repeated reflection; this then becomes the habit. Linked with this notion of habitual action and of the concept of path-dependence, mentioned above, is the idea of learning-by-doing (Arrow, 1962) and learning-by-using (Rosenberg, 1982).

Here, it is important to draw a distinction between the notion of habit and that of routine. Habitual behaviour relates to the unreflective repeated action of individuals, whereas routine behaviour is about the same phenomenon but at the level of the group. In other words, routines refer to the shared patterns of behaviour within a group context and involve interaction between various agents. For evolutionary accounts of technological change, these routines

can refer to the staff of a particular firm, or to members of a particular scientific discipline.

We again find resonance here with the old institutional economics. Regarding the relationship between institutions and habits, Hodgson (n.d., p. 3) suggests that: 'Particular habits spread through society, leading to the emergence or reinforcement of institutions; and institutions foster and underline particular habits and transmit them to new members of the group.'

While this range of conceptualisations of routine and habitual behaviour may appear to be in agreement, there is a very important difference in the frameworks that have been proposed. The agreement is that there is a tendency to reduce deliberation and calculation in repetitive situations. The differences are in the explanations of why this may be the case.

For some, the primary explanation of routine behaviour lies in the cognitive constraints on the potential to repeatedly calculate an *optimal* course of action. These accounts include the psychological treatments of habit and the economists' notion of bounded rationality and are usually explored by considering only the individual human agent. Other accounts stress the organisational dimension of routine behaviour, where social contexts are responsible for reinforcing repetitive action. Furthermore, the learning and adaptation that lead to modifications in routines or indeed the breaking of routines also occur within a social context.

This distinction is far from trivial, and is at the core of this chapter. We argue that routines are often governed by social contexts and test this notion by examining social consumption routines. To further elaborate this aspect of consumption routines, and to develop a framework for identifying the existence of groups of consumers that exhibit broadly similar consumption behaviour, we turn to the sociology literature.

Bourdieuian sociology of consumption

In sociological accounts of consumption, there has also been vociferous debate regarding the extent to which consumption behaviour is shared within social groups. One of the central propositions of the 'postmodernist' approach to understanding consumption is that the importance of socio-structural context has decreased over time; we now live in a time where traditional forms of social stratification (for instance, along class, gender or racial lines) are less important than the individual's ability to calculate individual actions rationally and where new forms of social structure create 'new' post-traditional social groups with quite different attitudes and orientations. Hence there is a burgeoning literature on different lifestyles, Green movements, 'queer' studies, etc.

On the other hand, and defending a more 'structuralist' position, there is a continuing body of work that takes a more traditional collectivist stance as a starting point, many of them drawing on the work of Bourdieu. Bourdieu often uses the concept of 'habitus' to help to explain the behaviour of different social groups, particularly their consumption patterns. In his classic

work *Distinction* (1984) he takes this concept and builds a framework within sociology that seeks to understand how consumers may act in different (social) situations. The habitus can be thought of as a general set of rules and dispositions defining the behaviour of a socially constituted group. For Bourdieu, the groups are usually delineated by occupational classes. Different social groups or classes have different habituses, depending on several factors which can lead to variations in levels of education, income, social capital, and so on.

The habitus is the medium through which actions (including consumption) are mediated in everyday life: what governs the acceptable and unacceptable for the group. Habitus is to some extent passed on from one generation to the next, partly modified by education, and subject to various changes dependent on the life course an individual finds himself/herself undertaking (whether by accident or design). This concept has resonance with the notions of habit in old institutional economics, but should not be confused with habit itself. The habitus is more than just a set of habits.

The similarities in the general ideas are quite striking. For instance, Veblen (1898, p. 79) stated that: '[Man's] methods of life today are enforced upon him by his habits of life carried over from yesterday and the circumstances left as the mechanical residue of the life of yesterday.' In other words, there are inculcated habits and beliefs that shape the desires of people that are not always easy to break free from. Compare this with Bourdieu's (1984, p. 172.) discussion of the habitus and lifestyle:

Life-styles are ... the systematic products of habitus, which, perceived in their mutual relations through the schemes of the habitus, become sign systems which are socially qualified. ... The dialectic of conditions and habitus is the basis of an alchemy which transforms the distribution of capital, the balance sheet of a power relation, into a system of perceived differences, distinctive properties, that is, a distribution of symbolic capital, legitimate capital, whose objective truth is misrecognised.

Bourdieu (1984, p. 101) reduces social practices to the following 'equation':

$$\{ (\text{habitus}) (\text{capital}) \} + \text{field} = \text{practice}$$

What this implies is that an agent's behaviour is governed by a combination of three factors: the habitus itself, the levels of economic, social and cultural capital the individual is endowed with (this is the general level of wealth, knowledge, culture and education possessed by the agent), and the field that the agent is operating in. The field can modify the habitus to some extent. Field is a notoriously difficult concept to define, but can be thought of as a more general area of life that is to some extent independent of any class-oriented habitus. So someone working in the field of education may have different behavioural patterns from someone working in the field of the arts despite having similar levels of cultural capital and occupational status.

The mode of operation of the social routine can be readily incorporated within the habitus framework. The type of framework put forward by Bourdieu can also help to explain apparently sub-optimal or irrational behaviour, as it supplies alternative logics to social consumption and the objects of consumption habits that are absent from mainstream economic analysis (which relies mainly on prices and incomes). For example, 'Objects, even industrial products, are not objective in the ordinary sense of the word, i.e. independent of the interests and tastes of those who perceive them, and they do not impose the self-evidence of a universal, unanimously approved meaning' (Bourdieu, 1984, p. 100).

Objects of consumption therefore are not objective in the sense that the social possibilities available to the consumer are not the same for different social groups.

The sociologists of consumption can therefore shed useful light on the processes that govern the dynamics of routines and in particular the relationship between an individual's actions and the behaviours of social groups. Economists have recently started to deploy some of these ideas in empirical and simulation work on consumption (for example, see McMeekin and Tomlinson, 1998; Cowan *et al.*, 1996). For example, Cowan *et al.* (1996, p. 7) state that:

In Bourdieu's analysis (1984), taste is driven in part by the desire for distinction and peer group reference, and that gives rise to an explicitly evolutionary character to consumption patterns. But this last theory lacks the power of a quantitative modelling framework which an evolutionary economic theory of consumption can bring.

The social mechanisms referred to here, of aspiration, association and distinction, are key features of Bourdieu's sociology of consumption.

The preceding discussion leads us to formulate an initial definition of social 'consumption routines' based on the original definition of organisational routines:

A consumption routine is an executable capability for repeated consumption that has been learned or acquired by groups of consumers in response to social pressures or contexts.

It is this that we begin to operationalise in what follows by modelling the influence of social context on routine consumption behaviour.

Data and methodology

The data: the Health and Lifestyle Survey

The data were initially collected in 1984 and 1985 to form a random sample of 9,003 respondents aged eighteen or over and resident in households in Great Britain. The data collected included many variables related to the area of consumption and lifestyles. For example, detailed data on food consumption, smoking, alcohol consumption, hobbies, exercise, etc., as well as

socio-demographic variables including social class, household composition, etc., were gathered. The interviewees were traced and re-interviewed seven years later (referred to as the ‘follow-up survey’) and the same questions were repeated. Thus we have similar data from two points in time for the same people. However, a number of respondents from the first wave could not be traced or had died. Thus the sample size of the follow-up survey is reduced from 9,003 to 5,352.

The influence of social class

We have argued that factors such as social class will be significant determinants of habitual consumption behaviour, whereas traditional neoclassical economic analyses of consumption typically take income as the primary determinant. In this section we use real consumption data to show that in many cases, although income is important, social class is often a stronger determinant, as would be predicted by Bourdieu. We assume that social class represents the context in which tastes are formed and consumption routines executed. Moreover these contexts have a persistent effect which lasts even when the social class changes. Thus social mobility will affect tastes, but there will be a residual effect stemming from the consumer’s origins (the *habitus* effect).

Modelling consumption

In most quantitative economic analyses of consumption the dependent variable is usually some measure of expenditure on a particular good. However, this data set does not have expenditure data. Rather, it has data on the frequency with which an item is consumed. The items covered include food, leisure activities, etc. So our dependent variable is an ordered categorical variable reflecting the strength of an individual’s particular consumption routine. For example, whether an individual consumes red meat more than once a day, once a day, down to the category ‘never’ (there are usually six categories per item). We use consumption frequency in 1992 (i.e. the second wave) as our dependent variable and model the influence of various factors on this outcome. Also, because the categories are not equidistant, it would be unwise to rely on ordinary least squares regression techniques. We therefore use ordered logistic regressions, which do not assume that the categories are equidistant but retain the order of the categories. The independent variables included in the models are:

- 1 *Social class in 1985*. In the analysis that follows we use occupational class in 1985 as a proxy for *habitus*. We are assuming that if occupational class is statistically significant then this is a reflection of the underlying influence of *habitus*. This assumption is consistent with Bourdieu’s own analysis. For the class variables, we have the basic Registrar General’s (RG) class of the household head as well as the more detailed socio-economic group (SEG). We are concentrating on RG class below. The rationale for using RG class is that it is simpler and closely corresponds to the social class

scheme used by advertisers in their marketing strategies (i.e. the familiar A, B, C1, C2, D, E grouping). The Registrar General's class is analogous and is defined as follows:

- I Professionals
- II Managers
- IIIN Routine white-collar workers
- IIIM Skilled manual workers
- IV Semi skilled workers
- V Unskilled workers

Whenever we refer to class in what follows this is the scheme that we are using. Class V, unskilled workers, is used as the base category. We use class in 1985 rather than 1992 as a reflection of the underlying, path-dependent disposition to consume certain items rather than others. This is a significant departure from most consumption models. We are basically arguing that long-standing dispositions have an effect on future consumption. Hence we predict consumption in 1992 on the basis of habitus effects stemming from 1985.

- 2 *Mobility between 1985 and 1992.* We assume that not only will there be latent habitus effects from original class position, but that these can be modified by shifts in occupational status. Thus people who move from blue to white-collar jobs, say, will modify their behaviour to be more 'white-collar' but will retain some of their old 'blue-collar' habits. (We use 'blue' and 'white' collar as a shorthand device. There may be occupations in the classes IIIM, IV and V that are not strictly manual jobs and hence not strictly 'blue-collar'.) This change in social context will induce 'learning' or 'adaptation' and hence modified behaviour, but there will be tastes which essentially persist from earlier social contexts. We construct two variables to represent this phenomenon. Firstly a dummy variable indicating whether the person shifted from class IIIM, IV or V into class I, II or IIIN (i.e. from a 'blue' to a 'white' collar occupation), and second a variable representing the opposite case. We resort to this simple scheme, as it would be too complex to have variables representing every possible type of occupational shift.
- 3 *Age in 1992.* We constructed age dummy variables dependent on whether a person is in his or her thirties, forties, fifties or sixty or over. The base category is people under thirty.
- 4 *Gender.* We entered a female dummy variable in the models; therefore males are the base categories.
- 5 *Income in 1992.* The base category is less than £79 net weekly income. The dummy variables are £79–£173, £174–£288, £289+ net weekly income.

So, schematically, we are modelling consumption routines in 1992 as in Figure 1.

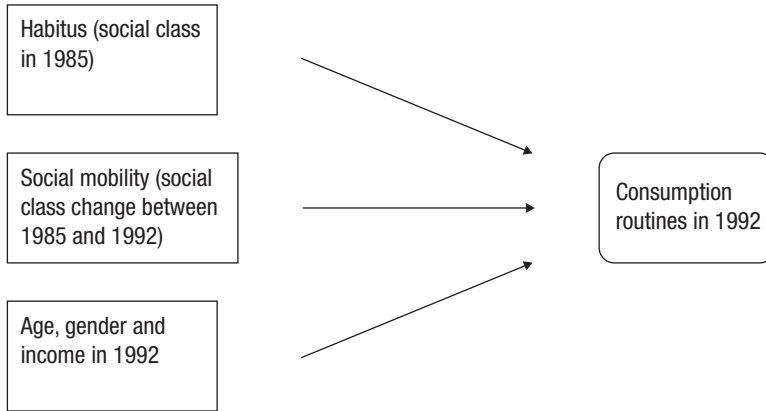


Figure 1 Modelling routine consumption

Results

If persistence in routine behaviour or changes in it were not in some ways determined by social context then we would find no significance for the habitus variable or for the mobility variable. In our models, for a number of goods analysed, we find that either the habitus variable or both the habitus and mobility variables were significant after controlling for income. This suggests, in a convincing manner, that the individualistic framework provides an insufficient explanation.

We are primarily interested in the social determinants of routine consumption behaviour, and the modelling results fall into three categories with respect to this.¹

- 1 Consumption routines for goods that fall into this category are determined by both long-standing habitus effects (the 1985 class variable is significant) but not by social mobility (the white/blue-collar shift variables are significant). This suggests that the habitus effects persist and that social mobility makes no significant impact. We call this *habitus-dominated* routine consumption (see Figure 2).
- 2 Consumption routines for goods that fall into this category are determined by both long-standing habitus effects (the 1985 class variable is significant) and are also influenced by social mobility (the white/blue-collar shift variables are significant). In this case the routine consumption is influenced by persistent habitus effects and is also subject to adjustment from social mobility. We call this *mobility-adjusted* routine behaviour (see Figure 3).
- 3 Consumption routines for goods that fall into this category are not significantly determined by long-standing habitus effects (the 1985 class variable is insignificant) or social mobility (the white/blue-collar shift variables are significant). The consumption of these goods would appear to be less

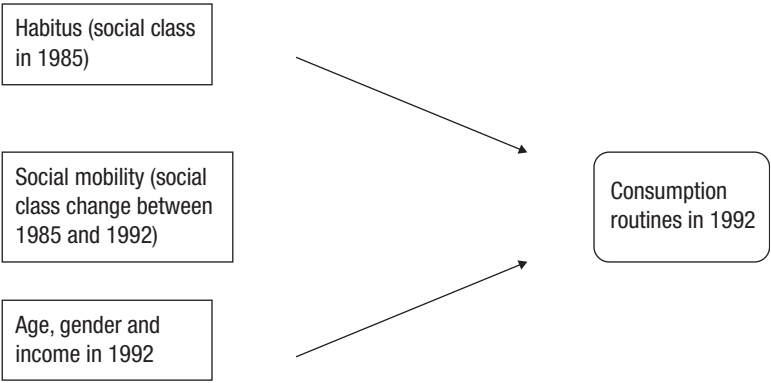


Figure 2 Habitus-dominated routine

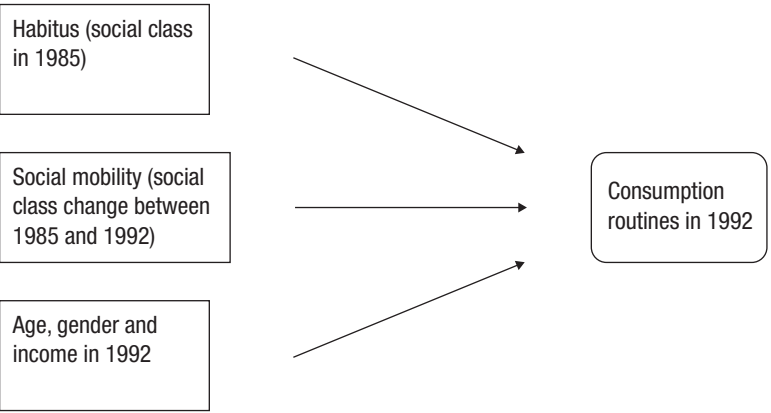


Figure 3 Mobility-adjusted routine

influenced by differences in social context. We call this *habitus-neutral* routine consumption (see Figure 4).

The goods we examined fell into the three categories:

- 1 *Habitus-dominated*, class 1985 significant, mobility non-significant: yoghurt, salad, squash, cheese.
- 2 *Mobility-adjusted*, class 1985 significant, mobility significant: tea, coffee, pasta, chips, fruit juice.
- 3 *Habitus-neutral*, class 1985 non-significant, mobility non-significant: potatoes, sweets, pulses.

Examples of models of type 1, 2 and 3 goods are shown in Table 1.

Persistent habitus dispositions influence the routine consumption of yoghurt, salad, squash and cheese. The consumption of these goods does not

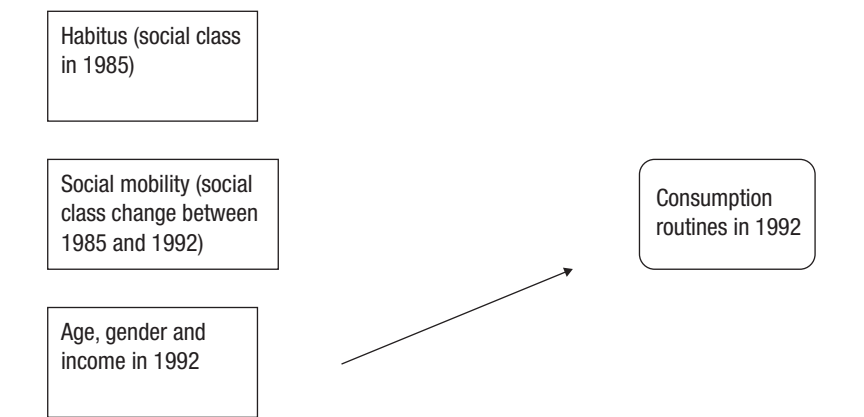


Figure 4 Habitus-neutral routine

Table 1 Examples of the three different types of model (ordered logistic regressions)

Independent variable	Dependent variable		
	Habitus-dominated	Mobility-adjusted	Socially neutral
	Yoghurt	Fruit juice	Potatoes
Class:			
I	0.77***	0.91***	–
II	0.57***	0.94***	–
IIIN	0.55***	0.90***	–
IIIM	0.34**	0.49**	–
IV	–	–	–
(Base: class V)			
Female	0.37***	0.37***	–
Age:			
Thirties	–	–	–
Forties	0.24*	–	0.51***
Fifties	0.39***	–	1.05***
Sixties and above	0.57***	–0.28**	1.36***
(Base: under thirty)			
Income group:			
2	0.40***	0.39***	0.26**
3	0.53***	0.61***	0.27**
4	0.59***	0.91***	–
(Base: 1, lowest)			
White-collar shift	–	0.27**	–
Blue-collar shift	–	–	–

Notes Only significant coefficients on independent variables are shown. – Not significant at the 5% level. *Significant at the 5% level. **Significant at the 1% level. ***Significant at the 0.1% level.

significantly alter when people change their occupational status. So, for example, white-collar workers in 1985 routinely consumed more yoghurt in 1992, whether they had occupational mobility or not. Those who only became white-collar workers between 1985 and 1992 are only as likely to consume as if they were still blue-collar workers. However, in the case of tea, coffee, pasta, chips (US: french fries) and fruit juice, consumers who had shifted to white-collar occupations were likely to shift their consumption behaviour in line with other white-collar workers. For these goods there appears to be an 'aspirational' or 'learning' effect, although the original class position remains significant.

These results are particularly interesting because they suggest that habitus and social mobility operate in different ways for different goods. This also raises the question of why goods should differ in this way. The consumption of potatoes depends significantly less on habitus than yoghurt; and while yoghurt consumption appears unaffected by mobility, both habitus and mobility determine pasta consumption.

Conclusion

Earlier, we offered the following definition of consumption routine:

A consumption routine is an executable capability for repeated consumption that has been learned or acquired by groups of consumers in response to social pressures or contexts.

The analysis in this chapter has concentrated on the social pressures or contexts that lead to the nature of consumption routines. There are several interesting findings.

First, we have shown that habitus can be a strong determinant of consumption routines. Modelling consumption by *past* social status is an unusual way to do this, and is probably an even stronger indication of its importance than simply using current social class. It suggests the longer-term persistence of habitus in appropriately defining the groups within which routines are shared.

Second, we have shown that social mobility can also have a significant effect on consumption routines. This resonates with our definition with respect to the notion of learning or adaptation. It suggests that consumers who have shifted from, say, blue-collar occupations to white-collar occupations will in some cases adapt their consumption behaviour accordingly. This they may do consciously, actively aspiring to behave in similar ways to their new colleagues, or through unconscious imitation. One implication is that shifts in the social structure will have an effect on aggregate consumption behaviour and the demand for goods.

Third, the effects of these influences are different depending on the good that is being examined. This is particularly interesting since it implies that goods differ with respect to the way they are perceived by different social groups; in other words some goods appear to carry more social significance

than others. We have characterised three different types of goods. Type 3 (habitus-neutral) goods do not appear to have any significant social meaning within this framework, whereas type 1 (habitus-dominated) and type 2 (mobility-adjusted) do. But the social significance of these goods is different.

The existence of consumption routines is particularly significant for those interested in the diffusion of innovative consumer products. The implication is that existing routines need to be modified or broken for innovations to succeed. This is reflected in practice, as advertisers and market research functions attempt both to reinforce routine consumption behaviour and to break it. This they frequently do through activities that are based on stratified populations of consumers. Marketers are well known for using the A, B, C1, C2, D, E scheme (analogous to the scheme we have used here). Consequently product ranges are designed so that a hierarchy of products are offered to different social groups. Advertisements are also created and presented in such a manner as to make clear the social significance of consuming certain goods.

These conclusions lead to important suggestions for understanding the consumption of new product innovations. There is a tension between the learned and routine behaviour of groups of individuals with respect to frequently purchased and common items of consumption (such as non-durables) and the arrival of novel, new or unknown goods that may change behaviour in unexpected ways. This is acknowledged by Bourdieu (1984, pp. 230 ff.) and by Warde (1997), who discusses the antinomy of taste with respect to novelty and tradition in food consumption. This antinomy is the tension between the need for familiarity (governed by routine) and humanity's passion for novelty and innovation.

We have demonstrated that consumption routines can change for certain goods and at different rates for different social groups. Understanding consumption behaviour as governed by routines and social mechanisms is essential to understanding the evolution of demand.

Note

- 1 We do not discuss the importance of age, gender and income in this chapter, because we are concentrating on the question of socio-economic class and consumption routines. For a discussion of these issues see Tomlinson and McMeekin (1998).

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7

Social categorisation and group identification: how African-Americans shape their collective identity through consumption

Virág Molnár and Michèle Lamont

This chapter analyses how a low-status group, black Americans, use consumption to express and transform their collective identity and acquire social membership, i.e. to signify and claim that they are full and equal members in their society. More broadly, we analyse the twin processes by which this group uses consumption to affirm for themselves their full citizenship and have others recognise them as such (what the literature on collective identity calls ‘group identification’ and ‘social categorisation’). We document these processes by drawing on exploratory interviews conducted with black marketing experts specialising in the African-American market who provide us with distinctive readings of the meaning of consumption for blacks. These experts are viewed here as individual black consumers and as members of an occupational group organised around increasing the place of consumption in individual social identities.

In the next section, we discuss the place of group identification and social categorisation in the creation of collective identity. We argue that for blacks the formation of collective identity is centred around defining their place in US society, i.e. finding various ways to demonstrate their social membership. The following section pieces together the literature on black consumption to show how focusing on group identification and social categorisation improves our understanding of the meaning of consumption for this group. We identify an alienationist, resistance, and discrimination perspective and propose a ‘social identity’ perspective: this allows us to accommodate the subjective meaning of consumption practices without predefining it as resistance while taking into consideration the role of cultural producers – in our case, marketing professionals – in providing normative definitions of social membership for their black clientele. The fourth part turns to evidence from seven marketing specialists. Our interviews suggest that marketing specialists (1) shape the meanings of ‘the black consumer’ for the public at large and the advertising industry in particular; (2) promote normative models of collective identity for blacks that equate social membership with consumption. They also believe blacks use consumption to (3) be recognised as sharing the

collective identities most valued in American society (middle-class membership in particular); and (4) transform the meaning attributed to the category 'black', enact a positive vision of their distinct cultural identity (e.g. as fashionable or proud black people), and affirm their distinctiveness for themselves and others.

We show that, for most of these marketing specialists, mainstream society is equated with 'elite society', perhaps because the acquisition of expensive goods is taken to 'objectify' social membership by making it undeniable: these experts view 'buying power' as a true mark of personal worth and racial equality, and as a powerful rebuttal to racism. Hence, marketing specialists provide to most blacks an ambiguous message about social membership: that it is out of reach to most of them. They make no reference to alternative bases of commonality such as common humanity, cosmic destiny, physiology, culture, territoriality, education, religion, or nationality.

We interviewed marketing specialists in black advertising agencies in New York and Chicago, where most of the agencies in this organisational niche are located.¹ Our interviewees are all black and work at agencies that map the full spectrum of the field, ranging from moderate Afrocentric to mainstream-oriented marketers. Drawing on a list of the top national firms specialising in marketing to the black population (see appendix) we sent letters to the chief executives of these firms asking for their collaboration. The letters were followed by phone conversations where we provided some information on our objectives and set up a face-to-face or phone interview with a marketing specialist employed by the firm. Of the nine firms we contacted, all but two were willing to collaborate. Two of our respondents were found via snowball sampling. Respondents included senior executives of large firms as well as self-employed strategic planners. Interviews lasted between forty-five minutes and two hours.

Collective identity and the study of consumption

In order to bring new insights into the consumption literature, it is useful to turn to recent writings on social identity offered by Richard Jenkins. This author describes collective social identity as constituted in a dialectical interplay of processes of internal and external definitions. On the one hand, individuals must be able to differentiate themselves from others by drawing on criteria of commonality and a sense of shared belonging within their subgroup. On the other hand, this internal identification process must be recognised by outsiders for an objectified collective identity to emerge. Jenkins's framework captures these internal and external moments of the collective identification process. He draws on analytical distinction between groups and categories, i.e. 'a collectivity which identifies and defines itself (a group *for* itself) and a collectivity which is identified and defined by others (a category *in* itself)' (Jenkins, 1994, p. 23). He contends that the internal-external dialectic can be mapped on to the interplay of processes of *group identification* and *social categorisation*.²

The dynamic interplay of group identification and categorisation can be investigated in a number of social contexts ranging from routine public interaction to official classification schemes (e.g. census categories, institutionalised marketing clusters).³ We explore this dynamic in the realm of consumption, a social activity where it is particularly salient. In doing so, we propose a 'social identity' approach to consumption which centres on the role played by consumption in internal and external definitions of collective identity. More specifically, we examine a range of social process including: (1) how cultural producers (here specifically, marketing specialists) identify and define categories of consumers, which categories become objectified and shape the cultural tools available for the formation of collective identities; (2) how such cultural producers offer cues and cultural models to people about how to achieve full social membership;⁴ (3) how individuals use consumption to signal aspiration to membership in symbolic communities (as citizens, middle-class people, etc.); and (4) how consumers perform, affirm, and transform the social meaning attributed to specific collective categories (here, what is common to blacks, but also, eventually, to women and other groups). The first two points address the social categorisation process in the making, i.e. the production of external definitions, while the latter two points address the role of consumption in the group identification process, i.e. the production of internal definitions of collective identity.

Consumption is a particularly felicitous point of departure for examining the symbolic aspects of collective identity beyond our concern for the dynamic between internal and external processes. Indeed, its symbolic efficacy in 'identity work' does not require that individuals be connected through networks and engage in face-to-face contact.⁵ It can operate either at the level of bounded subcultures, or at the level of widely shared cultural structures, of 'hidden codes that make individuals and groups predictable and dependable social actors' (Melucci, 1996, p. 8), and that exist beyond the enactment of specific interpersonal typification or ties.⁶ Consumption thus constitutes a useful lens for understanding how membership is acquired in symbolic communities.⁷

We now review the literature on black consumption in the United States to show how it can be improved by focusing on processes of internal and external identification.

Theories of black consumption

Our reading of available research on black consumption practices suggests that the latter are understood as (1) a source of alienation, (2) a means for expressing resistance to dominant society; and (3) a site for discrimination. We argue that the 'alienationist' perspective downplays the subjective meaning that consumers attach to their consumption practices and predefines consumption as repressive while neglecting its role as a site for identity formation and in the transformation of the meaning attributed to blackness as a category.

In contrast, the 'resistance' approach overemphasises the consumers' ability to shape the meaning of consumption against dominant consumption narratives produced by advertising. Simultaneously, it predefines the meaning of consumption as individual or collective resistance, and cannot account for instances where individuals use consumption to gain social membership. Finally, the 'discrimination' perspective offers a unidimensional view of the cultural impact of the marketing industry by downplaying or ignoring recent efforts of black and white firms to combat racial discrimination and transform racial stereotypes.

Focusing on the use of consumption in internal and external identification processes allows us to integrate these neglected, yet crucial, aspects of black consumption. In contrast to the alienationist perspective, we pay careful attention to the subjective meaning individuals attribute to their consumption practices. In contrast to the resistance perspective, we also avoid predefining subjective meaning as counter-hegemonic. In contrast to the discrimination perspective, we pay attention to the positive role played by corporations in shaping the collective identity of blacks. We also analyse subjective understandings of consumption in relation to the dominant social narratives about consumption that are produced by marketing professionals and influence the external definitions (or social categorisation) of black consumers. Hence, our 'social identity' perspective is a substantial addition to the three dominant perspectives by (1) focusing simultaneously on the congruence and interaction between individuals' self-understanding as consumers and the production of external definitions by marketers and society at large, and (2) treating as complementary different aspects of black consumption that are either ignored by the available literature or described independently of, or in opposition to, one another.

Conspicuous consumption and alienation

The first perspective describes the multiple alienating effects of consumption for blacks. However, it neglects the subjective meaning blacks attribute to consumption and how they use the latter to transform positively their collective identity (more specifically, the external categorisation processes, i.e. how 'mainstream society' views them).

The perspective describes how blacks consume to compensate for oppression, exploitation, discrimination, and humiliation: consumption offers immediate gratification and inclusion in mainstream society for affluent and not so affluent blacks alike. However, consumption also has negative consequences in that it erodes racial solidarity and subordinates 'uplifting the race' to private wealth accumulation: it takes blacks away from their 'real' interest of racial solidarity. In the words of Cornel West, blacks have fallen into the clutches of 'corporate market institutions ... [that] have created a seductive way of life, a culture of consumption that capitalises on every opportunity to make money'. Market forces threaten the very existence of black civil society

as they produce a form of nihilism, i.e. 'the lived experience of coping with a life of horrifying meaninglessness, hopelessness, and most important lovelessness'.⁸ Herein lie the alienating effects of consumption.

Along similar lines, Carl Husmoller Nightingale offers a dreary account of how inner-city black children define social integration by inclusion in 'mainstream America's mass market and hence compensate for the economic and racial exclusion they face in other parts of their lives'.⁹ Like George Lipsitz, he understands commodity purchases as 'symbolic answers to *real* problems' (Lipsitz, 1990, p. 9, our emphasis). Marketing specialists devise advertising strategies to capitalise on this illusive and ultimately inefficient search for a compensatory identity. They produce images that equate personal worth with conspicuous consumption (Nightingale, 1993, p. 152) and indirectly have devastating effects on the life of the inner city (e.g. the increasing number of clothing-related armed robberies, 'sneaker murders', and the rise of girls' violence over jewellery; Nightingale, 1993, p. 152, and see also Austin, 1998, p. 157 n. 33). In this context, drug dealers come to be idolised for 'their ability to combine glorification of blackness – by linking race to prowess in matters defiant, sexual, and violent – with virtuoso performances of conspicuous consumption' (Nightingale, 1993, p. 152 n. 13).

The perspective describes the affluent black middle class as similarly alienated and prone to engage in a desperate quest for status by means of consumption. In the 1940s and 1950s, E. Franklin Frazier portrayed middle-class blacks as 'making a fetish of material things or physical possessions' to satisfy their longing for recognition and to 'seek an escape in delusions involving wealth'.¹⁰ However, 'behind the masks' the black bourgeois struggled with insecurities and frustrations stemming from the futility of efforts to acquire membership in mainstream America, and with self-hatred and guilt for 'elevating himself above his fellows' (Frazier, 1957, chapter 10).

Today's 'buppies' (upwardly mobile black professionals) are similarly described in the popular press as 'ambitious and acquisitive, determined to savour the fruits of integration by any means necessary' (George, 1992). They strive for career advancement and material wealth (designer wardrobes, elegant houses, furnishings, and fancy cars) to gain an ever elusive social acceptance, as their white counterparts often remain reluctant to acknowledge their status. Hence they experience a disillusionment, which is described in Benilda Little's novel *The Itch* in powerful terms: her characters feel that the rest of the world 'either did not see them at all or viewed them as kind of backdrop, treating them with either benign hostility or total indifference. This was the thing that bonded these people ... most Black people who had become successful' (Little, 1998). They suffer from a 'cultural schizophrenia', as they are expected to 'check any ethnicity at the door' despite being members of the upper middle class. Similarly, Henry Louis Gates describes the lives (and alienation) of middle-class blacks as predicated on 'the premise of an inverse relationship between class and colour, where upward mobility implies a flight from racial identity'.¹¹ Hence, whereas

consumption leads poor blacks to alienation because it provides a false remedy to their social marginality, it leads middle-class blacks to be doubly alienated, i.e. to be alienated from their own race as well as from the mainstream society, in their pursuit of an ever elusive integration. And indeed, poor and working-class blacks view the blossoming black bourgeoisie as pre-occupied with conspicuous consumption, absorbed in egotistical pursuits, and drifting away from 'uplifting the race' (Hampton, 1985, p. 1).¹²

The 'alienationist' perspective resonates in some respects with the Frankfurt school's outlook on the perils of the 'culture industry' and mass consumption.¹³ Commodity fetishism is posited to generate 'false consciousness' as people embrace the illusion that consumption will bring them fulfilment, just as they remain unaware of the inherent limitations of capitalism. In the alienationist perspective, as in the Frankfurt school's humanistic critique of capitalism, relations of production (exploitation) are construed as more real than either relations of consumption or collective definitions of social membership. At the same time, consumption and money are seen as intrinsically repressive forces, which precludes the possibility that individuals use them to transform their collective identity and improve their position in the status hierarchy.

As illustrated below, instead of defining the natives' point of view as fundamentally mistaken, the 'social identity' perspective argues for an agnostic stance that entails a suspension of belief concerning the ultimate consequences of consumption. Also, instead of viewing all consuming activity as the product of media manipulation and the seed of false consciousness, this perspective shows how the meanings that individuals attribute to consumption are played out in their definition of the distinctive features of the groups they belong to (i.e. in the process of group identification). Finally, it also considers how, in so doing, individuals react to external definitions of their collective identity as blacks, transforming the meaning of blackness for themselves and for others. For instance, inner-city black children generate fashions distinct from 'mainstream' ones, that come 'from the outside'. Although they may appear to emulate consumption patterns of affluent whites in order to gain membership in mainstream society, they can also be actually striving to meet standards most valued among their peers, which standards may or may not bring them status in society at large (Hall, 1992, p. 263).¹⁴ This process can entail either self-definition as a goal in itself, or resistance to mainstream practices of granting social prestige and recognition.

Consumption and resistance

The second perspective understands consumption as a site where individuals express resistance and defiance to mainstream society and create and transform the meaning of commodity to suit their own purposes, against the dominant meanings provided to them by the advertising industry. This approach underplays the alienating forces of modern consumer culture and refocuses attention to the polysemous nature of commodities. As described by Paul Willis,

consumer goods are 'raw materials' for everyday creativity and consumption is an open-ended activity involving a great deal of interpretive freedom and negotiation rather than passive acquisition (Willis, 1990, p. 19).

This perspective frames black consumption as 'an active, celebratory process' (Gilroy, 1987, p. 211) where transfiguration of meaning is achieved by 'blackening' mass-produced goods so as to subvert domination and contest their dominant, 'mainstream' meaning. Black men and women who bleach their hair shades of blond nowhere found in nature provide a handy example to this practice (Austin, 1994, p. 160; see also White and White, 1998). Hip-hop culture, B-boy and B-girl rebellion also poignantly illustrate the expressive use of consumption in contemporary black culture. B-boys and B-girls 'molded by hip-hop aesthetics and the tragedies of underclass life ... combine the explosive elements of poverty, street knowledge and unfocused political anger' (George, 1992). Their elaborately designed sneakers, gold chains, inverted baseball caps, and rap music, or the survivalist look (classic hunting coat over baggy khakis and Timberland boots, camouflage fatigues and thermal half-face masks) 'taps into a post-Vietnam understanding of the urban terrain as a daily guerrilla war' (Cardwell, 1993, p. 5; see also Moore, 1993). The attire literally mobilises the polysemy of consumer goods to wage what Umberto Eco called a 'semiotic guerrilla war'.¹⁵

A variant of the resistance approach, advocated by Paul Gilroy, focuses on the use of consumption as a means of collective action with the black community. For Gilroy, hip-hop culture in particular symbolises a site of oppositional meaning and collective strength. It is a cultural practice that brings atomised individual consumers together and fosters collective action by generating an alternative public sphere. Thus Gilroy points to the potential link between the black empowerment movement and the mobilising force of expressive black cultures through consumption (Gilroy, 1987, p. 34; see also Gilroy, 1993).

John Fiske extends this argument in his analysis of the cultural dimensions of 'looting' in the racial protests that followed the Rodney King verdict in Los Angeles. He understands looting in this context as 'an appropriate, available and effective site for political protest' (Fiske, 1994, p. 469), a form of collective social action employed by blacks to articulate their resistance against racial discrimination, oppression and alienation. In the same fashion Lizabeth Cohen offers a historical account of the significance of consumption in the civil rights movement. She underlines that blacks have associated their sense of citizenship with unrestrained access to consumer goods and services from the 1950s onwards. She also shows how the personal experience of indignity (or 'diss') in everyday interactions and the political effectiveness of organised boycotts of stores, restaurants, and buses in the struggle for desegregation, rendered the sphere of consumption a central scene of a social movement (Cohen, 1992).¹⁶

This perspective is largely faulty for predefining the meaning of consumption as resistance, thereby downplaying the role of dominant social narratives.

This predefinition involves romanticising and exoticising responses to social marginalisation and overestimating the political radicalism of consumption. In contrast, the 'social identity' perspective understands the distinctive meaning of commodities like Timberland boots and baggy fatigues created by black urban youth as aiming at the construction of a culturally distinct group identity that does not necessarily have a counter-hegemonic dimension. It also leaves open the possibility that blacks who think of their expressive culture and sense of style as superior to that of whites simply consider this to be a form of distinctiveness, as opposed to resistance. At the level of social categorisation, the social identity perspective examines how blacks transform the dominant meanings of social membership associated with specific commodities, which meanings are made available by marketing specialists (i.e. the preppy Nordic image of Tommy Hilfiger clothes). Finally, it also considers the importance of consumption for acquiring membership in mainstream society (via the purchase of expensive sneakers, for instance, which signals one's purchasing power), another issue that the resistance perspective cannot tackle given its constraining premises.

Discrimination and the disadvantaged consumer

A third perspective on black consumption focuses on consumer discrimination and on the racialisation of consumption.¹⁷ It describes how blacks encounter stereotypes (as dangerous, without buying power, etc.) in shopping and how these stereotypes are enacted in the retail sector, often under the guise of security measures. An example is provided by Patricia Williams, a distinguished black legal scholar and lawyer, who recalls how she was 'buzzed out'¹⁸ of a Benetton store in New York City after the salesperson determined that she was an unpromising client, based on her racial characteristics only. She wrote an article denouncing 'the rhetoric of increased privatisation, [that] in response to racial issues, functions as the rationalising agent of public unaccountability and, ultimately, irresponsibility' (Williams, 1991, p. 47).

A large-scale study reporting on in-depth interviews with middle-class blacks suggests Patricia Williams's experience is not an isolated event, but is shared by an overwhelming majority of middle-class blacks. In fact, the incidence of discrimination is highest in commercial settings such as restaurants, retail stores, hotels, and banks, and it takes the form of poor service (or no service), excessive surveillance, or redlining.¹⁹ Consumption is a central site of discrimination and one that is particularly hurtful to blacks, because this discrimination sends the message that they are excluded from the 'American dream' (Feagin, 1991, pp. 101–16).

In this discrimination literature, a number of legal scholars also examine how blacks are taken advantage of in commercial transactions. In particular, Regina Austin explores how blacks' labelling as deviant legitimises *de facto* limitations on their right to shop and sell freely.²⁰

It is assumed that blacks do not earn their money honestly, work for it diligently, or spend it wisely. When blacks have money, they squander it and cannot save it. If blacks are cheated in the course of commercial transactions, it is because they cheat themselves either by being unsophisticated or incompetent consumers or by making it difficult for a decent ethical person to make profit from doing business with them. As a result, individual entrepreneurs feel perfectly justified in taking advantage of blacks as a means of privately policing or controlling blacks' spending malefactions. (Austin, 1994, p. 151)

The perception of black consumers as dubious and deviant often jeopardises their recourse to legal remedy for discriminatory treatment. At the same time owners of retail stores claim that they resort to tight security and surveillance because the laws crafted to deter and punish shoplifters are insufficient and ineffective.

Austin argues that similar social and legal mechanisms constrain the leisure activities of blacks. Local authorities often refuse to rent public spaces, auditoriums, concert halls for rap music or reggae concerts or issue a licence to a bar or restaurant that caters to a black clientele 'in the name of curbing or controlling crime, violence, aggression, or social irresponsibility or incivility' (Austin, 1998, p. 3). In fact, Austin argues, while security concerns are ritualistically evoked, there is a more fundamental reluctance to facilitate or host alternative yet legitimate cultural practices that are at odds with mainstream culture. In her view, the above examples demonstrate that racism does not necessarily proceed through readily apparent notions of superiority and inferiority: it is increasingly disguised in the form of neutralising language and insidious rationalisation.²¹

The main failing of the discrimination perspective lies in ignoring the efforts on the part of American corporations to transform the external definition (or social categorisation) of blacks by diffusing a positive portrait of black consumers and by sponsoring a wide range of 'pro-diversity' community events. Marketing specialists are hired as consultants by firms, such as Denny's Restaurants, that have been targeted as racist, in an effort to improve their image. This suggests that corporations increasingly understand the symbolic and economic interest of reaching out to blacks as consumers. Simultaneously, they play a very active role in reshaping the collective identity of blacks. The images they are projecting in advertising often affirm to blacks and to the population at large that African-Americans have considerable buying power and are part of mainstream American society (as professionals, college graduates, home owners, etc.). These images constitute a powerful counterweight to negative portrayals of blacks diffused by the news media. This remains unnoticed by proponents of the discrimination perspective, who tend to view the construction of an alternative black public sphere as the only workable solution to the problem of pervasive racism.²²

Marketing specialists interpret the profile of the black consumer

Ethnic or multicultural marketing became the marketing mantra of the 1980s in the United States. This new marketing paradigm views the market as divided into segments and aims at gathering information regarding the customs, traditions, rituals, relationships, and identities of these segments of potential consumers. The three predominant segments are 'blacks', 'Hispanics', and the 'general market'. The black segment is pursued by top advertising agencies and by (often black-owned) black advertising agencies, which have been around since the 1960s. These black agencies have received considerable attention in the recent wake of 'ethnoconsumerism' (Venkatesh, 1995) as they engaged in a fierce struggle with top advertising agencies to control the black market (Lloyd and Hayes, 1995, p. 92; Ayres-Williams, 1998, p. 153). Just as it is the case with 'general market' agencies, these black agencies have come to define black consumers as fundamentally distinct, and contribute to producing and reinforcing this distinctiveness. We want to explore what precisely this distinction is made of.²³

The shift to segmented ethnic marketing has entailed a broadening of the technical tools used by marketing specialists, including the incorporation of interpretive approaches such as ethnographies and personal interviews, to better capture ethnic cultural worlds. These new developments make specialists in black marketing a particularly suitable source of information on black consumers. Again, interviews with members of this professional group provide us with interpretations of the distinctiveness of black consumers, both from the perspective of their expert knowledge of black consumption and from that of their own personal experience as black consumers.

We structure our analytical description by tracing processes of external and internal identification in order to show how our social identity perspective sheds light on dimensions of black consumption that are neglected and/or not integrated by the three perspectives just reviewed. First, we focus on external categorisation and describe how marketing specialists believe (1) blacks use consumption to transform objectified definition of the category 'black' by providing evidence that they share the collective identities most valued in American society; (2) corporations and marketing specialists themselves contribute to transforming the meaning attributed to the category 'the black consumer'. Second, we turn to internal identifications and show that marketing specialists underscore how blacks use consumption to express their commonness and enact the most positive aspects of their collective self-identity. In the process, we emphasise the meaning of consumption for black consumers (namely, our marketing specialists) and also highlight the positive uses of consumption for gaining social membership; without pre-judging its ultimately detrimental effect on the position of blacks, hence challenging central claims of the alienationist perspective. Moreover, we show, *contra* the alienationist, resistance, and discrimination perspectives, that marketing specialists and corporations can have a positive effect on the dominant social

identity of blacks by providing images of blacks as socially inserted, dotted with buying power, and living stable mainstream lives to the stereotypical association between blackness and poverty. We offer a counterpoint to the resistance perspective in particular, which exaggerates consumers' agency and neglects the powerful impact on dominant social categorisation of these identity narratives construed by the marketing industry.²⁴ Our social identity perspective offers a framework for analysing in an integrated fashion aspects of consumption that are depicted in isolation from one another in the literature, and more specifically, the use of consumption to gain acceptance (stressed by the alienationist approach) and the creative use of consumption to express identity (stressed by the resistance approach).

How consumption shapes social categorisation: achieving membership and changing the meaning of blackness

The marketing specialists we interviewed discussed at length the centrality of consumption as a way for blacks to affirm and gain recognition of their full membership in American society. This is framed by them both as an empirical observation, and implicitly as a central feature of the normative model of social membership they diffuse to black consumers. Marketing specialists believe that blacks use consumption to signify and acquire equality, respect, acceptance, and status. Interviewees also consistently prioritise a market-driven notion of equality that equates social membership with high socio-economic status.

Marketers interpret the buying habits of blacks as strongly guided by a desire to be recognised an equal and full participating member of society and to disprove the stereotype of blacks as belonging to an underclass deprived of buying power. This desire is manifested in distinct consumption patterns: in comparison with whites, blacks spend disproportionately more on items that they view as affirming their equal standing. Marketers cite familiar data that lower and higher-income blacks alike purchase more premium brands and luxury products than whites. As the chairman and chief executive officer of one of the main national black marketing firm put it, 'We have more money, or disposable income, for attainable status symbols. It is how we acquire the American dream' (see also Fisher, 1996, p. 15). A strategic marketing specialist from Chicago also emphasised this. According to her, black people consume voraciously because they want to be viewed as good and worthy:

Whites will wear jeans but have wallpaper and carpet at home. They do not have to worry about who they are and what they look like when they go out there. When blacks walk out the door they are affected by this . . . Whites gain more respect through purchases. Blacks with Rolexes are stereotyped as engaging in conspicuous consumption or showing off, instead of gaining prestige by it. They buy their way in, but money does not trump blackness.

For this respondent, however, money still remains a 'passport to acceptance'. 'Acceptance is the first hurdle that blacks have to overcome. The problem is not "not having the ability" but "being accepted for having the ability". Money is a universal door opener.'

Blacks carry a stigmatised social identity on their body. This is why it is particularly important to them to display visible signals of high status (e.g. high-quality clothes), in order to counteract racism, to conspicuously distance themselves from the 'ghetto black' stereotype, and, as one respondent put it, to disconfirm the view that blacks are 'uninteresting', i.e. unlikely to bring benefits through networking. The need to signal worthiness through conspicuous consumption is potentially as powerful as the all-pervasive experience of racism that blacks face on a daily basis. Indeed, we were told that every time blacks interact with whites, they feel the need to refute racist beliefs. In the view of most of our respondents, this is accomplished by driving the best car, drinking the best scotch (especially in public settings), and being impeccably groomed. In contrast to other stigmatised groups (e.g. gays or, in earlier eras, the Jews or the Irish), gaining membership involves not only offering warranties that one personally belongs: it also involves transforming the meaning of the visible stigma, or of the category as a whole. Hence, for blacks, collective status is at stake, whereas, for upwardly mobile whites, mobility is framed in more individualistic terms. To put it differently, for blacks as compared to whites, gaining membership through consumption constitutes a collective act.

In this context, it is interesting to note that data on consumption behaviour confirm that 'dressing up' or 'getting clean' is more crucial to blacks than to whites. Indeed, black women spend 41 per cent more on personal care services than white women. Also, on average, black households spend four times as much on boys' suits and sports coats as their white counterparts. They also spend 46 per cent more than white households on girls' skirts, 67 per cent more on girls' accessories and 86 per cent more on boys' footwear.²⁵ Moreover, despite their lower median household income and lower household expenditures in a lot of product categories, black households outperform white households in pouring money into status consumption.²⁶ They save 4 per cent of what they earn, but are twice as likely as whites, when they purchase a car, to opt for an expensive foreign model such as an Audi, BMW or Mercedes (Reid, 1995, p. E1). They are also significantly more likely than whites to shop at department and speciality stores. (It is the case for 41 per cent of blacks as compared to 32 per cent of whites.) Along these lines, one respondent noted that blacks resist buying stocks and bonds, precisely because they are not a visible form of wealth that one can point to, both to demonstrate to oneself that one 'has it' and to offer concrete proof of one's social membership.

The normative model of social membership adopted and implicitly promoted by respondents equates it narrowly with consumption and makes no reference to other bases of commonality such as common humanity, cosmic destiny, physiology, culture, territoriality, education, religion, nationality, or

citizenship.²⁷ For example, a black top executive working for one of the largest black advertising agencies in the United States believes that consumption is a more important means of signalling and acquiring status for blacks than education or membership in the black Church. In his view, branded consumer goods, often referred to as 'portable status symbols', are obtained more easily than employment, housing, or membership in certain groups and organisations. Also, when asked what images of blacks they try to convey, this and other marketing specialists often described black people shopping at Saks Fifth Avenue and engaging in consumption patterns that are characteristic, not of the average American, but of the top 5–10 per cent of the population, black or white. Although some referred to marketing campaigns aimed at K-mart consumers, implicitly or explicitly, all stressed that consuming luxury items, and not ordinary items ('Remy Martin, not Coors beer,' as one of them put it), provides social membership.

These findings raise concerns about the unintended consequences of these marketing messages: marketers offer to most blacks the contradictory idea that they cannot afford the social membership for which they strive. Moreover, when asked whether they have any reservations about targeting luxury goods to inner-city poor blacks who cannot afford them,²⁸ one interviewee replied that marketers should not judge consumers' decisions, blacks or whites: in line with neoclassical economics, he believed it is the role and privilege of sovereign consumers to make choices after proper deliberation. Therefore, 'some people may buy a Hilfiger coat, but buy only this one coat for two years and wear it every day'.

Marketing specialists believe that they also play a progressive social role, which consists largely in diffusing to clients and to the world at large a more positive image of blacks and a more accurate view of the diversity of the black population, particularly in terms of its purchasing power – what one called demonstrating 'positive realism'. By doing so, they explicitly shape meanings predominantly associated with blackness and transform the external identification aspect of black social identity. This is achieved by, for instance, encouraging corporations to be respectful to blacks, because 'blacks mostly want to consume products that treat them right'.²⁹ It also means publicising the support of corporations for African-Americans (e.g. corporate sponsoring of African-American artistic or athletic events) and fighting the prejudices of conservative whites employed by marketing agencies that target the general market, publicising basic facts concerning the socio-economic diversity and purchasing power of the black population, and *ipso facto* contradicting the racist assumption that most blacks fit the underclass stereotype.

The ability of marketing specialists to diffuse a definition of social membership as acquired through consumption and to reframe the meaning of 'the black consumer' (especially concerning class diversity among African-Americans) should not be underestimated: billions of dollars are invested to diffuse this message. Hence it is extremely likely to influence the formation of the collective identity of African-Americans, both for themselves and for

the public at large. Interviewing a wider range of black and white consumers is needed before we can assess the extent to which the identity of black consumers is indeed reshaped by these images.

Consumption and group identification: what 'black' means to 'blacks'

We now turn to marketers' descriptions of the meanings that blacks give to consumption, which we consider from the perspective of its impact on how blacks define themselves as a group (i.e. on internal identification processes). These descriptions have to do with how blacks define themselves to themselves through consumption, by using commodities to express a self-identity they all value as blacks. Consumption is described here as a means to perform and affirm collective distinctiveness (including racial pride), primarily for oneself. It is also a mean to treat oneself well while rebutting stereotypes.

In the eyes of our interviewees, their distinctive expertise as black marketing specialists resides in their ability to tap the cultural identity and needs of blacks (i.e. going beyond 'just putting white people in ads'). They believe that this is a requirement for a successful marketing campaign aimed at blacks, and that black agencies have an advantage over their white counterparts in reaching this goal: not only do they have more native insight into and 'natural affinity' with that black culture, but also they have more personal experience and invest more energy into understanding what makes blacks resonate with an ad or identify with a specific product. In particular, black marketers spend considerable time trying to understand how blacks differ, and believe they differ, from whites and what makes blacks relate to one another³⁰ – what defines their collective identity. Whereas general market agencies often tend to underplay the black/white distinctiveness, black marketing agencies capitalise on it by using what they believe to be authentically black frames of reference. Their work also consists of making blacks believe that consuming is the most adequate way of expressing cultural distinctiveness and gaining acceptance to mainstream society simultaneously by displaying formidable purchasing power.

Marketers discuss the intrinsic rewards blacks attach to consumption, which has implications for developing a positive collective identity as blacks. They affirm that self-expression is a source of personal pride for all human beings, and consumption is a means for achieving this for whites and blacks alike. For instance, a female executive explains, 'Consumption brings in the pride. "I want to look good. I want to be seen. Make it green or yellow," i.e. visible . . . Blacks try to put on the dog, they like to "get clean". It makes them feel better . . . and they do it for themselves.' However, for blacks, this has both an individual and a collective dimension, to the extent that they use consumption to signify who they are collectively as blacks. In particular, an interviewee indicated that blacks use fashion differently than whites, as it is a dimension of black expressive culture that is superior to 'bland, low-key and not particularly stylish' white culture. Moreover, several marketers view

blacks as taste makers and trend setters in mainstream society, not only in fashion but also in urban lifestyles and music.

Other interviewees underline the importance of consumption in the positive internal identification of blacks by pointing to the use of distinctively black practices to affirm cultural commonness and belonging. Paraphrasing James Brown, one in particular explains that African-Americans use consumption to 'say it out loud that I am black and proud'. 'Now black pride is the recognition of the motherland, Africa. It becomes a personal statement about what "black" and "African-American" mean to you. This often leads to purchasing black artefacts to affirm who you are even if you live in [white upper middle-class] Westport, Conn.'

Another example of this collective affirmation by means of distinctively black practices is adopting a hairstyle that affirms one's racial pride (e.g. being able to 'work for IBM without straightening my hair'³¹). As one respondent puts it, a growing number of African-Americans use consumption to express that 'I can get in and out of corporate America, but I remain this proud black person'.

Respondents also discuss the importance of consumption in signalling blacks' sense of a good life and general well-being, and in simultaneously affirming one's worth and status for oneself in the face of pervasive discrimination – which we also consider as part of the internal racial identification process. In the eyes of a respondent who defines herself as 'very materialist', a top-brand car communicates that:

you can afford it and you are worth it, i.e. you are worth the best. When your history tells you that you are less than, and only worthy of the worst, it feels terrific to be able to say, 'I don't care what you might think, I know I am worth it.' It feels very good. When you don't see yourself represented with relevance and respect, if you can get it for yourself, it's important.

She suggests that the ability to consume is integral to affirming her self-worth and racial (group) identity simultaneously. It helps counterbalance negative external categorisation: consuming rebuts racism not only for others, but also to oneself by providing material support to one's self-worth – positing, of course, that self-worth is correlated with buying power.

That consumption is used to facilitate the expression of a positive racial identity is also demonstrated by the insistence of marketing executives that blacks consume for their own satisfaction above all, as opposed to 'pleasing whites'. This is illustrated by the president of one of the advertising agencies who described the situation thus:

We are not trying to impress white people any more. We are not begging for acceptance. We just consume what we like. The attitude is 'I don't care if you don't like me. But through consuming I want to let you know that "I know". This is who I am. I want to be perceived as being "in the know".'

This interviewee is implicitly pointing to the role of consumption in leading one to acquire a self-image as being 'on the ball', i.e. as someone who knows

how the (status) game is played, and therefore as someone who needs to be contended with.

A positive group identity is closely linked with consumption, social membership, and the demonstration of purchasing power. In this context, the expression of cultural distinctiveness and racial identity is often framed primarily in terms of tastes slightly different from those of whites or in the use of different brands but of equal status within a product category (Cadillac versus Mercedes, Hilfiger versus Calvin Klein, Kool Aid versus Coke, etc.). Or else it simply means using the same goods differently. As one senior marketing executive who exclusively shops for clothes at Brooks Brothers puts it, 'I walk out of there and I have my own style, my own way of putting things together. I really don't look like the other white guy who shops there.' For these marketing specialists, their shared identity as blacks is largely defined and performed in the sphere of the market, through commodities, perhaps in lieu of through the affirmation of a cultural distinctiveness in aesthetic/expressive culture, through a shared religious culture, a shared history, or common patterns of social interaction. More interviews are needed before assessing how these various conceptions of racial commonness are articulated. Our data suggest that marketing specialists conceptualise their own racial belonging as well as social membership through consumption, just as they do for African-Americans in general.

Conclusion

This exploratory study of consumption in light of the collective identification processes of group formation and social categorisation offers new analytical tools to examine the link between social identity and the practice of consumption. We trace how collective identity for blacks is manifested predominantly through the interplay of internal and external definitions of social membership in US society. We analyse the interaction between how marketing specialists, considered here as black consumers, use consumption to define their racial identity (for themselves) and how this group, as professionals, attempts to influence the widely available categorisation of blacks as a group, both for blacks and for mainstream society. This analysis helps us avoid some of the pitfalls of existing research on black consumption by accounting for dimensions of consumption that are neglected in the literature or by integrating and correcting dimensions that are generally considered independently from one another.

On the one hand, the alienation and discrimination approaches overemphasise the impact of the social categorisation process on blacks' use of consumption: in a nutshell, they equate the representations of blacks' social standing in advertising with blacks' self-understanding of their social membership. Unlike the resistance and social identity perspectives, they do not investigate the social processes by which blacks internalise and vest with new meaning the categories that are made available. And, unlike the social

identity perspective, they also neglect to analyse how black marketing executives transform the images of blacks that are available to blacks and to US society at large. On the other hand, the resistance approach overemphasises the power of group identification, i.e. how blacks use consumer goods in an innovative way to counteract social marginalisation and discrimination. Unlike the social identity perspective, this approach downplays the power of dominant social narratives produced by marketing executives and ignores how blacks use consumption to gain social membership.

In contrast to the other approaches, by tackling the interaction between group identification and social categorisation processes, the social identity perspective does not prioritise only one of these dimensions. It gives due emphasis to the subjective understanding of black consumption practices without predefining the innovative potential of consumers in transforming the meaning of consumer goods. It also refines the analysis of the social categorisation process by showing, *contra* the alienationist and discrimination perspectives, that the 'categorising work' of marketers can have a positive impact in transforming the meaning of the category of 'blackness' (away from the underclass stereotype) and improve the symbolic status of blacks. Thereby, it offers a more balanced and integrated reading of social mechanisms that underlie blacks' use of consumption in defining their place in contemporary US society.

The interviews suggest that consumption is uniquely important for blacks in gaining social membership. Their experience of racism makes the issue of membership particularly salient, and consuming is a democratically available way to affirm insertion in mainstream society. This is facilitated by the prevalence of market-driven notions of equality, and an equation of social membership with purchasing power, found in US society at large, and promoted by marketing specialists in particular, both for consumers and for themselves. These marketing specialists play a central role in producing some of the dominant narratives associated with the category 'black'. In their view, by providing images of blacks as valuable consumers, they contribute to improving the collective social standing of blacks in the mainstream status hierarchy and counterbalance negative stereotypes of blacks as marginal, low-status and criminal elements of US society. Yet we noted that equating social membership with buying power makes it largely unreachable for a large number of whites and blacks alike.

At the level of the group identification process, our interviewees underscore the importance of consumption for the expression of collective cultural distinctiveness by displaying commonness, i.e. tastes that are characteristically black. Hence consumption plays a central role in internal identification processes as well as in group categorisation, in how a collectivity defines itself for itself through commonalities and a sense of shared belonging, and how outsiders recognise it as distinct. At the same time, the interviews also suggest that marketers promote the equation of social membership with conspicuous consumption. Consumption thus becomes a simple and effective

way of expressing both black cultural distinctiveness and membership in mainstream society by virtue of demonstrating equal purchasing power with whites. And through the dynamic interaction of internal and external definitions of social identity we witness the construction of the 'black consumer' and the transformation of the meaning of 'blackness'.

Of course, at this point our study of the group identification dimension suffers from a clear middle-class bias. Our interviewees are members of the upper middle class and are representatives of a profession that devotes all its energies to the role of consumption in social life. Therefore the broadening of our group of interviewees should be the logical next step for our project. The incorporation of a wide range of black and white consumers that vary across class, gender, age, and occupation will clearly shed new light on the interaction of internal and external definitions of collective identity. Thereby we also hope to sharpen the comparative focus of our analysis to (1) reveal how varying conceptions of social membership correspond to the views of marketing specialists and middle-class consumers, (2) explore more closely black and white differences, (3) extend the analysis to the study of the construction of race-specific tastes, and (4) explore whether other stigmatised groups (e.g. women or gays) understand consumption as an important tool for gaining membership.

By extending this exploratory study this way we hope to demonstrate the analytical potential of the social identity perspective in consumption research at large. This perspective can do more than transcend the limitations of alienationist, resistance, and discrimination perspectives. It can also help us move beyond existing paradigms that waver between postmodern arguments that advocate the individualisation and fragmentation of consumption profiles and deterministic approaches that reduce the association between social identity and consumption to a clear correspondence between consumption patterns and class position.

Appendix: Top marketing firms specialising in the black ethnic market, 1997 (\$ million)

- 1 Burrell Communications Group (167.999)
- 2 Uniworld Groups (162.000)
- 3 Don Coleman Advertising (111.000)
- 4 Chisholm-Mingo Group (73.712)
- 5 Muse Corder Chen & Partners (50.000)
- 6 Carol H. Williams & Advertising (48.500)
- 7 Sukes Communications (23.958)
- 8 Wimbley Group (23.000)
- 9 R. J. Dale Advertising & Public Relations (22.700)
- 10 Spike DDB (22.500)
- 11 E. Morris Communications (16.100)
- 12 Andersen Communications (15.000)
- 13 Caroline Jones (15.000)

- 14 Circulation Experti (12.500)
- 15 Vince Cullers Advertising (7.600)
- 16 Jesse J. Lewis & Associates (6.500)
- 17 The King Groups (6.000)
- 18 Visions USA (3.906)
- 19 Images USA (3.800)
- 20 Beach Advertising/Beach Graphics (3.394)

Source Roz Ayres-Williams (1998, p. 153)

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Notes

- 1 The primary target of these agencies, the black population, is heavily concentrated in these metropolitan areas. In fact, blacks make up a large share of the population in several major metropolitan areas. More than three in ten residents of the New York metropolitan area are black. New Orleans, Baltimore, Atlanta, and Washington all have populations that are more than one-fourth black. See Fisher (1996) and Edmondson (1997).
- 2 A group is rooted in processes of internal definitions, while a category is externally defined. Jenkins defines 'category' as follows: 'A class whose nature and composition is decided by the person who defines the category; for example, persons earning wages in a certain range may be counted as a category for income tax purposes. A category is therefore to be contrasted with a group, defined by the nature of the relations between the members' (in Mann, 1983, p. 83).
- 3 For a full list see Jenkins (1997, p. 210).
- 4 On advertisers as meaning producers see Jackall and Hirota (forthcoming).
- 5 On identity work see Snow and Anderson (1987). On symbolic communities see Anderson (1991).
- 6 For more network-bound approaches to identity see Tilly (1998) and Somers and Gibson (1994). For a discussion of cultural structures see Sewell (1992), Hall (1992) and Wuthnow (1987). For a more macro view of institutionalised categories see Jeppeson (1991) and Dobbin (1994).
- 7 On this topic see also Lamont (1992).
- 8 Austin (1994, pp. 158–9), citing Cornel West (1993, pp. 5, 16, 14).
- 9 Nightingale (1993, p. 135) argues that the 'kids' experience of exclusion ... has made their participation in mass culture particularly urgent and enthusiastic, for the culture of consumption has given them a seductive means to compensate for their feelings of failure'.
- 10 They are constantly buying things – house, automobiles, furniture and all sorts of gadgets, not to mention clothes. Many of the furnishings and gadgets which they

acquire are never used; nevertheless they continue to accumulate things. The homes of many middle-class Negroes have the appearance of museums for the exhibition of American manufacturers and spurious art objects. The objects which they are constantly buying are always on display' (Frazier, 1957, p. 229–30).

- 11 Cited in Page (1992, p. 15).
- 12 See also William (1997) who argues that the life of the underclass has deteriorated greatly owing to the flight of its most upwardly mobile residents. On the working class see Lamont (1992).
- 13 For a description of the Frankfurt school approach to consumption see Slater (1997, chapter 4).
- 14 Hall (1992, p. 263). See also Gans (1975, pp. 261–78).
- 15 Umberto Eco, cited in Hebdige (1979, p. 103).
- 16 Elizabeth Cohen (1992) cited in Fiske (1994, p. 481). See also Austin (1994, pp. 155, 165–6) about how boycotts have been employed by blacks on varying occasions as an effective strategy to protest against mistreatment as customers and how consumption has been viewed as an exercise of collective economic power. Feagin and Sikes (1994, pp. 348–50) also discuss the role of campaigns such as 'Buy black', 'Build black', and 'Black Dollar Days', and illustrate how the mobilisation of consumption is part of the repertoire of collective action used by blacks.
- 17 An important body of literature, produced mostly in the field of economics, on consumer discrimination is not reviewed here in detail but deserves notice. For a review see Yinger (1998). See also Fix and Struyk (1993). This literature shows the resurgence of economists' interests in the problem of discrimination in market transactions. Although economic research inquires into the multiple layers of racial discrimination in the consumer market, analysis tends to be confined to specific product markets such as housing, car, and food markets, and its primary aim is to quantify the degree of discrimination. These studies usually do not explore the ramifications of racial discrimination on the social fabric of society and on the collective identity of discriminated groups. There is also growing research at the interface of economics and sociology examining unequal patterns of wealth accumulation or adaptation strategies of consumers under conditions of segregation. The latter research aims to complement both theories of consumer behaviour and institutional racism by scrutinising how black people in poverty cope with the burden of basic provision. See Olivier and Shapiro (1997) and David Crockett (n.d.).
- 18 She is referring to buzzers, which are screening devices installed in increasing numbers in New York stores, expected to reduce the incidence of robbery. The door of the store will be unlocked by the salespeople or the owner if the buzzer is pressed by a desirable customer.
- 19 Redlining is a practice by which, for instance, banks and mortgage institutions proscribe lending in certain (often predominantly black) neighbourhoods.
- 20 For a survey of most common discriminatory instances see Austin (1994, pp. 148–50). For a detailed ethnographic account see Chin (1998).
- 21 At the same time Caldwell (1991) notes that 'overt racist caricatures of the past expressed in the subtle, symbolic code of contemporary racism' also continue to prevail in some consumption-related contexts. The attack on African-inspired dress by employers forbidding female employees from wearing hair braids or kente cloth remains unchallenged, albeit the practice casts serious doubt over the

- expression of racial identity through the free choice of dress style. For more examples see also in Austin (1998, pp. 162–3).
- 22 Austin (1998) argues that the status of the black consumer will improve only if the status of the black producer and seller is enhanced. Black consumers will be able to shop freely if the production side of the black public sphere, i.e. black enterprise activity, is gradually expanded. So '[w]hat blacks need is a rational nationalism which focuses upon building a nonseparatist, expansive, cooperative black public sphere' (Austin, 1998, p. 147).
 - 23 It should be evident that we understand the interpretations of black consumption by marketing specialists as social constructions that produce, but also react to, dominant narratives on black consumers.
 - 24 Again, the resistance perspective ignores the negative as well as the positive impact of marketers in shaping dominant social narratives.
 - 25 See *Chicago Times*, 28 August 1996, p. 1. See also 'The African-American market: community, growth and change', *Sales and Marketing Management*, May 1991, p. 75.
 - 26 The median money income of households in 1996 was US\$37,161 for whites and US\$23,482 for blacks (*Statistical Abstract of the United States*, p. 468, table 739).
 - 27 For an illustration of how different definitions of social membership are used in the drawing of racial boundaries see Lamont (forthcoming).
 - 28 Inner-city markets are aggressively pursued by marketing agencies because, for instance, as a study, *Catalysing Private Sector Inner City Retail Investment and Services*, suggests, inner-city residents strongly prefer brand products and are willing to pay more for them. The study's findings also note that inner-city dwellers have up to six times as much purchasing power, per square mile, as surrounding areas and that their annual retail spending power adds up to US\$85 billion. The research, which focuses on six inner-city markets (Atlanta, Boston, Chicago, New York, Miami and Oakland), found that 'quality' brands are a form of insurance for consumers. See *Chisholm-Mingo Matters*, 2, November 1998.
 - 29 Research shows that blacks often go to the same stores where they know that they are treated right. They especially do not go to new stores when they are with their children because they do not want them to witness maltreatment. The 1993 Yankelovich African-American Monitor Survey showed that 61 per cent of blacks decide where to shop on the basis of whether they are 'treated the same as other people' (cited in Reynolds, 1993). Blacks know, for instance, that General Motors treats blacks well while Ford does not. Other companies show a lack of respect and lose their black customers by displaying negative images of blacks that are truly insulting. Domino Pizza had an ad saying that their pizza is so good that even savages will like it, showing the picture of a black man. Benetton had an ad portraying a handcuffed black man. When companies realise that they have estranged their black clientele, they will often approach black advertising agencies to try to have their image repaired.
 - 30 These marketers use a lot of interpretive, qualitative techniques. One marketing specialist gave us a detailed account of some of their special research endeavours – the grandmother research, father–son, mother–daughter, cab driver interviews – and mentioned that he often just hangs out with the black men in the office's neighbourhood to engage in some informal ethnographic study.
 - 31 Hair care products are one of the few acceptable 'exclusionary' products that are sold to blacks. Moreover, hair grooming is probably the most well documented

area of blacks' distinctive consumption practices. See, for instance, Rooks (1996). Blacks are otherwise very sensitive to being the target of 'ghettoised', exclusionary products. The biggest marketing failure involved a menthol cigarette that was marketed only to blacks. It created a public uproar in the black community not only because the product was detrimental to health but also because the utterly negative campaign was confined to the black population.

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8

Hyperembedded demand and uneven innovation: female labour in a male-dominated service industry

Bonnie H. Erickson

In service industries, demand for a service is inseparable from demand for the kind of people seen as suitable for providing the service. The fusion of service and service provider implies that using a new kind of person to provide a service is a true innovation, and one that may meet resistance to the extent that it violates entrenched expectations of who providers should be.

One important example is women providing services once monopolised by men. This is a large-scale innovation, involving many people across many industries, part of the massive movement of women into paid employment that was one of the twentieth century's major labour-force trends. The innovation was a very uneven one, both within and between industries: sometimes men still control a kind of service, sometimes women have entered it but have been 'reseggregated' into particular jobs defined or redefined as suitable for women (Reskin and Roos, 1990), sometimes women do jobs defined as men's work. To account for this variability I draw on one industry, the private security industry in Toronto, which usefully exemplifies overall trends. Security work was once done by men only, is still widely seen as work mostly done by and suited to men (e.g. Macan *et al.*, 1994), and is still done mainly by men in Toronto (Erickson, 1996). Though men dominate overall, the role of women varies widely from one part of security to another: women are sometimes absent, sometimes in jobs redefined as suitable for women, and sometimes in jobs very much defined as men's work.

I trace such variability of innovation to the complexity of the relational matrix within which innovation is embedded. The matrix includes several kinds of key actors: employers, service providers, potential employees, clients, and targets to whom service work is directed on behalf of clients. In reviewing research on gender segregation at work, Reskin (1993) calls for work on 'all labour market actors', noting that research often looks only at the supply side (employees and potential employees) or the demand side (employers) and rarely looks at clients. The work reported here is novel in considering clients, and in adding the very much neglected role of targets, and above all in looking at the interconnections among all these actors. Part

of the complexity and impact of the relational matrix lies in the actors involved, and in particular in whether or not there are targets for a service, since the presence of targets sets in motion certain processes favouring innovation at a greater rate than found in parts of the industry not in contact with service targets. Another part of the complexity and impact of the relational matrix lies in the fact that it is a connected matrix, with each part affected by what goes on in others. Events in just one part may block innovation in the rest, or, may trigger a spiral positive feedback fostering innovation.

Innovation varies with both real and perceived gender distributions and gender homophily within the matrix. Real gender distributions for key kinds of actors either limit or enable innovations. For example, employers can use female labour in innovative ways only to the extent that they have female service providers on hand or can recruit them from potential employees. Real homophily also shapes innovation, for example limiting it to the extent that predominantly male employers feel more comfortable with male employees or enhancing it to the extent that the growing number of female clients prove more receptive to female service providers. Previous research has begun work on homophily and noted both that it has effects and that these are not universal (Reskin, 1993); responses to men and women service providers seem to involve not only the responder's gender but other factors such as expectations about the appropriate gender of the provider of a particular service (Fischer *et al.*, 1997). The present study both extends this work and adds a relatively novel aspect, the vital importance of perceived gender distributions and gender homophily. For example, employers will be more eager to get female service providers if employers believe that women clients are becoming more numerous and prefer to be served by women; employer beliefs will thus open up new jobs for women even if the employers are not entirely correct.

Previous arguments have discussed how various kinds of economic processes are embedded in social relationships (Granovetter, 1985) or in networks of ties among a few kinds of key actors such as garment companies and firms which sew for them (Uzzi, 1996). But innovation as discussed in this chapter is more than merely embedded in a few kinds of ties. Since innovation depends on the complex feedbacks among different types of things – interconnected actors in the relational matrix, plus gender distributions and gender homophily real and perceived – it is hyperembedded. Hyperembedded demand for female labour generates highly variable demand, depending on local variations in the many interrelated demand factors. Thus there is no such thing as 'the' demand for women in security, but instead many different micro-climates of demand. Industries differ in the complexity and variability of their relational matrices, and hence in the extent to which they generate uneven demand for innovative forms of labour. I will end the chapter with some speculations about industry variations and their sources.

Women as innovation

The Toronto City directories of the nineteenth century listed some individuals in security occupations (watchmen) and from 1877 onward included advertisements for security firms. Wherever security personnel were identified as men or women, they were always men. However, by 1971 women were 7 per cent of the guards in Canada and 17 per cent of the investigators, and by 1991 they were 24 per cent of guards and 23 per cent of investigators (Campbell and Reingold, 1994). Thus it is innovative to use women at all in work that was so long done only by men and is still done mostly by men. Moreover, women service providers may change the nature of the service. Many industry informants (including men and women, employers and employees) claim that men and women do their jobs somewhat differently. The differences informants claim to see are in line with standard accounts of both gender socialisation and gender stereotypes in our society; for example, women are thought to be better at dealing with people, while men are thought to be stronger and more aggressive. To the extent that these perceptions are accurate, women do service work differently while 'doing gender' (West and Zimmerman, 1987). At the same time, they do service work in ways more consistent with the changing self-definition of the industry. Security leaders once defined their industry as protective services and emphasised masculinised virtues such as the physical strength, courage, and aggression of guards or investigators, or the physical strength and technical skills of alarm personnel. But more recently managers and owners give more weight to security as a service and emphasise the patience, courtesy, and other virtues of the service provider. These virtues overlap considerably with the stereotypical virtues of women, who in fact do the majority of service provision in lower-status industries other than security. Thus the growing use of women in security may ultimately be an adaptive innovation, bringing greater people skills into the security labour force.

The use of women service providers is a very unevenly distributed innovation. Use varies between firms, many having no women outside of (stereotypically feminine) clerical jobs. In 1994 I supervised a telephone survey of 208 security firms listed in the Yellow Pages, with a response rate of 94 per cent. Twenty-nine per cent reported that they had no women employees, and 60 per cent reported that they had no women in non-clerical jobs. Use varies by hierarchical level, with women more common at the bottom than the top. An earlier survey of people in the industry (partially reported in Erickson, 1996) found that women were 30 per cent of employees and supervisors but only 9 per cent of managers and 6 per cent of owners. Use varies by sector. In following up the 1996 telephone survey I found that hardware sector employees were divided among better jobs almost exclusively dominated by men and worse jobs increasingly held by women. The better job, alarm installation, was defined as suitable for men (because of their supposedly greater strength and technical skill) and had better pay and working conditions such as autonomy (Erickson, 1993). The worse job, alarm monitoring, was

defined as suitable for women (because it is office work calling for great patience in dealing with clients on the telephone). Though alarm monitors were once all men, the job is being redefined as women's work as more and more women do it. This sector of security thus exemplifies the standard description of 'resegregation' following the entry of women into men's work (Reskin and Roos, 1990). But the guard and investigation sector of the industry shows an entirely different pattern. Though investigation work is the better job (better paid, more autonomous, and more prestigious) the proportion of women investigators is at least as high as the proportion of women guards. Instead of varying by type of job, the use of women varies by the type of site, with women guards or investigators more often sent to work in settings where there are many women present.

Since I wanted to explore some complex and little-studied aspects of the entry of women into male-dominated labour markets, I conducted an intensive qualitative follow-up to the above-mentioned industry telephone survey of 1994. The two graduate students who conducted the phone survey (one male, Slobodan Drakulic, and one female, Patricia Albanese) identified firms that reported at least one woman in work at least somewhat innovative, that is, jobs other than clerical ones. They then sought out and interviewed both men and women in each of the major kinds of security work: owners, managers, alarm installers, alarm monitors, alarm sellers, guards, and investigators. A hundred and three respondents from thirty-three companies gave detailed discussions of work and gender in security. Since this was deliberately not a random sample, no inferential statistics will be reported. The goal is to use rich qualitative data to generate theory, more than to test particular propositions.

Matrices of multiple relevant types of actors

Discussions of demand often focus on ties among actors of one kind (such as the consumer networks through which demand for a new innovation diffuses) or between actors of two kinds (such as ties between producers and clients). But demand is not just embedded in ties among a limited set of actors; it is hyperembedded in matrices of ties among actors of several kinds. The matrix as a whole matters in at least two ways. First, a blockage in one part of the matrix can block innovation throughout it; or positive experience with innovation in one part can trigger related, supportive changes throughout. Both negative and positive network feedback spirals are possible, depending on the features of particular matrices as discussed below. Thus innovation will be necessarily uneven, self-reinforcing in some networks and blocked in others, within the 'same' industry. Second, actors within a matrix make decisions in terms of what they think is going on in all the other parts of the matrix. For example, a manager deciding whether to send a man or woman to guard a construction site will consider what men and women are already employed, whether more could be recruited, what the client would

think of a man or woman guard, and how potential troublemakers at the site will react to a male or female guard. The complexity of these calculations, and the variable nature of their inputs, again contribute to the heterogeneity of innovation.

There are several major types of actors in the Toronto security industry, as classified for the purposes of this chapter. Employers include both company owners and managers who have some responsibility for recruiting and assigning employees, and who thus make critical decisions about whether or not to use female labour at all or to use it in especially innovative ways. Providers directly provide services for clients. They guard premises, investigate problems, and sell, design, repair, install, or monitor security systems. In small firms, owners often spend part of their time as service providers themselves, so some spoke both as employers and as providers. Similarly, some managers who hire and fire also do some of the same work their employees do. We encouraged people to report on any kind of work they did. Managers are sometimes employers and sometimes do the work of providers, but do not overlap fully with either of these other groups, and deserve separate attention as a distinct and high-status group of employees. Clients buy and use security services. Targets are people other than clients toward whom services are aimed on the client's behalf. For example, a guard at a shopping mall has the mall management for a client, but also has a variety of targets: potential thieves to watch for, delinquents to eject, peaceful customers to assist. As will turn out to be critical in this analysis, some providers deal with targets directly, as the mall guard does, while other providers have only indirect and hypothetical targets. People working in the hardware sector provide physical security systems designed to detect and ward off intruders; no one may ever intrude, and even if they do, the hardware service provider will not encounter them. Thus relations between providers and targets are seen as critical in the guard and investigation sector but as a non-issue in the hardware sector. The presence or absence of this piece of the matrix has pivotal consequences for innovation, and is a major reason for the striking difference between the two sectors in the use of female labour. Finally, potential employees are the potential labour pool from whom new people might be recruited.

All relations among and between these kinds of actors are important parts of the relational matrix for innovation, but some of them are beyond the scope of my research. Since only people in the security industry were interviewed, I have direct information only about (1) employers and providers as reported by both, and (2) links between employers and providers on the one hand and clients, targets, and potential employers on the other, as reported from the industry side only. I can only conjecture about ties among clients, targets, and potential employees, though these are obviously important topics for future research.

Multiple processes and distributions

Innovation is hyperembedded not only in a complex matrix of ties among multiple actors, but in the distribution of women in each kind of actor role and in a complex set of related processes. Sometimes gender distribution can affect gender innovation quite directly through a simple process of limited supply. For example, if there are very few women potential employees with the electronic and construction skills needed for alarm installation, this alone can block the innovative use of women installers.

But other effects of gender distribution are more subtle. What matters is not only the actual gender distribution but the distribution as perceived by key actors. For example, women potential employees are more likely to seek or accept security jobs if they think there already are women in those jobs, which signals that the jobs are attainable and will include fellow women as potential supporters. Since some security jobs have more publicly visible gender distributions than others, their real gender distribution has stronger impacts on potential employees.

Another relevant process is homophily, or the tendency to feel more attracted to and comfortable with people who are similar in salient respects. Gender is always salient to some degree at work (Ridgeway, 1997) and social relations are more common and more comfortable between co-workers of the same gender (e.g. Ibarra, 1997). However, homophily does not rule all; people sometimes value service provided by someone of the same gender more, and may prefer to interact with a server of the same gender, especially if the interactions will be repeated, but they may also prefer service or be less critical of service provided by someone of the gender thought to be appropriate to that service (Fischer *et al.*, 1997). Thus we must consider whether women providers get more positive responses from women clients, whether men managers feel closer to men employee providers, and so on. To the extent that homophily affects work interactions and judgements, the innovative use of female labour will be more welcomed and successful where women workers deal with a higher proportion of fellow women among all the kinds of actors they must deal with.

Again perception matters as much as reality: important decisions get made in terms of what key actors believe about gender homophily among other actors. For example, employers often send women guards to sites with a high proportion of women, and men guards to sites with a high proportion of men, because employers believe that each gender can deal best with its own.

The planned itinerary

To explore the complex webs of ties among the several kinds of actors implicated in security work, I will begin with the nucleus of actors directly involved in the service contract: employers, providers, and clients. First I will discuss the simpler case, the hardware sector, where there are no direct targets. I will

describe the kinds of work done, the extent of innovative use of female labour as direct service providers, and how this is rooted in the web of ties among key actors. Then I will move to the guard and investigator sector to explain how the dynamics in matrices change when targets are also included among the actors. Then I will discuss managers in both sectors, since there is little difference between the sectors for managers but managers differ from more direct service providers at employee level such as monitors or guards. Finally I will move on to discuss potential employees and the impact of the rest of the matrix on recruitment from this pool of potential labour.

Employers, providers, and clients in the hardware sector

In the hardware sector the main kinds of providers are installers, monitors, and sellers. Installers work with a wide variety of security systems: home alarms, card access control systems, video surveillance systems, etc. Simpler systems do not require much strength or skill to install, and anyone (including women) can easily learn to install them. Installing the more complex systems calls for knowledge of some combination of electronics, computer hardware or software, cameras, and construction; installation may also call for some strength, as in carrying a heavy camera up a ladder. Since the installer works at the client's premises and explains the system to the client, installation work always requires good people skills and the ability to work autonomously. Thus the job includes traits our society sees as stereotypically masculine and feminine. When the more sophisticated systems are set off, they send electronic signals to a station where monitors will then check to see whether the alarm is a false alarm (as is true over 90 per cent of the time) and then either help to reset the system (if the alarm was false) or notify the appropriate emergency service such as the police. Monitors need to understand system technicalities well enough to advise clients over the phone, and also need to be patient and courteous with clients who are often demanding or rude. Thus this job also calls for a mix of feminised and masculinised traits. Sellers go to a client's home or place of business, explain what his or her company's systems can do and how to work them, and negotiate prices for services. Again this calls for both 'male' technical sophistication and bargaining and 'female' people skills.

Though the actual work in these three jobs is not overwhelmingly better suited to the stereotypical man or woman, the jobs are still strongly gendered. Almost all installers were men; we heard of half a dozen women installers, but could find only one woman who had worked as an installer recently and a couple who had done so in the past. Most sellers are men, though women are making inroads, and most monitors are women. As is often true, the jobs done by men or women are seen as more suitable for men or women respectively. Employers and providers held similar views: they reported that installation was either equally suitable for men and women ($n = 8$) or more suitable, sometimes much more suitable, for men ($n = 8$) while monitoring was either

equally suitable ($n = 4$) or more suited to women ($n = 4$). The perceptions of monitors are especially interesting in light of the historical fact that all nineteenth and early twentieth-century monitors in Toronto were men: prevailing ideas about men's and women's work are mutable.

Thus the innovative use of female labour is quite low in the hardware sector. Women have entered the sector, but have largely been directed into lower-status, lower-waged, office-based monitoring work which has been redefined as women's work. One manager described monitoring stations as 'pink-collar ghettos'. Men have retained control of virtually all the installation work and most of the selling work, both much better jobs and still defined as men's work. In a typical account of the sharp gender division, one respondent described installation as 'probably better suited to men; although a woman could do it, you are better off having a woman in an office on the phones'.

How is this gender segregation of work embedded in ties and processes? Both employers and providers observe the existing gender distribution within the industry; employers, providers, and clients all observe the gender distribution of work in similar jobs in the wider labour force (electronics, telephone-based client services, etc.). Work that men are doing seems to be naturally men's work, and work that women are doing seems to be naturally women's work (even if once done by men, like monitoring). Within the industry, homophily tends to underline this equation of the actual with the suitable. Almost all hardware employers are men (the few woman company owners are co-owners with their husbands) and most have selling and installation experience, but not monitoring experience. They can work comfortably with male installers and sellers and leave the monitoring to women. Perceived homophily also plays some part in employer-provider relations, since some employers explicitly questioned the ability of men and women to work well together as installers. Turning to ties to clients, homophily also has a conservative effect in that men clients sometimes impede women sellers. Several female sellers, but no male sellers, reported that some clients challenged their competence (male clients in all cases). For example, one saleswoman said, 'I've had weird cases, where I'll go to the home and the male, he'll say, oh, can't believe we've got a female doing this job ... they don't think females understand the technical side of things.' But by the same token, homophily offers a small opening for innovation from the client side, since a growing number of clients are women and women sellers do not report similar challenges from female clients. The opening is a small one because there are few women sellers, and essentially no women installers, for women clients to meet. These gender distributions and relations feed back into employer perceptions of what clients like. When employers were asked whether their clients preferred women or men as installers, nine said clients had no preference, three said clients preferred men, and four said they could not tell because they had never had a woman installer. And one added that clients prefer women in sales.

Thus the nucleus relational matrix in the hardware sector generally holds innovation back, though the rising tide of female clients opens up some

opportunities for female hardware sellers. Conventional patterns of use of female labour largely reproduce themselves in large part because the relational matrix does not include direct interaction with the targets of hardware services. Targets are the burglars or other undesired intruders who should be deterred or caught through the security systems after the sellers and installers are gone. Even monitors interact not directly with targets, but with systems, clients, and the emergency services that monitors call if necessary. The lack of any direct ties to targets, even potential ties, prevents a set of dynamics that can open unconventional jobs to women, as we shall see below for the guard and investigation sector.

Employers, providers, and clients in the guard and investigation sector

Security guards perform unskilled tasks such as patrolling buildings, writing reports, and being polite and helpful to any people they need to work with. Guards in most posts rarely if ever encounter a threatening person, and if they do, their orders are to stay out of trouble and contact the police or other emergency service. Thus employers and providers agree that the good guard has good interpersonal skills, good appearance, reliability, literacy and common sense – a description consistent with the stereotype of a low-status female service provider. Investigators have more varied, autonomous, and glamorous tasks: going under cover to look for criminals, checking possible frauds, tracking missing persons, and so on. Their work calls for a more mixed set of traits both masculinised (for example, the aggression and courage needed to arrest shoplifters who sometimes fight to get away) and feminised (for example, being good at getting information out of people by talking with them). Not only is investigation more masculine in its job description, but it is better work: better paid, higher in prestige, more independent, more interesting (Erickson, 1993).

Using women as guards or investigators is truly innovative. First, in the early history of the industry investigators and guards were always men. Second, these jobs include some features inconsistent with the female stereotype. Both guards and investigators run the risk of physical confrontations, and both sometimes have to act as agents of social control over suspected criminals, and moreover the people to be controlled are often men. (See McCaughey, 1997, on the perceived impossibility and impropriety of fighting women, and Heidensohn, 1992, on resistance to women in social control and policing roles.) These unfeminine aspects of work are especially prominent for investigators, while the lower-status guard job has some feminised components. Thus if investigators and guards were like installers and monitors, most investigators would be men and most guards would be women. But this is not so: the proportion of women in these jobs is similar and considerable. (As noted above, the Canadian census found about a quarter of the people in each job to be women.) The extensive penetration of women into these jobs is reflected in their perceived suitability. Thirteen employers and

providers agreed that investigation is in general equally suitable for men and women; twenty-one of twenty-four employers and providers agreed that guard work is in general equally suitable for men and women. Why is the innovative use of female labour so much more extensive and accepted in this sector than in the hardware sector?

Part of the answer lies in the self-reinforcing nature of the gender distribution: because many women have innovative work in this sector, many employers, providers and clients have learned from experience that women do such work and do it well, and thus are welcoming to additional use of women as guards and investigators. But this does not tell us how the female beachhead got started in the first place, or, in particular, what overcame the same resistance that women meet in the hardware sector. In both sectors, homophily largely works against the novel use of female labour. Employers are overwhelmingly men and they admit to feeling closer to their male than to their female employers. Men are a majority of all the provider roles in which women are innovative (sellers, installers, guards, investigators) and some women report trouble in being accepted as a member of work teams in which the other workers are usually all men. Men are still a majority of clients. Clients are also an obstacle to innovation because both male and female clients have less experience with female providers than do people in security itself, and hence less chance to learn to value this innovation. Notably, two in ten of our respondents report that men and women in their own companies treat them differently, but twice as many (four in ten) report that men and women clients treat them differently; gender is more of an issue for the less experienced outsiders. And of course in both sectors the major provider jobs were initially filled by men and hence defined as suitable for men.

To understand how such obstacles are gradually being overcome, we must turn to another kind of actor in the relational matrix: targets.

Guards, investigators, and their targets

Unlike hardware providers, all guards and investigators may have to deal directly with the targets of their work for clients, and many deal with targets frequently. When employers assign providers to a site populated mainly by women, they like to send women providers. The rationales given for this differ somewhat for guards and investigators but are equally persuasive in both cases.

In the case of guards, employers argue in part in terms of perceived homophily: women guards can feel more comfortable and work more effectively in 'women's' places than men can. Guards themselves agree. For example, a male guard said, 'It would not be nice for a man to walk into a woman's hospital.' Sometimes respondents express perceived homophily less directly by the way they describe sites suited to men or women guards, for example saying that men are better suited to working construction sites, well known to

be dominated by men. Employers also argue in terms of gender stereotypes: women should not be sent to any site where they may face the risk of physical assault (such as a solitary night patrol), but should be preferred for sites such as apartment buildings where most of the work is being polite and helpful to residents. Interestingly, the very strong feelings against exposing women to risk melt away when the effect of perceived homophily is strong. The most dangerous kind of guard post is in a hospital. Whereas most guards never get into a fight, hospital guards routinely have to struggle with deranged or criminal patients. Women guards face the same risks as men, risks which one woman guard describes as including 'getting your butt kicked, getting bitten, getting accidentally injected while trying to restrain someone'. Despite the risks, women guards are in demand for hospitals because many patients are women, who are thought to be better handled by fellow women.

Employers prefer women investigators for women's places in part for similar reasons of perceived homophily. For example, one employer told of a woman investigator who got valuable information at a day care centre, success which the employer attributed to her female ability to relate to female day care staff. But investigation includes another powerful reason: many investigators do their work covertly. They may pretend to be a shopper in order to detect shoplifters, they may pretend to be a warehouse worker to investigate losses, and so forth. Most employers and providers are convinced that successful undercover work requires blending in, that is, seeming to be a typical ordinary inhabitant of the social setting. Thus one female investigator said, 'Men look very conspicuous standing in a cosmetics section; men can hang around in hardware.'

There is a striking irony here: gendered thinking produces innovative job assignment that contradicts gendered thinking. Employers believe that social settings are dominated by one gender or the other, and they also believe that the people in these settings find anyone of the minority gender noticeably and suspiciously out of place. Precisely because employers perceive extensive gender segregation and gendered thinking, they assign women to 'women's' places to do very unwomanly work. For the same reasons, clients accept women guards and investigators for woman-dominated settings.

There is another irony: the same processes that produce innovative use of female labour also help to limit innovation. Since women work in settings dominated by women, while men work in settings dominated by men, there is gender segregation by work site even as gender segregation by occupation is overcome. And since women get to do their most innovative work, investigation, in part because they can be inconspicuous, they do the most innovative work the most invisibly.

Managers

To this point I have been emphasising managers as employers, as people who take part in the job assignments of service providers. But managers are also

employees; to what extent do women get innovative management jobs and why? The extent of innovation is limited. Above I noted that women are rarer among managers than among employees (9 per cent versus 30 per cent) according to my earlier survey of the Toronto industry as a whole. Not only is the use of women as managers limited, but women managers tend to be segregated into posts seen as more suitable for women. In the later qualitative study, company representatives of all firms with both men and women managers reported that the men and women were doing different kinds of managerial work. Most women managers are in support staff positions, not operational line positions. This reinforces traditional ideas about what women can or should do, and it also keeps the managerial work of women somewhat hidden, since support staff do much or all of their work within the firm.

Management is similar to hardware service provision in its low rate of use of innovative female labour; and it is also similar in that the work does not include direct interaction with service targets. Whether managers work in hardware, guard, or investigation companies, their managerial work as such involves only working with people in their firms and possibly with clients. Thus there is not innovative push to use women managers to deal with female targets. However, there is some push to use women managers to deal with women clients. Employers think this is true: when asked why the number of women in security has grown, many pointed to the rise of women among their clients. 'I think in some cases it might be an expectation of some of the clients. Where historically a lot of our clients were males, and a lot of our managers were males, there is a shift, it started in the client base.' And employers seem to be acting on this belief, matching women managers to women clients. When asked what percentage of the clients they dealt with were women, women managers reported 42 per cent female clients, while men managers reported 26 per cent. Further, security companies with more female clients have more female managers. Company representatives were asked, 'Please think of the people who make the final decision about whether to hire your company's services. What percentage of them are women?' When women are less than 30 per cent of client decision makers, fewer than 20 per cent of security managers are women; when women are 30 per cent or more of client decision makers, 33 per cent of security managers are women (based on reports from nineteen firms with fifty-seven managers).

As for non-managerial providers, the innovative use of female labour in management is in part a function of gender distribution (especially the extent of female clients) and in part a function of perceptions (notably the employers' belief that women managers suit women clients). And as for providers, innovative use of women managers is uneven, being higher in those companies that have more powerful women among their clients.

Potential employees

It is now time to add the final kind of actor, potential employees, to the relational matrix. Effects flow two ways here. If potential female employees do not try to enter security work, the innovative use of female labour is blocked; if female labour is not used or is not seen to be used, potential female employees are not attracted into the industry.

Some employers reported that they could not use as many women workers as they wanted to, because of problems in recruiting women. What factors reduce the supply of female labour? Only five informants lay the blame on the security industry itself, as in 'Women have a tough time getting into any industry ... security would be a tough one, unless you get into an office.' Twenty informants point to barriers on the labour supply side. The most commonly described barrier (named by eleven informants) is women's lack of interest in security work, whether security in general ('Women generally don't like getting into security') or specific features of security work (technology, hard physical labour, risk, low status, policing). Other supposed barriers include family commitments and lack of training for the better jobs that call for training.

Though informants are understandably reluctant to attribute labour supply blockages to themselves, the role of women employees in security must have some effect on the further supply of new women. If women do a kind of security work, and other women see them do it, this encourages potential women employees to apply for or let themselves be recruited to this kind of work. Above we saw that the ties among employers, providers, clients, and targets play a powerful role in shaping both the kinds of work that women do in security and the extent to which they are publicly visible in doing this work. Distribution and visibility then affect the influx of new female labour. To explore this connection in the relational matrix, I compared the reported proportions of women among employees in a kind of security job to reported proportions of women among applicants for these jobs over the previous year. Seven hardware companies reported no women installers (at the time of our interviews) and also no women among 120 applicants. Two companies with monitors, a majority of them women, reported a majority (seventeen to twenty-eight) of women among applicants. Eight companies employing a total of about 900 guards reported that 15 per cent were women, and the median reported percentage of women among applicants was 10 per cent. Ten firms reported that about 20 per cent of their 120 investigators were women, but only 10 per cent of their applicants were women. Fourteen companies with fifty-one managers (other than owners) reported that 25 per cent of the managers were women but only 5 per cent of nearly 200 applicants were women. Thus there is some overall correspondence between the proportion of women in a job and the proportion of women applying for it, but the proportion of woman applicants is low compared with women employees in two cases: investigators and managers. These are

the two kinds of work in which women are least visible, the investigators because they work covertly in the field and the managers because they work internally in the firm.

The companies in the 1996 qualitative study were deliberately chosen because they had some women in non-clerical security work, and hence these firms are not necessarily typical of the security industry in their gender distributions. Some of the mismatch between their gender distributions for current employees and for applicants may thus arise because potential employees are responding to signals from the industry as a whole, not just from these companies. The 1996 telephone survey of the whole industry showed that women were 5 per cent of the total staff of guard companies and 9 per cent of the total staff of investigation companies. These figures provide even more of a mismatch to the equal percentage of women applicants for guard and job positions than did the figures from the qualitative survey reported above. The earlier industry survey (Erickson, 1996) found that women were 9 per cent of managers overall, quite a bit less than the 25 per cent female among managers in the firms in the qualitative study, but still more than the 5 per cent female among applicants for management work. Thus potential employees may be reading signals from the whole industry, especially concerning management jobs, but they are also under-responding to the actual rate of female penetration into management and investigation work.

Spirals, dams, and uneven innovation

The ties in the relational matrix are not separate, but interlinked. Sometimes this provides the structural basis for a spiral of innovation, of increasing use and acceptance of female labour in 'men's work'. According to our informant stories, the spiral often starts with employers, who have the widest security experience of all the actors and thus are most likely to be aware of the advantages of employing women. The employer may meet with some initial resistance from clients, but can try to persuade the client to try the innovation in his or her own best interests. For example, one employer tells of a mall reluctant to use female security guards. 'So we found the biggest, meanest-looking female guard you could find. And she'd been in the military police for a good number of years, and hey, I wouldn't want to wrestle her.' These efforts may not always be successful; the same employer reported that he had no further problems with the mall, but other clients cancelled contracts when sent female guards. But some clients approve of the service the female providers give, the use of women workers grows, potential employees are encouraged to consider security work, and so on. Another employer accounted for the rise of women in security in terms of just such a spiral of positive feedbacks. 'Women came in and they did such a damn fine job, in many cases a better job. Somebody said, "We have a girl who did a great job, see if you can get us another girl." They had more opportunities and they have been able to prove themselves, and it goes on and on.'

At the same time, the interconnection of the matrix means that innovation can be blocked by a dam of resistance at any point. Clients sometimes refuse women security employees, even if they have seen them give good service. One woman investigator reported being sent to a site usually served by men, doing 'three or four hundred dollars' worth of arrests' (a good day's work), and then hearing that the client complain to her male colleagues the next day, 'What's this company doing, putting these goddamned women on my site?' Targets sometimes resist women service providers. For example, a woman guard reports that her male colleagues more easily move vagrants along: 'They just kind of look up at me and see I'm a woman, and try and go back to sleep.' Potential employees may not get interested, as in the complete absence of female applicants for installer jobs. Employers may be reluctant to hire women or to assign them to the more innovative positions.

Whether innovation gets dammed up or gets into a growth spiral depends on the many factors described above: the kind of work, the gender of clients, the visibility of innovative examples and so forth. Since these vary so much, so do the local outcomes, which range from no use of female labour at all (as in the many security companies with no women whatsoever) to extensive use of women in apparently men's work (as in the many female investigators doing risky undercover work).

Extensions and variations

Though this argument has been built on a case study of women in one industry, the same themes appear elsewhere. All of the kinds of actors in the relational matrix appear in some (though not necessarily all) other industries. Employers, clients, service providers, and potential employees are found in every service industry. Targets are not so universal but do appear in some services. Public relations firms work on targets such as the media on behalf of their clients, for example. Does the presence or absence of targets play as important a role in other industries as in security? All of the processes discussed here also appear in some though not necessarily all other services. Gender distributions, homophily, and perceived homophily are probably of general importance. The role of invisibility is more variable, and may seem at first to be peculiar to security and its opportunities for undercover work. But invisibility is a factor in other industries also. The poor visibility of women in management is not special to security; women managers are often in the internal housekeeping jobs such as human relations and accounting. Some other kinds of workers hide their work, like the restaurant reviewer who pretends to be an ordinary customer in the hope of getting a representative dining experience. And some workers openly do their work while hiding their identities, like the gay members of Toronto's notoriously homophobic financial district. Hiding the identity blocks information about innovation (in this case, that gays can be effective financial workers) just as much as hiding the work while displaying the identity.

Not only can the ideas in this chapter be explored in other industries, but they can be explored for other innovative forms of labour such as new immigrant groups trying to enter the mainstream economy. Ideally, future work will examine multiple identities. Even in this study of gender, it soon became clear that gender was not the only relevant identity. Sometimes other identities mattered more, as when women reported that they had had problems not because of their gender but instead because they were young or black. Sometimes gender could not be disentangled from other identities; for example, women have entered security recently, so on the average are younger and less experienced than the men in security.

How might the results found here differ in extensions to other industries? I speculate that there will be differences, and many of them will occur because of differences in the relational matrix. The structure of the security matrix is especially suited to production of the great variety of gender innovation. There are many security companies in Toronto (over 200). They have varied niches of different types, such as the family-run hardware company that installs alarms largely for members of the family's ethnic group, or the investigation company that checks possibly spurious claims for insurance companies, or the guard company that specialises in guard and dog teams. Security companies often do not have any contact with each other, so that news about innovation cannot flow freely around the industry. In an industry with a smaller number of more similar companies with better mutual surveillance, innovation might well be more uniform. While I could not examine the social structure of targets, clients, and potential employees directly in this study, it seems more than likely that such groups are even more diverse and disconnected than security companies. Other industries may deal with a smaller number of more unified and homogeneous actors in any of these categories. Potential employees may come from relatively standardised sources such as professional training programmes; there may be just a few powerful clients such as the top companies that top business service firms serve; even targets may be fewer and better connected than in security, as in the example above of public relations firms targeting media. Unity and homogeneity among any of these key kinds of actors may also encourage more uniform innovation.

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9

Greening organisations: purchasing, consumption and innovation

Ken Green, Barbara Morton and Steve New

In this chapter we examine some previously ignored connections between processes of organisational purchasing and innovation in the context of the greening of organisations. We build an argument around the idea of consumption and we do so to problematise explicitly the issue of collective agency as it relates to organisations. In developing the argument, we ask: who is the consumer and what do consumers do? Despite the thriving field of research in organisational purchasing, it remains tempting to slip into a rather easy and prescriptive anthropomorphism when explaining what organisations do when ‘they’ buy things. Here, we use the interplay between concepts of the individual consumer and concepts of the organisational consumer as a way to explicate some key ideas about the greening of consumption. We use these ideas as a platform for considering how various inter-organisational links limit attempts to green individual organisations. We also consider what goes on inside individual organisations as they receive and respond to external market signals that are pro-environmental.

It is our contention that any attempt to reduce levels of consumption as part of a programme of global environmental improvement needs to consider two things: consumption by *organisations* and the *innovative* activities of organisations, especially their ability to develop new products and processes. Organisations, whether public or private, are major discretionary consumers. Their purchasing will, therefore, be significant with regard to the depletion of resources and impacts of production (including incident pollution and waste) carried out by the organisations from which they buy – and so on, throughout the range of inter-organisational chains and networks. There is clearly scope for intervention in greening these chains and networks through changing how and what organisations consume. This can be achieved both by changing how companies purchase and by changing the processes of organisational innovation. Such interventions are obviously limited, however, by the power individual organisations have as they are embedded in various chains and networks, but there is no doubt that there is room to green the process of organisational purchasing and much pressure

for it. It would be no exaggeration to say that there are currently many more opportunities for professional management commitment to green consumption and innovation than there are for greening end-user consumption.

In the next section below, we explore the view that the traditional image of the 'consumer' is inadequate, both for theorising in the social sciences and, especially, for considerations of the environmental challenge of greening organisations and the economy. For theory, attempts to interpret the world which rely on the established models of 'consumers' *contra* 'industry' and 'organisations' (especially corporations) are, in our view, unhelpful. Keeping to such explicit or implicit models means that efforts to 'green' the economy are bound to falter without the recognition of organisations, as well as individuals, as consumers. In the following section, we examine deficiencies of traditional definitions of consumption and comment on the implications of these weaknesses. In section four, we introduce the concept of a 'supply chain' and elaborate it by discussing the relationship between such chains, environmental impacts and product and process innovation. We conclude by tying these threads together and briefly discussing the implications for future research and for the practical side of greening organisational purchasing.

Consuming organisations

Consumption: a frail convergence?

There has been an explosion of interest in the broad phenomenon of consumption. It has resulted in an exciting convergence of disciplinary interests: economists, historians, sociologists, psychologists and even management theorists have trundled around each others' aisles and enthusiastically swept brightly packaged conceptual goods into their intellectual shopping trolleys.¹ This coming together is a genuine example of cross-boundary intellectual work, and there is much to commend it. The convergence is possible because all can gather around the apparently unifying idealised image of the *consumer*, which appears meaningful and comprehensible to all of the disciplines. But is this image adequate? We think not.

Firstly, in terms of the scale of economic activity, personal traditional (end) consumption is dwarfed by the spending of public and private organisations. Sales between organisations – in which one organisation will 'sell' and the other will 'buy' (and then 'consume' in some way) – are of major importance in any economy. Unfortunately, the definitional problems we outline below do not allow an easy estimate of the ratio of inter-organisational sales to end-consumer sales from conventional economic statistics; furthermore, the ratio will vary over time with the degree of vertical integration in the economy. Nevertheless, it is easy to see how for a given item the *sum* of its intermediate prices as it progresses down the supply chain will exceed the final price charged to the final consumer. Yet, in most writings on consumption, typically the consumer is seen as an *individual*, passively making choices between brands; this is often contrasted with a concept of 'production' or 'industry',

which conjures up pictures of smoking factories or lumbering agricultural machinery. The simplistic and dualistic imagery of these traditional models does not stand scrutiny, and limits and confuses the debate.

Some definitional problems

In recent years the discipline of Economics has come to be blamed for skewering intellectual progress by its reliance on simplistic and mathematically biased assumptions, and its abandonment of reality and empirical challenge with a flight to theoretical elegance (see, for example, Lawson, 1997). Consumption is one area that has been particularly fraught with contention and controversy, and this is perhaps to do with the fundamental difficulty of defining the term. Boulding (1948) is in no doubt that 'The process of consumption ... is the *final* act in the economic drama' (p. 614, emphasis added) or that the consumer is 'the supreme mover of the economic order ... for whom all goods are made and toward whom all economic activity is directed' (p. 613). Rather less grandly, Gregory (1987) characterises this view of consumption as 'the dead end of a one-way avenue'.

Problems arise, however, when the precise meaning of the term is required. Boulding (1948) (selected here as an influential and typical example) collapses into a tautological loop: consumers are people who consume ... and consumption is ... what consumers do. To overcome this, a series of ill defined and effectively *ad hoc* qualifications are offered, such as the 'ultimate consumer' defined as 'organisms which buy not in order to sell again, but in order to consume and enjoy; families and orphanages fall into this class' (p. 17). One page later this is expanded to 'Every individual who has to spend money in the purchase of commodities for consumption is an ultimate consumer' (p. 18). This identification of an economic process with an economic actor causes significant definitional problems; 'producers' who consume raw materials in order to make products are deemed then to have their production netted off, to give a value of 'net production'; households who also produce stop being a 'consumer proper' and may need to be considered quasi-enterprises, or have their activities divided according to some convention, a situation which is 'far from satisfactory' (p. 291) and to which 'a satisfactory definition has not been found' (p. 742).

More recent texts are often less candid about the conceptual difficulties which lie behind the elegant curves of standard theories. Sloman (1994, p. 1) defines consumption as 'the act of using goods and services to satisfy wants' which 'will normally involve purchasing the goods and services', but fails to give a clear explanation of the consumer. This is not untypical: in a straw poll of seven dictionaries of economics, six (Eatwell *et al.*, 1987; Knopf, 1991; Bannock *et al.*, 1992; Rutherford, 1992; Livesey, 1993; Greenwald, 1994) omit an entry for 'consumer'; Pearce (1992) is an exception, offering 'any economic agent responsible for the act of consuming final goods and services. Typically the consumer is thought of as an individual, but in practice will

consist of institutes, individuals and groups of individuals.’ However, the rest of his description concerns households only.

This is a tricky but significant problem, as theories of consumption play a major role in several branches of economics. Hollander (1986) points out that the development of the subject as a mathematically oriented discipline was crucially affected by the development of the theory of consumption, and this rests on the need for differentiating economic actors into categories of shared behaviour. It is clear that economics has not always considered the obvious lack of homogeneity of motivations and behaviours. Nor has it been concerned that the aggregate analysis presents a picture that corresponds to any particular reality: the detail of what a firm actually does is, in an important way, not the point. Machlup has commented, ‘to confuse the firm as a theoretical construct with the firm as an empirical concept, that is, to confuse a heuristic fiction with a real organisation like General Motors or Atlantic & Pacific is to commit the “fallacy of misplaced concreteness” (1967, cited in Sawyer, 1993, p. 22).

This would not be an issue were it not for the fact that, in many ways, economics has preconditioned the terms of discourse about consumption: sociologists and economics can share some of the same terms (notably, perhaps, the term ‘consumer sovereignty’) and mean quite different things. Debates about consumption have tended to accept the connection that when we talk about consumption we talk about the *behaviour of individuals* as consumers, when many of the interesting issues which emerge from research and reflection in fact apply just as interestingly at the *organisational* level.

It is true that the restricted notion of consumption that we have rehearsed is less common in accounts of environmental consumption.² Thus Paul Stern, in the authoritative US National Research Council’s contribution *Environmentally Significant Consumption: Research Directions* (1997), criticises the individual and household focus on consumption and defines it more broadly: ‘Consumption consists of human and human-induced transformations of materials and energy.... This is a definition of *environmental consumption*, as distinct from, for instance, *economic consumption*’ (p. 20, emphasis in original).

He explicitly includes ‘producers and distributors’, ‘public officials’ and ‘military organisations’ in the human-induced transformations that figure in his definition. However, despite this broad definition, the rest of the NRC book makes no explicit reference to organisations as consumers, focusing instead on households and ‘global consumerism’. The essence of the argument that follows is that the purchase of products and services, by organisations, is a significant aspect of consumption in its own right.

Organisations as consumers

At a trivial level, it is obvious that organisational purchasing shares many of the same features – not to mention items of purchase – that apply to

traditionally conceived consumers. Car companies need to buy not only car components and raw materials, and lubricants and energy to run the machines, but also pens and telephone services ... and toilet rolls. A moment's reflection shows that most people spend most of their waking time in corporate or institutional environments or contexts; furthermore, the products we buy have generally followed a complex web of paths from raw materials to finished products, with the elements changing ownership many times *en route*. In the world of economic exchange, buying and selling between organisations is the dominant category.

The academic study of organisational purchasing has largely been done under the banner of 'industrial marketing': this has developed over the last forty years into a significant academic industry in its own right, and draws its intellectual origins from the explosion of interest in the study of consumer marketing which followed the Second World War. It is fair to say that early attempts to develop theory were partially hampered by attempts to produce a general theory, and rather underplayed the differences between types of purchasing. Early work was dominated by a handful of academics, and set the tone of further research by concentrating on essentially positivist models with techniques appropriated from quantitative psychology, focusing on the key influencing factors in the purchase 'decision' process. However, both consumer and industrial marketing were moving on from early models of passive purchasers responding to stimuli (see Nicosia, 1966). For organisational purchasing, it was clear that decisions were *spread* among several interacting individuals within an organisation – the so-called 'buying centre' (Webster, 1965; Webster and Wind, 1972; Sheth, 1973; Hillier, 1975). The 1969 book *Theory of Buyer Behaviour*, by Howard and Sheth, attempted to develop a universal theory to cover organisational and end-consumer purchasing, but ended up reflecting a strong emphasis on consumer products. By 1977 Sheth was able to comment on the development of academic interest in industrial marketing and (rather curiously) asserted that the quantity of research in the field was comparable to if not greater than that for consumer marketing. His analysis of work in the field at that point concentrated on the range of sub-decisions present in the purchase decision (for example, choice of supplier, choice of brand, etc.), and the way in which the process of the procurement differed according to the type of purchase. Faris (1967) had introduced the idea of distinguishing between 'new buy', 're-buy' and 'modified re-buy' situations (see also Robinson *et al.*, 1967).

During this period, progress in research in industrial marketing was marked by increasing realism about the 'rationality' of decision processes within organisations: a highly influential text was Cyert and March's *Behavioural Theory of the Firm* (1963), which sought to explore traditional perspectives of economic decision making by taking explicit account of, among other things, the presence of conflictual and satisficing behaviour by organisational actors. This more realistic approach was taken further by the emergence of a group of European academics known collectively as the Industrial Marketing

and Purchasing (IMP) group, who developed the so-called interaction model (Håkansson, 1982; Ford, 1990). This work took as its starting point the empirical observation that most commercial relationships were of some considerable longevity, a point that cast doubt on the importance attached by previous work to the atomistic 'decision'. More significant was the relationship in which transactions occurred, the atmosphere of the exchange, and the economic, social and cultural context. This work emerged at the same time as growing interest from a number of other areas in management studies (notably operations management and industrial organisation theory) which stressed the significance of the relations between buyers and sellers, and the potential advantages of trust and co-operation (e.g. Sako, 1992; Lamming, 1993; Provan and Gassenheimer, 1994; Macbeth and Ferguson, 1994).

There is, then, a considerable body of knowledge about organisational purchasing. What, though, does it tell us about the process of consumption in organisations, and how does it compare with what we know about consumer behaviour as traditionally envisaged? To consider this, we will explore similarities and differences in the purchasing process under three connected headings: roughly, these correspond to the questions *who*, *how* and *why*.

Who is the consumer?

It is tempting to postulate that a key difference between the purchasing of an organisation and the purchasing of a traditional end consumer will be the identity of the person doing the consuming: in many organisations, purchasing/procurement activities are typically carried out by central purchasing departments, whereas the atomistic end consumer acts as an individual. However, we should note that not all organisations have central purchasing departments. For example, the chemical distributor serving a city council we have studied is accredited to ISO 14001³ but is only a seven-person operation in which 'purchasing' is one of many functions undertaken by the managing director. In the city council itself, a team of only four provides purchasing services, while routine purchasing is authorised and managed by departmental heads throughout the organisation who call on purchasing expertise (from the purchasing 'department') as they require it. Even within organisations, therefore, purchasing may or may not be carried out by specialists. Indeed, in smaller organisations it may look more like 'end consumer' purchasing.

However, we need to be cautious of making too much of these differences. The idea of an end consumer buying for her/himself may be challenged as itself misleading. Miller's *A Theory of Shopping* (1998) elegantly describes how the purchasing behaviour of traditional consumers is in fact dominated by acts undertaken on behalf of others (for example, a parent shops for food on behalf of a household). If this counts as 'consumption', then surely so does a purchasing agent buying on behalf of a 'user' within an organisation? One difference that does apply, however, is the character of who does the purchasing: organisational purchasing is now the domain of specialists operating

in dedicated purchasing departments. This means that – in Western economies, at least – a considerable amount of purchasing is controlled by a body of people who have a professional commitment to a set of values, practices and norms, sometimes being members of professional associations. For example, the UK-based Chartered Institute of Purchasing and Supply, CIPS, has a membership of approximately 5,000, administers a training programme at various levels, and also sponsors and accredits courses in universities. There is a similar organisation based in the United States, the National Association of Purchasing Managers (NAPM), founded in 1915, although its roots go back almost to the turn of the century (Farrell, 1954).

Although falling short of the type of professional identity associated with, say, medical doctors or architects, the notion of consumption processes being mediated by specialists has implications both for theorising consumption and for understanding environmental impacts. The ‘consumer’ – as traditionally constructed – is inevitably portrayed as something of a dupe, subject to the wiles of the sinister advertiser and manufacturer. The very point of the purchasing professional is to break out of this stereotype: the organisation of procurement means that there is at least some hope of more balance in terms of sophistication, cunning and knowledge. Many of the rather sanguine analyses of the effectiveness of Green consumerism point to the difficulty consumers face in interpreting and digesting technical information, or being able to make informed judgements of suppliers’ claims. In organisational consumption, there are *a priori* reasons to suspect that the prospects are somewhat better. Moreover, there is the likelihood that professional purchasers are potentially swayed by norms and notions of ‘good practice’ (see, for example, Dobler *et al.*, 1990, pp. 721–41) and that organisations’ buying may be influenced by attempts to define environmental considerations as acceptable practice. Indeed, one initiative in the United Kingdom – ‘Buying into the Environment’, a CIPS/Business in the Environment collaboration – has sought to do just that (CIPS/BIE, 1993).

Another point concerns the reification of organisations as economic and sociological actors. In everyday talk it is common to refer to organisations as entities making decisions, exhibiting behaviour and even having intentionality. Legally, in most countries’ systems, corporations have some kind of legal personality for the purposes of contract and tort. Why not, then, extend the discussion of consumption to organisations directly? This raises a raft of complex theoretical challenges, such as just how questions of social justice are applied to organisations.

How is consumption accomplished?

Even if the separation of purchase from user is conceded, it might be argued that it is still easy to differentiate the realms of organisational and traditional consumer by reference to the *systematic* nature of procurement in organisations. Within an organisation, purchasing is carefully controlled by bureaucratic procedure (see Heinritz *et al.*, 1991), whilst for the traditional

consumer there is no such constraint. The consequence would be, according to this argument, that one would expect a greater degree of *rationality* in organisational purchasing. Hollander (1986) discusses J. S. Mill's separation of economic rationality between consumer and business: 'Mill observed that buyers at retail outlets do not typically make their purchases "on business principles" – a reflection of their indolence, carelessness, satisfaction derived from paying high prices, ignorance, defective judgement and coercion, apart from high search costs' (p. 136).

As organisational purchasing deals with the outflow of money from the organisation, it is not surprising that it is generally accomplished in the context of some systematic procedure. Scheuing (1989, p. 73) comments, 'The procurement process itself is a prime example of a standard procedure.'

The environmental implications of a consumption process that is so heavily structured are paradoxical. This is seen in particular in the public sector, where the proceduralisation of procurement is most evident. On the one hand, the systematic nature of the processes of public procurement is amenable to the incorporation of environmental criteria; on the other hand, the systems are there principally to ensure financial rectitude, and so sit uneasily with other criteria (see New *et al.*, 1998). Despite the paradox brought about by the structure of purchasing, however, there are several ways in which the organisational purchasing process can have an environmental impact, and these include but exceed the scope of action available to the traditionally defined consumer. In short, organisational procurement may be constrained by the degree of structure, but compensated by its broader scope.

To understand this, it is worth considering the ability of the traditional consumer to have any effect on the supply chain. Two of the roles examined in Gabriel and Lang's *The Unmanageable Consumer* (1995) are that of the *rebel* and that of the *activist*. In the former, consumers may instigate boycotts of particular suppliers; in the latter, consumers may agitate and organise to redress the imbalance of power between consumer and big, powerful firm. Organisations are able to play both these roles, but may also have options that are not available to other types of consumer. Firstly, there is the greater scope to play a significant role in the specification and design of the product and service on offer. Secondly, there may exist scope for imposing requirements on suppliers relating to process as well as to product; an example would be using the adoption of environmental management systems (such as ISO 14000) as a prerequisite of approval to supply (Cascio *et al.*, 1996; Krut and Gleckman, 1998). Thirdly, there is sometimes scope for projects which entail the direct transfer of knowledge and technology between buyers and sellers (see Lloyd *et al.*, 1994; Burnes and New, 1996; Burnes and Dale, 1998).

However, whilst the processes of procurement may be markedly different between traditional consumers and organisations, not least in the time taken, it would be wrong to infer too great a variance in the degree of *rationality* applied to the process. One result from the industrial marketing literature that is beyond dispute is that purchasing in organisations is open to all sorts of

influences from the wily salesperson. The interactions implied in the notion of supply relations bring with them even more complexity, and take purchasing decisions beyond the realm of pure idealised analysis. Davis (1994), for example, examines the wide range of reasons which are used by retail buyers when 'de-listing' products (i.e. when they stop taking a product from a particular supplier); owing to the complexity of dealing with the accounting problems, decisions ostensibly based on economic criteria are in fact often made without the information really needed to make a definitive judgement. Furthermore, research on organisational behaviour has proceeded since the days of Cyert and March to reinforce an even more cynical view of the limitations of organisational rationality; Brunsson (1989) explores the way in which conflicting discourses are endemic in organisational life, generating a degree of 'hypocrisy' in the way in which organisations conduct themselves.

Why are things consumed?

A major element in the development of theories of consumption in sociological (and marketing) terms is the establishment of the notions of consuming not for the 'real' value of the thing consumed but the 'meaning' of the act of consumption (Belk, 1988; Bock, 1993; Elliot, 1994; Hogg and Mitchell, 1996). This idea is not new, of course, and analysis of the phenomenon in terms of the current debate dates at least to Veblen (1899). What is new in the field is the refinement of models of the mechanisms of meaning, and the impact of this process on the construction of identity and society. For Baudrillard, for example, consumption and the consumer society are the *motif* of the age (see Poster, 1988); Narotzky (1997) comments that, for some writers, consumers and consumption fill a role formerly taken by class and capitalism in the understanding of social relations. For traditional consumers, the meanings of consumption can be as banal as showing off wealth to one's neighbour or as simple as purchasing a particular brand of detergent to prove to oneself that one is an adequate parent (see Flynn and Goldsmith, 1994).

In order to develop the argument at this point it is important to differentiate between two 'whys' which may apply in this context. The first is the question 'Why consume?' or 'Why consume so much?' The second is 'Why consume this particular thing rather than that?' The idea of consumption as meaning or identity generation arises as an attempt to explain both the volume and the detail of things consumed.

When discussing traditional consumers, it is difficult to engage in this aspect of the debate without sinking into a discussion of 'real' versus 'non-real' needs, a philosophical point of some complexity. For organisational purchasing, however, surely this issue should not arise. Economically, why would an organisation buy anything it does not 'need'? Reflection shows, however, that there are ample cases of corporate 'excess': Why use colour overhead slides for that internal presentation? Why have a fountain in the reception area? An entertaining portrait of lavish expenditure by organisations is found in Burrough and Helyar's (1990) ironic account of the struggle for meaning

in RJR Nabisco (which involved, for example, the purchase of private jets for senior executives and the holding of generous parties); it is true that the market eventually imposed discipline on such ostentation, but only after an extended period of consumption that was certainly directed to *symbolic meaning* rather than need, narrowly defined. Note that excess in one aspect of an organisation's activities need not mean other aspects are organised in the same way; Wikstrom (1997) points out that individual consumers may also display extremely complex patterns of behaviour (such as shopping in charity shops and drinking champagne), so that austerity and excess are entwined.

The scale of ostentation in consumption is not the only issue, however. In terms of the detail of things consumed – the choice between goods rather than the total volume consumed – the significance of particular consumption for particular meaning is also clearly visible in organisations. A mid-1998 UK advertising campaign by IBM suggested to decision makers that they should buy the company's equipment because 'When you give people better tools, you are telling them what kind of company they work for.' This is a variant on an old IBM saying, 'No one ever got sacked for buying IBM', but both are more about the feelings of the person doing the purchasing than the product itself. This point applies to services as well as products: just as an individual's consumption of the arts and education can be seen as consumption for the acquisition of 'cultural capital' (Bourdieu, 1984), an organisation's purchase of training or consultancy services can be seen in a similar light. Organisational purchasing, then, can be easily squared with two more of Gabriel and Lang's roles for consumers: the *communicator* and the *identity seeker*. In our research, two of the organisations with which we have worked provide interesting illustrations of this: one large firm wished to re-evaluate its purchasing activities in the light of environmental considerations, motivated very strongly by a concern for public relations and corporate image. Another firm – a retail buying group – saw environmental concerns as very important to its own identity as an organisation. The reason for examining the environmental credentials of products and suppliers fitted the group's culture and character: what it perceived itself to be, and what it aspired to be, was the sort of organisation that would concern itself with these issues.

The implications of these ideas are significant, but also complex. Organisations and their managers may have many reasons for considering Green issues (Gallaroti, 1995), but if the idea of 'consumption for meaning' is allowed, the problem of connecting the semiotics of greening with some underlying reality becomes significant. Serious difficulties arise for both activists and academics: the identity construction or PR manipulation process may be a driving force for organisational Green consumption but may also entail an element of 'greenwash' (Greer and Bruno, 1996). Is the correct response to encourage firms in their rhetoric, even if the objective reality of what they do falls short of their own claims? Or is blowing the whistle on corporate cant the best idea?

Greening innovation and organisational purchasing

Chains of supply

The discussion above has identified some key aspects of organisational consumption. We now turn to the context in which such activity is set, and develop a series of ideas that develop and expand upon the notion of the 'supply chain'. A supply chain is a metaphor for the linear sequence of connecting links between organisations (which in market economies will usually be firms) (see New, 1994; Harland, 1996). It maps the way in which, for example, materials and components intended for a particular product or service flow from raw material firms, through component firms, assembly firms, retail firms, transport firms, service firms and, finally, disposal and recycling firms. In this sense the supply chain is the organisational 'crystallisation' of real material flows which form the 'life cycle' of the product, from cradle to grave.⁴ Of course, a particular chain – for the production of automobiles, for example – is a complex network of organisations spread over a wide geographical and temporal space. However, the *flow of material* is unidirectional – raw material firms 'supply' other firms further along the product's life cycle, which is why we use the chain rather than the network metaphor.

Different types of products have differently structured supply chains; for example, compare *consumer durables* (assembled by large companies for many end users where product design is concerned with mechanical and electrical engineering) with *construction* (many small firms for fewer end users – property developers – where product design concerned with systems and civil engineering). The structure of the chains will be continually changing, owing to company take-overs, mergers or bankruptcies and the increase or decrease in outsourcing. The structural relationship of organisations constitutes the 'supply chains', but the detail of this structure is fluid and extraordinarily complex; organisations may from time to time adjust the level of vertical integration, and the same organisations can operate in different ways in different product sectors.

The structure of a particular supply chain is crucial in determining how environmental impacts of the various aspects of a life cycle can be reduced. Indeed, it is the decisions and strategies of the organisations in a flow that will determine what that flow is. For example, if a firm decides to accept recycled components, the structure of the flow will change because of this decision. Flows are a result of organisational relations, subject to the obvious time-related aspects of that flow (i.e. the components have to be made first – and raw materials transformed into the components – before assembly can take place), rather than of physical ones.

Therefore, a crucial component of understanding how a supply chain may change is the nature of relations between the organisations in it. This will be related – *inter alia* – to the size and power of the organisations in that flow. Which organisations are the most powerful, and therefore are the most able to make changes in the chain, depends on historical accumulations of economic

and/or political power. Of course, external events, be they government regulations, campaigning by environmental pressure groups or consumer demand, will constrain or redirect that power. In a report published by A. T. Kearney (1994) one of the present authors has hypothesised a scheme of different kinds of power in addition to the 'traditional' ones of monopoly, geographical proximity and ownership: *power by spread* (i.e. diversifying your customer base); *power by focus* (i.e. including the product in an unrivallable service package, and so increasing customer dependence); and *power by initiative*. This last one includes power by *innovation*, represented by a continual flow of innovative product and service elements to keep ahead of competitors.

Innovation

The importance of technological innovation, embodied in new products, processes and systems, to long-term environmental improvement and especially to sustainability should be obvious (Green and Miles, 1996; Porter and van den Linde, 1995a, b; Howes *et al.*, 1997). Of course, new technological developments on their own will not be able to bring about the degree of environmental improvement some consider to be necessary – changes in social organisation and in the mode of delivery of desired final household services will also be needed to bring about any 'Factor Four' – never mind 'Factor Twenty' – changes (von Weizsacker *et al.*, 1997; Vergragt and van der Wel, 1998). However, new patterns of sustainable living inevitably require new methods of production, using, for example, less energy and new methods of household delivery of services: such changes are inconceivable without the availability of products designed on new principles and, in many cases, based on new technologies. Such new products and production methods are the outcomes of the innovation activities of organisations large and small.

To understand how such product and process innovation can be better directed towards 'Green' objectives, we have to take account of the many studies of product/process design, development and innovation that have been conducted over the last twenty-five years (see Freeman and Soete, 1997; Tidd *et al.*, 1997). There is a considerable amount of empirical research (Green *et al.*, 1994; Howes *et al.*, 1997; Christie and Rolfe, 1995) showing that almost all innovative product or process developments in organisations undertaken for environmental reasons are stimulated either by *government regulations* (actual or expected) or by what is labelled as *market demand* (currently experienced or imminently expected). Government regulations can act directly as a stimulus to changes in the selection of which research, development and innovation projects an organisation will pursue (a prime example being the influence of the banning of ozone-harming CFCs on stimulating the innovation of chemical alternatives and, indeed, of completely new forms of refrigeration). The innovation-inducing regulatory 'signal' may be 'received' by an organisation via a variety of routes. Some organisations, usually the largest ones in those industrial sectors, like chemicals, that have been the subject of intense regulatory scrutiny, have R&D departments that maintain

close links with their colleagues who are continuously monitoring external regulatory changes.

Even if there are no direct regulatory constraints operating, an organisation may innovate because it *anticipates* demand from its customers for more environment-friendly products. Indeed, as we have observed from several of the examples we have studied, such organisations may have made a strategic decision to offer such products, expecting to 'educate' their customers into purchasing them. However, for many organisations, the key 'channel' for receiving such signals will be its *customers*, who may demand changes in the environmental specification of the products they buy from their suppliers. The suppliers are therefore in this case often responding to 'second-hand' regulation conveyed through changes in market demand exhibited between customer and supplier.

The literature on the determinants of technological innovation has explored in detail the influences of the market and other factors in inducing innovation, from the 1960s onwards. The focus of economists of technological development has tended to be on the relative importance of 'demand pull' and 'discovery push' as prime movers of innovation. (Dodgson and Rothwell, 1994). To oversimplify, the current 'model' is an elaboration of the view arrived at in the 1970s (resulting from much empirical investigation of how a wide range of innovations actually emerged) that innovation is a result, in varying degrees, of combinations of signals from 'demand' and the development of new applicable knowledge produced in firms and in public-funded research institutes. Such a model draws attention to the fact that there cannot be *one* mix of 'demand' and 'scientific knowledge' that explains the origins of all innovations. Research in the 1980s concentrated therefore on identifying the different mixes as revealed between different industrial sectors, between sizes of firms (the time-honoured debate regarding the highly innovative small firm and the monopolist large firm), between differing national contexts and, crucially, depending on the position the innovations occupy in the life cycle of a particular technological regime. (Tidd *et al.*, 1997)

Studies of the patterns of innovation have revealed the way in which different types of product and process innovation (e.g. radical versus incremental; science-intensive versus redesign) arise in different industrial sectors at different times in the developmental history of a technology. The 'science-based' industries (electronics, chemicals) are the source of the more fundamental innovations that are embedded-new-technology inputs (as advanced raw materials or components) to all other sectors; 'specialist suppliers' (machinery, instruments) are another major source of embedded technology (principally into other industries' processes or service-enabling systems); other sectors, however, will have much less room for manoeuvre, in anything other than minor product or process innovation.

Thus some organisations in a particular supply chain will be much less able to respond to customer signals/requests on their own, because the relevant technologies are not directly within their control. For example, a packaged-food

manufacturing firm cannot easily respond to demand from retailers for package reduction but must pass such requests to the manufacturer of the packaging materials, who may in turn be limited by the raw materials available from chemical companies.

So, rather than seeing the link between ‘demand’ and innovation as a simple one between an organisation and its market, we should see it as a *series* of links, with purchaser demands requiring a cascade of similar links up the supply chain. The ability of any particular organisation in the chain to respond to those demands is dependent on its position in the chain (which is connected with the power it has) but also on its possession (or not) of innovative technological knowledge. The fine structure of the chains – especially how organisations relate to each other in terms of their strategic importance in product and process innovation – is crucial to an understanding of how ‘Green’ innovation can take place. We need to focus on how organisations relate to each other as sellers and buyers (marketers and purchasers) and how this connects with their role as product and process innovators and (possibly) carriers out of research and development (R&D).

In addition to the supply chain metaphor providing the external frame of analysis for the activities of organisations, the notion allows the consideration of what goes on *within* the organisation. This brings the discussion back to the ideas of organisational versus individual consumption discussed earlier, and in particular to a detailed consideration of the nature of organisational action and the flow of information.

Purchasing and innovation: consumption in chains

We now turn to the way in which these two preceding discussions interact. In section three we demonstrated some of the similarities and differences between organisational and individual consumption; Section four set out the notion of the supply chain and how it can affect environmentally appropriate innovation. This section shows how these issues can come together and teases out some general themes. The ideas that forge the link are the concepts of (1) *agency within organisations* and (2) the *transmission of market signals*.

We earlier examined the questions ‘Who?’ ‘Why?’ and ‘How?’ These transpire to be important points in understanding the organisations we have studied, and questions that lead to some interesting general conclusions. Various sociological and demographic typologies have been suggested to describe the individual Green consumer: ‘true-blue greens’, ‘greenback greens’, ‘premium greens’, ‘no-cost ecologists’, etc. (Schwartz and Miller, 1991; Simon, 1992; Wagner, 1997). However, we suggest that such convenient categorisation would be inappropriate for corporations and other organisations, owing to the internal structures of agency.

The first point to be made is that the places within many organisations that are able either to translate environmental concerns into procurement activity or absorb and react to concerns from upstream customers is rather ill defined. In

one organisation we have observed – a local authority in the United Kingdom – the buyers' main activity was to provide users with a catalogue of possible purchases, negotiating supply arrangements and contractual terms with suppliers, but leaving the task of selection and ordering to 'users'. As the services of the purchasing department were 'sold' to the user base, there was considerable focus on meeting the wishes of the users. This was felt by purchasing managers to be a natural constraint on the extent to which Purchasing could introduce Green products into the catalogue, and – for the purchasing department – rendered too close an eye on the environmental credentials of suppliers and the details of their processes an expensive irrelevance.

For another organisation we have observed, a major 'Green' cosmetics retailer and manufacturer, in contrast, the analysis of the Green credentials of suppliers was a major business issue, and warranted a department separate from the main purchasing department. In another retailing organisation, a committee charged with considering environmental and ethical issues struggled to develop sensible policies that could be applied among buyers steeped in a more traditional ethos of retail buying. In one health-care product manufacturer, we found an intricate web of influencing bodies and parties to the purchasing process. In a utility services company, we found a senior procurement manager taking the lead, in collaboration with environmental managers, to ensure that Green criteria were used as a component of decision making. In a public-sector organisation we found environmental specialists striving to have an impact on procurement decisions, but feeling constrained by the regulation of public procurement. In contrast, another public body felt no qualms at putting explicit pressure on suppliers to develop environmental policies and attempting to stimulate product and process innovations.

These disparate ways in which organisations approach Green purchasing lead to an interesting comparison with the idealised notion of the Green consumer. The wide range of patterns of departmental and personal involvement, and the widely varying effects (real and perceived) of purchasing procedures, make the simple ascription of an organisation as a 'Green buyer' rather unconvincing. In terms of the importance of individuals, however, we do identify at least three potential roles that may be significant in the stimulation of innovation. The first is that of the 'Green (procurement) champion', someone who for whatever reason (we discuss motivation below) has an interest in introducing Green issues into procurement in some way, and has an organisational position from which such activity can be affected. Interestingly, we found this role could be filled by senior procurement managers, environmental managers or senior general management. The second and more modest role is that of 'Green (procurement) campaigners', people who (again, for multifarious reasons) have an interest in stimulating activity in the topic within an organisation, but may lack the organisational position and status to effect real change. More surprisingly, we also found managers who fell into the category 'Green (procurement) careerists'. This label is not meant in a derogatory sense, but is appropriate to describe managers for

whom launching initiatives in environmental purchasing is connected with other personal or organisational agendas; we encountered the phenomenon in a number of forms, and it seems that whilst it may be a highly effective basis for the greening of procurement in some contexts, it is not necessarily premised on the individuals concerned having a keen personal commitment to environmental issues.

Just as the issue of agency illuminates the process of Green purchasing, the concept of the transmission of market signals is valuable for understanding what goes on when organisations pursue environmental issues. However, the exact mechanisms inside organisations by which demand signals are received, understood by marketing and (where applicable) R&D departments, and then translated into practical innovative product/process development have been relatively unexplored: we need therefore to consider how any environmental signals that are integral to what a firm buys stimulate its suppliers to innovate and how this takes place.

Oversimplifying, we can assume that persistent requests from customers for some particular product features (e.g. that the product should be more environmentally friendly in some way) will be conveyed from an organisation's sales department to its R&D department by whatever interdepartmental liaison systems are in place. The R&D department will respond by amending its portfolio of projects to redesign existing products and processes or develop new ones. Within each organisation, there are a variety of potential links between the sales department, the R&D (product/process development) department and its environmental management procedures. In addition, there are market links between its sales department and the purchasing department of its customers, and between its own purchasing department and the selling departments of its suppliers.

In this model, the only links that are certain are the market connections that link buying from suppliers and selling to customers. However, the other links are less certain; there is a huge variety of forms and combinations they can take, if they are indeed present at all (many companies do not have an R&D department or, indeed, environmental management systems).

The ability of an organisation to respond to any demands/pressures from its customers for more environmentally friendly products will depend on three things. Firstly, there is the matter of how 'attuned' the sales department is to the demands its customers make and how it makes 'sense' of them in terms of the need to re-consider the product and/or its production process. Secondly, there is the question of how effective the mechanisms are that bring sales/marketing together with R&D; this will depend on what particular organisational relationships have been established for the marketing-R&D interchange, whether about environmental issues or about other issues (price, quality, etc.). Thirdly, there is the ability of any R&D department to respond to requests to attend to environmental issues.

As we have already mentioned, the examples we have examined have shown that the environmental signals that the organisations receive often

come from *customers* or *regulators*. Even so, environmental signals from regulators are often the result of legislation affecting customers as users; only a few large proactive final consumer-oriented organisations are developing environmentally superior products as a matter of business strategy. Whilst the environmental performance of products is being improved in many companies, it takes place generally in situations where the environmental performance of the product is a key factor for the consumer. Ironically, however, as Foster (1999) has shown, the focus on 'customer requirements' is very often a *limiting* factor, restricting R&D departments from proactively developing products with improved environmental performance. Organisations which see themselves as driven by 'demand' cannot build environmental objectives into their R&D projects until they perceive them as customer requirements. However, such environmental demands may come up in supplier–customer dialogue only when it is a key performance issue rather than as a matter of course. Conventional market relations between seller and buyer do not of themselves routinely provide a clear channel for environmental signals from 'the customer' to product innovation.

There is, however, a complex relationship between signals being received passively and signals being stimulated *by the supplier*. One organisation we observed – a large, internationally active telecom equipment firm – sought to tackle 'environment' as an issue involving a range of people inside and outside it: customers, account managers, purchasers and suppliers. Players in environmentally well regulated markets are very likely already to have tackled management systems (internal solutions to their environmental problems), Life Cycle Assessment for product development and supplier environmental appraisal and assessment. Environmentalist specialists in such firms are now faced with the task of getting the 'environment' recognised as a key business issue. Environment, in their view, needs to be seen as strategically important to the business. So they introduce environment to account managers (sales and marketing) and customers at the same time; they want to have another set of connections with the customer – through environment – and want their customers to think of the firm as a reliable source of information on the environment, as well as thinking of it as a reliable, quality supplier. Firms can indeed *stimulate* signals from customers through 'dialogue' and education. For example, we have observed that health-care product companies operating in the UK market will increasingly seek to introduce 'environment' on to their (National Health Service) customers' agenda. In this case, it is reasonable to say that with environmental as with other product and process features, innovation activity is a complex mixture of 'supplier push' and 'market pull'; the caveat is that both these mechanisms need careful disaggregation, and that the detail of organisations, processes and products needs to be considered.

Conclusion

The role of the ‘consumer’ (the end consumer, you and me, who buy commodities from retailing organisations) in ‘greening’ the economy has long been recognised by environmentalists. Since the late 1980s, environmentalist activist organisations have advocated the use of consumer pressure, for example through boycotts of environmentally harmful products and through positive purchasing of ‘Green’ products, to influence what firms offer for sale and, indeed, to influence their policies towards the environment overall. End consumers’ views and preferences on environmental performance (‘consumers as stakeholders’) are increasingly part of the rhetoric of business organisations in their attempts to interpret sustainable development for their own ends.⁵

However, as we have argued in this chapter, it is our contention that the traditional image of the consumer is inadequate, both for theorising in economics and sociology and, especially, for consideration of the environmental challenge of greening industry and the economy. We have set out the arguments for treating organisations as consumers, and developed a framework for examining the differences and similarities between the two categories.

Using the concept of the supply chain, we have discussed how it frames both the external context of organisations and is also helpful in understanding the texture of behaviour within them. Focusing on the ideas of agency and the transmission of market signals, we have indicated areas that point to a much richer and more complex story than the simple accounts of Green supply might suggest. Certainly more work needs to be conducted on these topics – developing a better understanding of how organisations operate in the context of changing environmental pressures from their suppliers as well as their customers as well as conducting more empirical studies.

With regard to any ‘policy’ conclusions from our discussion, we have seen that market mechanisms for the ‘greening’ of organisations and of product innovation can be seen as just as problematic as other mechanisms, whether they be tighter regulation or changes in ‘management values’. The ‘greening of innovation’ requires attention to these internal company management and organisational issues as much as it does to the public policy issues over regulations. For both private and public sectors, we suggest that Green supply practices need to be implemented concerning organisational structure and strategy. Where this is not so, greening initiatives will flounder.

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Notes

- 1 For example, in economics see Ekins (1992); in environmental studies see Redclift (1996) and Sagoff (1995); in sociology see Warde (1997) and Gabriel and Lang (1995); in cultural studies see Miller (1995, 1997); in psychology see Friedman (1994); in geography see Bell and Valentine (1997), in history see Brewer and Porter (1993) and Horowitz (1992).
- 2 See Elkington and Hailes (1998), Irvine (1989), Charter (1992), Wagner (1997), NRC (1997).
- 3 ISO 14001 is an internationally recognised environmental management standard.
- 4 Writers on industrial ecology and industrial metabolism describe flows of physical materials through industrial sectors. See Ayres and Ayres (1996) for examples of flow charts for copper, chromium, zinc, cadmium and also tyres; these charts show the flow of materials (in masses) from mining through processing to end products and, occasionally, to waste/recycling.
- 5 The World Business Council for Sustainable Development, a coalition of 120 international companies, has sponsored a number of books arguing for greater business consideration for 'sustainable consumption' and 'meeting consumers' real needs'; see Willums (1998); DeSimone and Popoff (1997).

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10

Information and communication technologies and the role of consumers in innovation

Leslie Haddon

As a contribution to current discussions of the role of both actual consumers and representations of consumers in the innovation process, this chapter considers two empirical studies of the information and communication technology (ICT) industries. It asks:

- 1 To what extent, how and when are consumers (i.e. potential end users) considered or involved during the design of new products?
- 2 When consumers are actually involved in the process of innovation, what is the nature of their feedback?
- 3 Are some end users considered more than others?
- 4 What considerations and factors influence this overall pattern?

In addition, one development, relatively recent in some companies, has been the emergence of units whose role is to promote end users within the innovation process. So one extra question concerns:

- 5 Their success in meeting this goal and the factors which influence their efforts.

Issues: users in design

There is a growing literature referring to the importance of understanding and involving users in the design process in order to achieve successful innovations. In the field of industrial innovation, we find an early example of this argument illustrated by the role played by scientist ‘users’ working in universities on the development of scientific instruments (Von Hippel, 1976). In reviewing recent developments, Rip has observed that firms appear now to be taking more of an interest in these arguments about the need for greater user involvement (Rip, 1999) while Hoogma and Schot (1999, p. 2) note that this principle has also become increasingly popular with governments. In fact, they cite an EC document lamenting the limited role still played by potential users. The following observations, drawn especially from some recent examples

of writings on this theme, provide a background to the later discussion of ICT innovation.

Potential users of innovations may be spoken for or represented by others in the design process who may be outside the innovating firms. Examples would include parents, paediatricians and drug regulators speaking for children as the end consumers of certain types of new medical drugs (Rose, 1999), women's health advocates speaking for diverse contraceptive users (Van Kammen, 1999) and environmental groups speaking for people in general as regards any Green issues relating new innovations (Hoogma and Schot, 1999). In the case of ICT innovation, the second of the empirical studies to be discussed below, the role of such outsiders would appear to be more limited. Advocacy groups have had limited success overall, although some, such as those campaigning for disabled users, have achieved some influence in certain sectors¹ (Haddon and Paul, 1999). Although they often limit intervention in consumer markets, governments can also represent end users by setting a framework for design.²

Those developing new innovations within the firm (or collaborating firms, or supporting agencies such as academic laboratories) also have images of users, their lifestyles and their 'needs'. A whole range of writings on technology, among other areas, have explored how these are socially constructed and mobilised, and how such assumptions are designed into innovations – for example, in the form of 'configuring the user' (Woolgar, 1991) or in the form of user 'scripts' which, when they are embodied in technologies, invite some practices and make others difficult (Akrich, 1992). What is of interest in this chapter, captured in the first empirical study, are the processes by which such representations emerge.

The same innovation may have different 'users': for example, in the medical field patients are in a sense one consumer of drugs, but clinicians also clearly use them (Van Kammen, 1999). In the case of the EFTPOS systems for using credit cards in supermarkets, both consumers and retailers count as different types of user of the service (Howells, 1999). Turning to the industry under examination in this chapter, while there are examples of ICT where users other than 'end users' are considered, in this industry it is more usually individuals or households which are the sole target, and that is the case in the empirical studies described below.

However, one observation of relevance to the later discussion of ICT is that the same innovation may have some initial users who may be in a position to help shape the product, but whose interests and relation to the technology may be different from later users'. In the field of industrial innovation these initial users, called 'lead users', have been characterised as providing more useful 'user feedback' by virtue of being more competent, resourceful and interested in innovation. The question then remains as to how well consumers can play this lead user role – Hoogma and Schot (1999) have some suggestions concerning what firms may have to do to create conditions favourable to the participation of such users in the innovation process. However, the

problem remains that such initial users may not reflect the interests and perspectives, aspirations and orientation of potential later users. In the discussions of ICT innovation, the more common distinction is between 'early adopters' (such as technological enthusiasts) and various categories of later adopters.

One final discussion noted by several authors (described in Hoogma and Schot, 1999) concerns the important lessons which producers can learn by seeing what users do with their products, especially since some problems cannot be anticipated in advance. However, Hoogma and Schot also point to the limitations of this approach. Certainly innovators can learn about the effectiveness of a certain technology for achieving a particular goal. Hoogma and Schot (1999, p. 4) illustrate this by discussing how various demonstrations of electrical car experiments could show how users responded to particular features of the technology. They refer to it as 'single-loop learning'. In contrast, 'double-loop' learning would go a stage further to involve users in exploring and questioning the assumptions, values and world views which are built into innovations. The authors argue for giving users more chance to construct their own meanings and preferences during the innovation process and to be more active and creative, along with designers, in formulating new products which could satisfy their own needs. So rather than involving users late in the innovation process as 'a source of information about a preconceived product' (Hoogma and Schot, 1999, p. 3) there would be a process of 'mutual learning by both producers and users about the possibilities for use of the technology' (p. 2). Clearly one theme to be explored in relation to ICT is when and on what basis users are involved in providing feedback.

Two empirical studies

The first study³ of the shaping of information and communication technologies dealt principally with innovation initiated from and occurring within large companies (Cawson *et al.*, 1995). It examined efforts, mainly but not solely in the United Kingdom, to develop consumer markets for home automation,⁴ interactive multimedia⁵ (mainly CD-i) and electronic messaging⁶ (mainly e-mail). At the time of the study these were chosen as examples of fairly radical innovations in the consumer market: even by the end of the 1990s home automation has yet to be established; by the early 1990s CD-ROM technology had not yet led to the growth of multimedia PCs; and e-mail had not yet become widespread through the Internet. Part of the reason for the focus on radical innovations was that they posed particular problems for producers: there was no established market or widespread consumer base to refer to.⁷

The general aim of this first piece of research was to consider the innovation processes around domestic ICT (e.g. the origins of ideas, paths of development, etc.) but within the research one key question concerned the place of consumers. This relates to the above debates because it charted consumers'

actual involvement in terms of giving feedback and the nature of that feedback, and what value innovators placed on such feedback. In addition, the study explored innovators' visions of consumers, and what other sources of knowledge about end users are taken into account (see also Miles *et al.*, 1992). Hence these in-depth case studies explored the issue of where representations of users come from – and to some extent addressed the question why.

The second study⁸ covered a broad range of European ICT industries,⁹ dealing principally with innovation in the United Kingdom, Germany and the Netherlands, but with sub-studies in Italy, France, Spain and the Scandinavian countries (Van Dusseldorp *et al.*, 1998; Haddon and Paul, 1999). Unlike the first study, the focus was not so much on specific innovations as case studies as on the processes of innovation within companies – although interviewees illustrated their points with specific examples. A second difference is that not all the innovations would necessarily be characterised as 'radical' in the same way that home automation, interactive multimedia and electronic messaging were at the time of that earlier research. For example, this second empirical study also included telephone handset and mobile phone design as well as services like home shopping. Internet access packages and web-site design. Finally, this second study examined a mixture of firms of different sizes ranging from large national and multinational to SMEs.

So from this second piece of research we have evidence concerning the role, timing and nature of consumer research in general from a far broader range of firms, both across Europe and in term of the types of ICT firms. Moreover, we can explore the question of what factors influenced decisions to involve users or what ones constrained their role in the design process. Also in this sample, and to an extent reflecting the change over time since the earlier study, we have a sub-sample of firms which could be considered 'leading-edge' in relation to this issue of involving end users. These companies had set up units within the firm (or sometimes employed individuals) specifically to take end users into account. So, as indicated in the introduction, we can ask questions about the situation of these user champions and the factors which have facilitated or inhibited their role.

First study: ICT innovators' understanding of end users

When we look at the whole process of innovation in the field of ICT, it could include such agents as the R&D labs, marketing and advertising staff, agents who organise collaboration between firms, the industry process and distribution and retail staff. These agents can have slightly different representations, of both the potential consumer and the nature of the product, which can sometimes lead to conflict (Silverstone and Haddon, 1993). However, it would be true to say that in the case studies discussed below, and in many other examples of ICT development, product ideas, and hence early ideas about consumers and consumption, were mainly generated from and championed by technical staff in the R&D labs. Hence they are the focus of attention in this analysis.

To understand how consumers, or visions of consumers, are introduced into the design process, we need first to appreciate the origins of and stages in formulating innovative ideas. Although the marketing literature often talks about the pre-eminence of consumer demand, in the three areas studied producers clearly did not start with the questions of what people might need, what their interests were or what they currently desired. Rather, these producers were usually aware of technological possibilities, they were aware of their firm's competitive advantages and they searched for ways in which a technological opportunity or possibility might be turned into a product that might be adopted by consumers.

To illustrate this, let us consider an example relating to home automation. Here the initial technological potential was a home network containing a microprocessor and display system. This was then translated into a function which at least made sense in the home – displaying a message on the television that someone was ringing the doorbell. The innovators then tried to conceive of the conditions when this might be perceived as a benefit (e.g. for people with hearing impairments):

We had a lot of ribbing over this initially. But, amazingly, it's started to sell itself. Someone rings the front doorbell and the act of ringing the bell brings a legend on to the TV that says, 'Front doorbell ringing.' Now initially some people said, 'That's silly.' Except that, as other people quickly pointed out, an awful lot of people are hard of hearing or they are absorbed in the television. But then the message gives you the chance if you wish to press a button on your remote control handset and suddenly you can see that there's Auntie Mary come for cup of tea, or it's the insurance man, or it's someone you don't want to see. And if you're infirm or aged, that's useful. So, right away, something that started off along the lines 'Yes, we can do that. What use is it?' has developed into something that has an application for the two million hard-of-hearing or the so many million invalided.

This is actually the account provided by the type of agent who can often play a significant role in selecting from and developing product ideas: the product manager. Because of the pressure within these firms to consider consumers, such product managers, who usually but not always have a technical background, regularly differentiated themselves from the 'technical enthusiasts' in the labs. They often regarded the latter as having horizons which were limited because they thought mainly in engineering terms. Or else they sometimes regarded the ideas of 'techies' as being 'unrealistic', given the firm's previous experience of the market. Such product managers attempted to learn from past experience of 'the market'. This was part of the motive for some forms of intense producer interaction and pooling of ideas – clearest in the case of home automation, where such managers attended conferences and took part in EC-sponsored and other forums for some years.

In practice, both product managers and many of the other staff involved in the innovation process imagined how innovations might find a place in their own household – and how innovations might find a place among

the interactions within their own (and sometimes their extended) family. In fact, this approach was more common than we had anticipated. The significance of this practice, as already noted in the earlier discussion of lead users and earlier adopters, is that the perspectives and preferences of innovators coming from certain social niches (in terms of class background and technical training) may be substantially different from those of later users of the new products.

Actual consumers played little part in the very early stages of product genesis. They were certainly not involved in a process of generating ICT product ideas – partly because product managers doubted that consumers might actually suggest radical product ideas which would in any way match the competences of the firms concerned. From the perspective of these managers, while consumers might state a desire for innovations which allowed them to avoid ironing, they were less likely, apart from technical hobbyists, to generate the idea of, for example, a Videotex system.

Moreover, in these studies consumers were usually not asked to evaluate the very early formulations of product ideas which were coming from the labs (i.e. concept testing) – or, if they were, in the form of focus groups, product managers were somewhat wary of interpreting the feedback. In fact, consumers tended to be involved later in such processes as product testing¹⁰ and evaluating interfaces.

Occasionally, consumers could play more of a role supplying feedback after the product was launched. For example, when the Micronet service was being developed on the Prestel Videotex system, one of the BT staff proposed the form of messaging now known as chat lines. He was allowed to design some software for the BBC computer and it was simply tried on-line, without further consumer research. As one of the Micronet staff commented:

This often happens. It's difficult to test a concept like chat lines, and the easiest thing to do, given you've got a user population as guinea pigs, and provided it's not costing you an arm and a leg to do it, is to just go at it that way. We as a central business decided we weren't going to develop it as a facility initially, we wanted it as a prototype. It was successful, it was very popular. So we decided to bring it on board.

And in fact, with a centralised service such as this one where it was relatively inexpensive to add a new feature, it was common to simply offer something and see how users responded – so, for example, MUD multi-user games were offered on the same basis. In fact, these Micronet users appear to have provided an unusual degree of feedback to British Telecom, compared with other types of on-line information system. Certainly a 'club' atmosphere was fostered, which was helped by the magazine component of the overall product and also by the hobbyist orientation of many consumers and staff:

It's always been foreseen that the users would determine the shape of the service by one means or another. In fact, they don't as much as we thought they

would. Clearly they send messages to the editor and complain, and they are very vociferous about what they feel is important or not ... a very small number are, I should say. It's not quite as democratic as it might appear. But, yes, it was always envisaged that there would be a strong user feedback path. It was more like an on-line club. It was an electronic magazine for enthusiasts, written by enthusiasts.

The telling point here was that 'a small number' articulated their views. Although Micronet's audience may have been wider than technological hobbyists, the users volunteering feedback and potentially shaping development appear to have been the more technologically oriented.

It was noted earlier that product managers often felt that they were trying to be more sensitive to the market. So even if actual consumer research sometimes played a limited role, they were nevertheless trying to piece together evidence about consumers. Hence, within some firms, such product managers sought the views of outsiders, be it from marketing consultants or academics to supply information which they often felt they were lacking about the interests and behaviour of end users.

A more common process was to consider past markets.¹¹ For example, at Philips, the staff who were developing CD-i were dubious (like some other mainstream consumer electronics suppliers) about the 'success' of the early home computer market of the early to mid-1980s, seeing it as involving mainly hobbyists (and games players), and regarding the whole PC interface as being problematic for ordinary consumers. On the other hand, audio CD players, with their simple interface, were regarded as an example of a successful innovation. These two considerations shaped the decision about how CD-i should be designed, with an interface more like a CD 'black box' and less like a PC (i.e. with no keyboard), hiding the technology, and stressing through marketing its ease of use and the software available. Meanwhile the growing ubiquity of remote controls (e.g. for television sets) led them to prefer this as the control interface – again, relying on evidence about what appeared to be popular and acceptable rather than actually seeking out consumer feedback.

Another approach involved monitoring trends. In the case of CD-i, Philips's US staff argued that there was a trend to more individual-centred activities which made the time ripe for their product – citing in evidence such factors as the fact that major mass television networks had lost audience, collective viewing within households had declined and the market for special-interest videos (e.g. fitness, gardening, sport) had grown.

So what emerges is a picture of innovators acting almost as detectives, using various sources of input to construct a view of family and social life.¹² This process involved considerable interpretive work on the part of these producers, rather than simple observation – leaving scope for some of the disagreement over the scenarios which emerged. Nevertheless, these producers interacting as a 'community' at conferences, on committees and in other forums, could equally well reinforce each others' images of end users.

On balance, these innovators paid far more attention to and made an effort to interact with other producers rather than investigating end users. While this reflected in part the uncertainties which innovators felt about consumer feedback, it also related to some of the realities of product launches. Other producers not only provided sources of judgements about the potential market and ideas about consumers but in those innovations involving collaboration (for example, in the case of home automation and CD-i) the support of the other producers was necessary literally to 'put the market together' – i.e. to create the conditions seen as necessary in order to give an innovation some chance of success with end users. Hence the importance of seeing what these co-producers of innovation thought, of sharing scenarios and sometimes of mutual persuasion that a market might exist.¹³

To summarise the findings in relation to the earlier discussion, we have seen a range of examples of how representations of users can be constructed from diverse sources. Some representations of users were specifically drawn upon because they could map on to what the technology might offer. Others came from producers' accumulated experience of markets, as well as their monitoring of a range of trends. In this whole process, at least in the case of products that were perceived as being more radical innovations, actual feedback from consumers played some, but a more limited, role compared with other inputs. In part, this reflected a degree of scepticism about what consumers might contribute to this type of innovation. Addressing the question of which consumers play a part in innovation, it was clear that some users rather than others were envisioned in this process¹⁴ (in the case of innovators thinking about their own or their families' circumstances) or else involved providing feedback (in the case of enthusiasts responding to innovations in Videotex). And in terms of the nature of this feedback, it would be more appropriate to characterise much of this user feedback as responding to product offerings.

Second study: the role of end user research in the design process

The most general result of this later and broader study was that the use of some consumer research during the innovation process was more common among larger companies, although by no means among all large companies. That said, larger companies were often composed of a range of different product development units, and within the same company some units were often more willing to seek consumer feedback than others. In contrast to the larger firms, though with exceptions, the smaller companies such as some software publishers and Internet designers were more likely to have very little or no user involvement.

Returning to the larger companies, the forms of user involvement which were now routine¹⁵ included (some) concept testing, prototype testing, usability testing, user trials and using software to monitor use. A few (though very few) companies went as far as to conduct surveys, hold focus groups or

conduct in-depth interviews on topics which might provoke ideas about future products – which is the nearest they came to the principles of ‘double loop’ learning described in the earlier discussion.¹⁶

However, it must be added that while a majority of interviewees in the larger firms accepted the desirability of involving users at some point in the innovation process, some project managers still had reservations about the value of some of these exercises (e.g. owing to the perceived artificiality of trials and doubts, noted above in the first study, about the benefit of testing radical concepts on focus groups). So while firms may collect user feedback, how much weight they give to it can be a different matter.

Secondly, even among those which did collect information about users, some staff admitted that they were less successful than they would like to have been in actually integrating such data systematically into new product development.

In the face of general pressure to become more market-oriented, a variety of factors still operated to limit innovators’ interest in consumer feedback. One was the general technology orientation of some companies, or parts of companies, although a number of larger firms were attempting to change the company culture in order to be more sensitive to the market. A second factor was the common attitude found among companies that ‘success’ measured simply in terms of increasing sales figures was sufficient to show that the products concerned met user demands. This was seen as being a good enough indication from ‘the market’ and justified little or no investment in customer-related activities. A different reason for not involving actual end users in the design process emerged where firms believed that they already took users into account by virtue of following certain basic ergonomic principles such as making a commitment to simplicity, providing well structured information which was easy to access, being concerned about error-friendliness, allowing self-explanation, building in help functions, etc. If they already did all this, it was sometimes regarded as sufficient to meet anything the user might want from the innovation.

Undoubtedly the lack of time, especially, as well as lack of money, played a part. One reason for the limited role of users in the development process was the enormous time pressures experienced by many ICT firms to get their products quickly into a constantly changing market. While this may not be unique to ICT, that sense of urgency, because of fast-changing technology, is part of the culture of the industry. And even where user data were collected the same time and financial constraints limited how thoroughly the information could be analysed.

Outside any question of actual consumer research, there was also a problem of which consumers were considered by innovators. Certain interviewees noted that when staff did think of users, these (often) young designers who were at the cutting edge of innovation tended to think of users as being people ‘like themselves’: technophiles. In many cases the main target group for innovative solutions remained the trend-setting *avant-garde* for high-tech

products. There appeared to be an underlying assumption that there is a 'trickle-down effect' whereby a product designed exclusively for this group would gradually become an everyday product for the majority of people. In other words, there was the problem of still considering initially just a narrow band of end users, not a mass market (and certainly not groups such as older and disabled consumers).

As regards the type of post-launch user feedback (and redesign) noted in the BT example above, obviously the scope for this itself depended on a variety of factors – for example, whether the firms concerned were dealing with the functionality of hardware, its industrial design, the core software architecture, more peripheral software that could be adapted, or content. So, for example, developers of interactive services, as in the Micronet example above, were in a better position to put their service on the market and then make alterations in the light of feedback once users were actually using the product. Some companies employed market research teams to phone up known users in order to get feedback for future product development. In fact, reviews of previous innovations, including evidence from users, sometimes had to take place because getting approval for future projects depended on whether past ones were considered to have been successful.

That said, a mixed picture of post-launch analysis emerges. One barrier to this process, noted by innovators in small but also in larger firms, was that staff were sometimes reluctant to conduct post-launch research because they had already used up their budget in the course of getting the product to market and they had not made provision for adaptations in the light of user feedback. As noted above, others felt that they were not capable of handling the user feedback which they routinely collected about the products they had already brought to market. And in some cases the feedback was never analysed because the staff involved in the initial innovation had moved on to other projects within the company.

Lastly, we have the consequences of collaboration between firms. First, there was, to various degrees, formal or informal collaboration between larger companies with complementary assets, e.g. the network operators of various sorts who maintain a channel, be it the phone, the Internet or television, the service or content providers who use that channel, and the hardware companies that support the whole operation. To the extent that they did not compete, some of these (such as telecom operators and telephone hardware suppliers) met regularly to share their scenarios, visions of users and sometimes even the evidence from consumers which they had collected. This could be a particularly important source of information about consumers for firms relatively upstream in the innovation process – e.g. the chip makers who supplied telephone or consumer electronics manufacturers and who did not themselves have any direct linkage with end users.

The other common form of collaboration involved one firm setting up a technology or service on behalf of a client, perhaps later handing over responsibility for maintenance and development to that client. Examples

would include the software developed for home shopping services or for PC banking. In fact, some of the technical or service suppliers in the study reported that as companies they themselves had had to change over time, putting more emphasis on understanding not only their clients but their clients' customers, and for this they relied on information being passed on to them.¹⁷ To some extent clients' knowledge of users was fed back into the development process or fed back to these more technical staff – although it was equally clear that some such knowledge was also either withheld or the need to pass it on was somehow overlooked.

But it is when the above form of collaboration involved smaller SMEs supplying the technical expertise that the issue of client feedback about end users became more crucial. This was because with their limited resources such SMEs were often not in a strong position to gather their own information about end users. However, in many cases, the commissioning clients failed in this respect: even when they had information about users, the data were not fed back to the outside designers. Sometimes the client even failed to take a strong lead in defining the end user, relying on the SMEs to do so. Hence there was some uncertainty in projects in which design was partly outsourced. Moreover, the problem of who took responsibility for defining and elaborating the picture of the end user was sometimes made even more difficult when there was not just a single client–supplier relationship but a whole network of small partners involved.

In sum, the findings from this wider sample suggested that the practice of expecting to get some form of user feedback was not common in larger firms, although not in all large firms or in all parts of larger firms. This broader study again drew attention to some of the concerns about the usefulness of consumer feedback, more so with radical innovation and the fact that some users, in effect 'early adopters', tended to be considered more than others.¹⁸ The degree to which post-launch analysis of user feedback takes place was uneven, although this could in part reflect the nature of the product. When a variety of producers collaborated, in general or in relation to a particular innovation, there was an important process of sharing both representations of users and evidence about them – but sometimes the sharing was more limited than some partners would desire, more clearly so in the case of SMEs. And, as in the previous study, it would be more appropriate to characterise much of the user feedback as reacting to product offerings, although there were a few examples of practices that attempted to evoke feedback which might stimulate product ideas.

Third study: the experience of units specialising in end users

These units included market research groups, human factor departments (much more rarely) ageing and disability units and other R&D groups going by various names which had often employed social scientists. This was perhaps most striking in the telecom sector, where a range of operators, but also

the hardware companies supplying them, had employed such staff on the grounds that companies felt that they were too technology-oriented and needed to know their markets better with the move to privatisation.¹⁹ While some of the work of these units involved users in evaluating preconceived products, this was also the location where one was more likely to find research²⁰ exploring consumers' lives and views. It was some of these units which were involved in concept testing.

However, the context in which they operated was one where the larger companies often consisted of fairly autonomous business units which acted as their own profit centres or else they had subsidiaries which operated fairly independently. So while the parent company might have set up the various units within the whole organisation to think about end users, there was often no requirement for the separate business units to consult any of them. Hence, while good rapport had been established with some business units which valued the input about consumers, other business units did not make use of the services of these user champions. Indeed, sometimes business units preferred to assemble their own team to think about the market. Where such product development groups were composed solely of technical staff working in isolation from the rest of the company, they could operate with more limited horizons concerning what users were like and remained unreceptive to new forms of, especially empirical, input.

Clearly the place in the design process of the social science staff and others specialising in end users could be problematic. To be fair, these staff often felt that they were having at least some success in raising awareness of end users and making others in the company take on a wider range of social considerations. Insights about users from these staff were sometimes taken up by those technical innovators who were more sympathetic to that input. But, as noted above, in other parts of the companies they either met with more resistance or were ignored – or else, in really large companies, their existence was still unknown in some quarters in spite of efforts to publicise their services.

Sometimes there were communication problems: the technical designer and social scientist communities were often separated, sometimes geographically, but also within the organisational structure (e.g. being connected only by intermediary product managers). In this respect, a number of interviewees identified one of the more promising practices of forming interdisciplinary teams to consider new product development. Here staff from these units (or individual social science staff 'representing' end-user perspectives) could negotiate with others from R&D. In such circumstances the user champions were seen less as outsiders, and in the process of talking directly with others in the team they could provoke technical staff to think about a wider range of considerations than they might otherwise have done.

However, when the two sides rarely met, some of the technical staff did not appreciate (or in some cases understand) some of the potential contribution from these units, more so when they came from social scientists with an academic background. The innovators did not see how it was relevant for the

type of design decisions they wanted to make. Meanwhile, some of these same social scientists acknowledged that they sometimes did not know exactly what the technical staff wanted. At times the different styles of language used by the two communities could also lead to communication problems.²¹

Finally, whether in relation to technical or marketing staff, some of these units specialising in end users were also under pressure to prove that any suggestions they made would be profitable. This was not always straightforward, especially when there were other criteria that could be applied, such as the principle that certain changes in design would lead to a 'better' product, more usable by more people. The inherent difficulty of precisely quantifying benefits could sometimes be used as a rationale for excluding those units from the innovation process.

Before drawing together some of the above observations, it is worth restating the point that the role and experiences of units within larger firms which specialise in representing (as well as researching) end-user perspectives have been less discussed in the above literature and in some companies are a relatively new phenomenon. The above research showed that while much of their empirical input involved eliciting consumer responses to products and product concepts, other research provided new kinds of exploratory feedback with the potential to be an input to new product innovation. However, the experience of these units was also mixed, even when dealing with different parts of the same firm. Sometimes they felt that they were being more successful in getting technical innovators to consider a wider range of factors about end users (or particular users such as the elderly and disabled). At other times, a range of factors outlined above militated against their influence.

Conclusion

While innovators have representations of and knowledge about consumers, actual consumer input into the design process is only one source among others of their understanding of potential consumption. The two studies are not strictly comparable so we cannot say whether that consumer input has increased over time. However, the ongoing discussions within at least parts of the ICT industry about the need to be sensitive to the market and the establishment of units to promote consideration of users within some sectors suggest that a degree of consumer consultation may have become more standard practice within at least some of the larger firms – and that was also the impression which many interviewees gave in the second study.

That said, this chapter has explored a number of constraints working against involving potential end users in the innovation process, and even where feedback is collected there is no guarantee that it will be used or of the weighting it will have among other considerations. In the case of what are perceived as more radical innovations, feedback can often take place relatively late in the whole process, although in some firms there is now more involvement of consumers at the conceptual stages. Given that many product ideas stem from

awareness of technological possibilities, consumers' feedback is more usually in the form of reaction to product proposals rather than generating them. Through a variety of mechanisms outlined above, some consumers are often considered more than others in this whole design process.

Lastly, the employment of end-user champions has gone some way to help widen the degree to which consumers are considered and the ways in which they are taken into account. Yet the process remains uneven, and there are still factors relating to the culture of firms and their organisation which can make the role of these units problematic. Of course, taking a more critical note, such user champions themselves translate what any user feedback means within the firm and they 'represent' consumers, or groups of consumers, just as agents outside the firm do. As such, their own interpretations could themselves be the subject of analysis. But if the starting point of this chapter was the literature suggesting more interest in consumer involvement in innovation, then in the ICT industry such units are trying to raise the user profile and in many cases they are helping to introduce more user feedback into the design process.

Notes

- 1 For example, the Royal National Institute commissioned designs of fonts for television screens which were easier to read than existing ones. Philips has not introduced these fonts into its chip set for the next generation of teletext.
- 2 For instance, the strict legal requirements for ATM design in North America which takes disabled users into account has influenced the design of the cash points available in Europe.
- 3 'Delivering IT into the Home' was a study sponsored by the ESRC and lasted from 1988 to 1990.
- 4 This refers to integrated systems of consumer ICT products known variously as 'smart houses' or 'intelligent home' systems, 'interactive home systems', 'home networks', 'domotique', 'batimation', etc. The challenge for suppliers here was to produce a viable mode of integrating various ICT products and providing control systems for such products.
- 5 This refers to the use of optical disc technology to deliver varied forms of information (text, graphics, video) in new, more interactive ways. The focus of the study was on CD-i but other competing formats were considered.
- 6 This focused mainly on electronic mail and Videotex services aimed at consumer markets, but also covered functional alternatives such as home facsimile machines.
- 7 The same point and the difficulties it raises have been discussed in relation to radical medical innovations (Martin, 1999, p. 2).
- 8 'Design for All and ICT Business Practice: addressing the barriers' was sponsored by the European Union's DG XIII TIDE programme and was conducted in 1998. TIDE, focusing on the potential role of ICT for disabled and elderly people, wished to promote Design for All/Inclusive Design (e.g. via standard setting, promoting best practice, etc.). It commissioned this study to consider how much elderly and disabled users were considered in the design processes of ICT companies,

but as a prior step the researchers tried to ascertain the extent to which and the ways in which consumers in general were taken into account.

- 9 This included telecom operators and their hardware suppliers, ICT innovation within the transport industry, public information services, software publishers, the Internet industry, broadcasters, suppliers of interactive services and firms involved in electronic commerce and financial services.
- 10 For example, US focus groups monitored reactions to CD-i when it was nearly ready for launch and when price information was available.
- 11 This was also noted in the case of radical innovations in medicine, where innovators drew on the commercialisation history of previous medical products when planning new innovations (Martin, 1999, p. 13).
- 12 In consumer markets this is largely so because what is happening in households is in some senses far less directly visible to innovators than, say, the operation of a client organisation where the innovators could attempt to go in and map the 'needs' of the client and the organisational processes at work.
- 13 Although, after many years, this clearly failed in the case of home automation when no one was prepared to take the risk of being a first mover.
- 14 Feminists have also drawn attention to the way male technical staff produce products that they think will interest other males – including home automation functions (Berg, 1990). Meanwhile, Wajcman notes, 'the designers of domestic technology have so far been subjected to very little investigation; an examination of their backgrounds, interests and motivation may shed light on the development of particular products' (Wajcman, 1991, p. 106).
- 15 This was occasionally even stipulated in the firms' checklists of actions to be undertaken at different stages in the innovation process.
- 16 Such consumer feedback was also sought in focus group discussions, among other types of information about daily life, as part of pre-competitive research conducted jointly by European telecom companies (the EURESCOM P-903 project, of which the author was a subcontracted participant).
- 17 In addition, larger suppliers had themselves sometimes built up a certain knowledge of end users from previous projects. In fact, there was one instance where it was actually the technical supplier which had 'accessibility' issues on its design checklist – which the supplier then raised with its client.
- 18 Also, elderly and disabled users were only rarely considered (Haddon and Paul, 1999).
- 19 The results of this process for ageing and disability units was uneven: for example, in the UK British Telecom's unit has remained influential for some years, while in some of the Scandinavian telecom operators such units have declined or faced problems as firms have emphasised the 'mass market'.
- 20 As an illustration, many of the social scientist staff from within European telecom companies were involved in COST 248 and later COST 269 programmes – where they met, along with academics, to discuss future users and share some of their empirical research. Examples would be the Future European Telecommunications User Home and Work Group (1997) and Haddon (1997).
- 21 In companies which were arguably more market-driven, it was sometimes the decision-making marketing staff who were not interested in any findings about users if they regarded the results and implications as being too complex (e.g. if they did not produce market segments which fitted into existing marketing categories).

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11

The incorporation of user needs in telecom product design

Vivien Walsh, Carole Cohen and Albert Richards

This chapter reports some observations of a user-oriented design project in a firm supplying telecommunications equipment. It is part of a larger project in which we also observed the design of a telecom service by a network of telecommunications service supply firms, and several projects in a consumer organisation which evaluates telecom and other electronic products and services. Our approach was to observe these projects as they were unfolding. The rationale for studying ongoing design work was to observe the process by which design decisions were made, while various options were being considered, and before each decision had become, in the minds of those concerned, justified as the 'best' and possibly only option to choose. A design often *becomes* the preferred option as it is adopted, commitments are made to it, rationalisation takes place, support is enlisted and interests become bound up with the choice that has been made.

One of our objectives was to use our observations to contribute to the understanding of the management of the design process. The organisation sponsoring the research was the Design Council, whose own objective is the promotion of effective design in manufacturing and service industry. The other objective was to contribute to the body of academic work currently being undertaken, in Manchester and elsewhere, which seeks to analyse design and innovation activities within an interdisciplinary framework of the social sciences, exploring the potential for *rapprochement* among technology management, sociology of innovation, economics of technological change, anthropology and other disciplines.

Demand, markets and user needs

Markets and market signals are extremely important phenomena in neoclassical economics, governing the allocation of resources and decisions about technological change. The approach of neo-Schumpeterian economics, in contrast, focuses on entrepreneurship, firm capabilities and other supply-side factors. It stresses the role of the firm, not as an actor which makes decisions

on the basis of profit maximisation, given the prices of inputs and outputs, but one which operates in an uncertain environment which does not allow all the likely outcomes of decisions that may be taken, which must generate knowledge (at a cost), which will take risks, which goes through a learning process, and which develops strategies not based solely on 'objective' knowledge, but also influenced by its own culture, ethos and guiding philosophy.

On the whole, we are in agreement with this latter approach, but believe that it tends to neglect the demand side, and in particular the environment in which products succeed (or fail), named the *selection environment* in the neo-Schumpeterian tradition but less widely studied than supply-side factors (Nelson and Winter, 1982). In refocusing on the demand side, we are not in any way embracing a neoclassical perspective. The selection environment includes markets, but is also strongly influenced by non-market factors such as government regulation, standards and professional recommendation, all of which may determine whether or not a market will exist, some of which are particularly important in telecoms. These expansions of the concepts of the supply and demand sides may thus in some senses be said to incorporate into economics ideas which are not strictly economics, concerning behaviour and culture (the province of sociology and anthropology) and motivation (the province of psychology). While our methodology has essentially been sociological, our conceptual framework draws on evolutionary economics as well as sociology.

Clearly, if a firm intends to market a new product, process or service, it makes sense to produce one that meets customer needs in some way, or it will not be very successful. This would seem to be a fundamental principle of business, and firms spend substantial sums on market research trying to find out what people do want, and on market trials which seek to discover customers' responses to products they have already developed. In spite of this, it is perhaps surprising how often firms (and designers) express the view that they 'just know' what customers want; or make assumptions based on their own wishes, thinking that customers will want the same kinds of products as they do themselves (Akrich, 1995; Cohen and Walsh, 1995). There are many anecdotes that indicate that such assumptions can be astonishingly successful – or disastrously mistaken. But company policy cannot be built on gambles of this kind.

Sometimes, however, it is not possible to tell from market research whether there is a potential market for a new product. If an innovation is radical, the firm will not be sure exactly who is likely to want to buy it; while potential users will not be aware that they have needs that the innovation might meet (Miles, 1993). In such cases, markets may have to be created. Advertising plays a role in market creation, but is not likely to be very successful where the innovation represents a substantial departure from known products.

Von Hippel (1988) has written about cases where users have made equipment for themselves, and in due course have got it manufactured in quantity for the market, either by involving a manufacturer or by going into business

themselves. Lundvall (1988) has written about the role of user–supplier interaction in the success of innovation. Collaboration in the development stage may take place between the producer of an innovation and lead users – who are equally innovative in adopting the new product, service or process. The provision of technical services by the suppliers of an innovation may assist customers to understand the properties of the new product and thereby make better use of it (e.g. new materials). And the provision of training for customers may be necessary so that they can use the new product (e.g. early computers). These interactions with users all contribute to the creation of markets, and to the creation of customer loyalty and ‘lock-in’ in anticipation of the appearance of competing products.

Lead users may modify a product so that it meets their needs better, at the same time as they alter their own tasks so as to make best use of it, and by their example enlist other users to try it out. In this sense there has been a simultaneous construction of technology and the market, and boundaries have become blurred between late design and early adoption (Mangematin, 1993; Mangematin and Callon, 1995). User–supplier interaction and ‘late design’ by lead users do not always involve the firm in learning more about its users *in advance* of product launch, or deliberately taking users into account in product design, but can provide a path for doing so in the future.

In the computer industry, concern with user needs began to focus on issues of human–computer interaction (HCI) with the growth of the PC market among households and business users who were not computer experts. Dedicated research centres on human factors started to appear in both public and private-sector organisations, such as Human Factors & Advanced Technology (HUSAT) at Loughborough University (UK) and human factors laboratories in the large firms of Xerox PARC, Apple, Microsoft and IBM in the United States. The dominant paradigm for taking user needs into account in this industry has been the ‘usability’ study, in which a new item of hardware or software will be tested to make sure that the intended users can see how to operate it successfully, achieving what they expect to achieve without recourse to frequent use of manuals or special courses.

There have been several changes of emphasis in the objectives, techniques and methods used in usability studies (Hull, 1992, 1997; Richards *et al.*, 1996), shifting progressively away from formal evaluation methods carried out in the laboratory by expert ergonomists and psychologists, whose focus is the appropriate shape, weight, labelling of keys, angle of display and so on to match the physical and psychological characteristics of the intended user. The ‘empirical’ approach to usability testing moved away from experts and ergonomics, towards observations of users or representatives of users interacting with equipment, though still in a laboratory-type situation. Most recently there has been a focus on observing ‘real’ people using the product or a prototype, with increasing emphasis on the context in which it is used, their own home or workplace, and qualitative as well as quantitative evaluation. Thus, for example, ethnographic studies, stemming from sociology (especially

ethnomethodology) and anthropology, have been carried out in which observations are recorded on audio or video tapes of 'real people' doing 'real work' with computers and other IT-based systems in their normal workplace environment. The recordings are then analysed later using conversation analysis (de Fornel, 1993; Harper and Hughes, 1993), interaction analysis (Suchman, 1993) or distributed cognition techniques (Hutchins, 1995).

The telecommunications industry has adopted the concern about HCI, human factors and usability which first emerged in computer hardware and software firms. This is partly due to the influence of the computer industry, as a result of the increased integration of computer technology and telephony. It is also partly due to the increasingly competitive environment in which telecoms firms are operating as a result of deregulation and privatisation, which have enabled the entry of increasing numbers of overseas competitors in most former national monopolies' home markets, on the one hand, and a shrinking market on the other hand, resulting from cuts in network operators' expenditure on equipment. Increased competition has encouraged telecom equipment firms to place more emphasis on meeting the needs of users, or at least making products they can use easily. In turn, the rhetoric of concern with user needs may be used as a marketing device.

Nimrod PLC

The case reported in this chapter took place at a telecom equipment supplier, and involved the observation of a usability trial about to start in their Business Systems division. We have called this firm Nimrod PLC (and Nimrod BS), to preserve its commercial confidentiality. This was the first such trial Nimrod had actually carried out, although it had adopted a user-oriented strategy some two years earlier. Working out the practicalities of implementing the strategy, usability training, developing guidelines and generally winning the support of staff throughout the firm for a usability orientation had all taken place, but so far no 'real' usability trial had been carried out as part of the development of a new product. We started our observations in July 1995, and continued to make them until the end of 1996, though our visits were more and less frequent at different stages of the development project. We interviewed several times all the staff involved in the usability and the product design processes, observed the usability trials, attended all the formal project meetings, and attended those of the informal meetings we could manage (as it was only possible to attend *ad hoc* meetings if we were already on site). All the first names mentioned in the chapter are those of members of the design team, changed to maintain their anonymity.

Nimrod used ergonomic consultants or in-house staff to advise on the match between human users and the physical properties of their products. They then carried out in-house usability trials, in which they used members of their own staff to test the usability of their proposed products. In the first place the surrogate users were colleagues of the design team, engineers working on other

projects. Then they asked staff from non-technical departments, such as accounting, marketing and secretarial services. The trials took place on company premises, but attempts were made to make the environment as unlike a laboratory as possible.

The project we observed at Nimrod was the design and usability testing of the P96 range of telephones intended to be used with the firm's private switching systems and networks. The firm's goal was to develop 'new, more powerful, flexible and user-friendly products that support international industry standards in advanced telephony features and applications, and advanced computer telephony integration'. The P96 range was to offer basic features on the simplest model; and advanced functionality, such as programmable feature keys and key system keys, on the top of the range model, with a display that would facilitate its use, enable the users to navigate the programming, and provide call information when the phone was in use.

Most of the functionality was supplied by the network, but it was the phone on the desk that the business user would use to access these functions, and therefore judge for its user-friendliness, and for the extent to which it made intuitively obvious which features were available and how to use them. Indeed, the terminal (telephone) was to be designed explicitly to *encourage* the use of the features available on the ISDX (the switch), without reference to user guides or training. Nimrod was concerned, as were other firms in the information and communication technology (ICT) industry, that users should be able to focus on the task they wished to accomplish, without needing to understand the technology that made them possible, or indeed be aware of it. This is known in the industry as 'transparency'.

Three groups of design issues¹ discussed by the team were:

- 1 Issues concerning the physical design.
- 2 Issues concerning the design functionality.
- 3 Issues concerning the user guides.

The usability procedures we observed concerned the first two of these.

Preparing for usability testing

Peter, the 'design authority',² started to prepare the usability plan at the design stage of the phase review process (see Table 2).³ The document would describe how the team was going to approach the problem of usability testing and go about doing it.

The core project team then provided the necessary resources to look into usability issues, running the usability tests in parallel with other design and development work on the terminals, so that all aspects of the terminal development were covered at the same time. Initially, Rob, an engineer taking on the title of Usability Co-ordinator, was going to co-ordinate the testing that was meant to start the last week of July 1995. Another engineer, Alan, was to be in charge of developing the simulation tool for rapid prototyping that

Table 2 The phase review process

1	Concept generation	Development of concept brief by multidisciplinary team looking at technological feasibility, price, manufacturing feasibility, potential sales and short-term profit.
	<i>Phase Review</i>	<i>I – Review of concept brief</i>
2	Feasibility study	Production of a business plan
	<i>Phase Review</i>	<i>II – Review of business plan</i>
3	Definition of the triangle of time, cost and requirements	Appointment of Project Manager, definition of technical specifications and production of the following key deliverables: <ul style="list-style-type: none">• Marketing plan• Marketing requirement specification (MRS)• Product requirement specifications• Project management plan• Engineering plan• Test plan• Customer service plan
	<i>Phase Review</i>	<i>III</i>
4	Development	Design Implementation
	<i>Phase Review</i>	<i>IV</i>
5	Testing	At least three months’ technical and safety testing before it is on the market
6	Controlled release	
7	Full release	
8	Withdrawal	

Note During each phase, plans are drawn up to show how the next phase will be implemented. The phase review at the end of each phase evaluates these plans and gives the authority to pass to the next phase. The phase review process acts as a control mechanism for new product development projects.

was to be used for testing the interface. Rob was to take the usability criteria defined in the usability plan and, looking into the simulation tool and the various hard model prototypes of the telephone, he would ‘redesign’ the usability plan accordingly for future evaluation. Rob was seen as the central usability resource that would look after all usability aspects of the terminal and be in charge of the future planning and co-ordination of all usability activities. Other people would come in later on, to look into usability issues related to specific design aspects of the terminal. According to Jack, the engineering team leader, usability issues were ‘a massive input’. In Rob’s words:

The way I understand it at the moment, it is that my boss wants me to become involved in P96 in terms of usability. Now I don't know what they've actually planned to do. It's certainly the case that in the past when we've made terminals there's a number of things that we got entirely wrong.

The project core team members all recognised the need to carry out 'usability exercises' as a way 'to try and address the issues that [were] being raised as a result of the work ... done at the front end'. In other words, usability exercises were thought of as a problem-solving tool to find solutions to the design issues raised in the design and development work.

Physical design

There were two types of casework (casing) design, one for the two more advanced terminals and one for the two more basic ones. Usability testing was to address the aesthetic acceptability of the form or shape of the terminal, and whether the physical design lent itself to use. ('It might look pretty on the desk but can you actually use it?') In relation to the latter, the questions to be answered concerned the shape and size of the terminal; the position, spacing, layout, labelling and feel of the keys; the angle, size and contrast of the display; and the weight, shape, dimensions and feel of the handset.

Before we became involved in the project, Nimrod's design consultants had supplied several proposed casework and handset designs, two of which had been recommended by the consultant and agreed by Nimrod as optimally meeting their initial specifications. The firm's ergonomic consultants had also reviewed four previous Nimrod terminals and the two preferred designs for the new range, against European Telecommunications Standards Institute (ETSI) guidelines and their own accumulated expertise, and made a number of recommendations.

The usability studies sought the preference of users for one or other proposed design along a variety of measures, as a result of which some changes were decided upon (e.g. the weight of the handset). Other changes were made as a result of lock-in or compromise. For example the keys were labelled so as to be consistent with previous Nimrod models (expected by existing customers) or mobile phones (expected by some of the target customers). The angle of display was chosen as a compromise between the outcome of the usability trials, the ergonomic consultant's recommendations and the need to fit electronic components into the space allowed. The usability exercise was more to confirm that the choices made were acceptable than to obtain feedback that might change the design significantly.

Functionality

The functionality was tested almost entirely in-house by the Nimrod team. The logic of the menu structure was an important issue of the human-

machine interface to be tested by the usability procedures. Also subjected to the usability tests was the sequence of key presses required for programming, for adjusting the volume of the headset, handset, speaker and ringer, and for setting the data port. These were tried out with the surrogate users. After several discussions in which different styles of managing the trials were put forward by different team members, the engineers decided to be as open-ended as possible in these trials, first letting the user 'play' with the machine like a child with a new toy, trying out various possible functions as purchasers of new pieces of equipment are wont to do.

In principle, they tried to make sure that the trialists did not feel that it was they who were being tested, rather than the equipment, but many of the surrogate users were nervous of breaking the equipment and self-critical if they could not work out what to do. Engineers from other teams were the most critical (of their colleagues) but the least likely to have problems. The non-technical trialists all experienced some problems, but the accountants were more likely to blame themselves. Some of them were clearly intimidated, expressed nervousness, and sometimes thought they had broken the telephone. Despite their good intentions the engineers were not entirely blameless in this, some of them expressing their own discomfort by over-heartiness and jokes, and demonstrating some (possibly unconscious) pre-conceived attitudes by calling the user representatives 'testees' – a word which they made up, but implying that the person is being tested rather than the one doing the testing (which logically should be 'tester').

The simulation tool for rapid prototyping

In order to carry out usability trials on the functionality of the engineering design, the terminal under development was modelled using a rapid prototyping tool, developed as part of the project by Alan. This was a computer simulation of the functions of the terminal under development, using the requirement-capture tool set, that is, product requirements stored in the computer from previously handwritten requirements. It was operated with a mouse, or (later) could even be connected to a solid model of the telephone, so that the user could press buttons and so on, and the computer acted as a 'virtual telephone'. Different versions of the simulation could be brought up on different workstations and made to 'talk' to each other as if calls were being made between two telephones. The interaction between the two thus became observable: it was possible to see the results of the phone call being made by another party to the virtual terminal on the screen in front of you.

The objective, Colin (the project leader) pointed out, was '[to release] products that people can actually work with, and that of course, is the ultimate test, but we should be able to follow up a lot of major issues using this environment'. The immediate aim was twofold, namely:

- 1 The 'traceability' of design choices, downward from the requirements into the simulation model, on to the functional specification document and

down into the design. The traceability of design decisions meant that learning could take place in the organisation. If a design choice is made that contributes to a later problem, identified during usability testing, the sequence of events and decisions can be traced back, and procedures revised for the future. Next time it may be easier to see which decisions should be left open, and where certain decisions were likely to have downstream consequences. It also, of course, makes the whole process more visible and the individuals making decisions potentially more accountable. Usability testing may thus become a way in which previous design choices are justified.

- 2 To force 'design issues up front' and allow 'marketing and other design authorities [to have] more of an involvement', thus reducing the risk of making 'bad' design decisions, and making sure that 'you know the thing is correct' before going into implementation and development (interview with Alan, 1996). This meant that decisions about design, and with respect to the user, could be taken even before any commitment was made to the specific structure and architecture of the system, before codes were 'cut' for the terminal software and firmware (thus placing constraints on the menu structure and logic) and before the tools necessary to make plastic moulds (for the manufacturer of the casing) were developed.

The idea was thus to be able to explore issues of usability before a working model had been developed, and therefore before certain irreversible decisions had been made. The output of usability evaluation was then to be analysed and assessed, and decisions were to be made on how to incorporate the feedback of the exercise into design specifications.

Usability testing as a means of testing already made design decisions

There was consensus in the team as to the role and purposes of a usability evaluation procedure, evident in the statements of various members of the team. Commitment to the necessity and usefulness of this new concern during the design process seemed to have been built from top down, as the following remark by Rob, the usability co-ordinator, showed:

The idea of the functional model [the virtual model] that Jeff⁴ is promoting is that before we actually get into even making small mock-up prototypes⁵ we should be able to test the functionality and usability. We should be able to give some people some tasks to do and say, 'Programme the terminal to behave this way,' without telling them necessarily how to do it, and just sit and watch what happens. Through this let them get half-way through a task and then say, 'Well, you've got an incoming call,' or whatever, 'what's going to happen now? So that's the first level of trialling that I want see performed in a controlled way, a professional way.

It was established as part of the project brief that the use of the terminals should be intuitively obvious, so that users could find and use all their functions without special training or constant reference to manuals. It was also

agreed among the project team that different kinds of users with varying levels of prior experience should be able to use the terminals equally easily – for example, with step-by-step guidance for novice users and short cuts for experienced users.

From the start of the project, usability issues had been stressed as paramount, and design choices had been made with concerns about the user-friendliness of the terminal range. As the project manager Colin told us:

Usability has been at the back of our minds so that we have been careful not to take any decision that can preclude any usability requirements, but Jack and I have spent our days making absolutely certain what we are getting in terms of number of buttons, and features, and things like that.

And Jack, the engineering team leader:

Colin and I right from the start took into account all the terminals, Nimrod ones, non-Nimrod ones, our experience, and we were very reluctant to commit right up front to a set number of buttons and any specific set of features. We did not want to make a commitment without doing a certain amount of research, and even now that we have decided on the number of buttons on the terminals, we are making sure that the features associated with those buttons are completely flexible and movable. We have made our best guess, what we will now do is test that best guess. We are doing that in a number of ways. You have seen Alan with his simulation model; we are having a hard version, an actual solid model being made up to work as well.⁶ That is a hard version of the wooden one, that is, actually a hard version of what the final one will be, not perfect, but at each of the stages we will be making refinements and then doing testing. Obviously we have set the number of buttons now.

Although the whole team had been very conscious of the usability issues from the beginning, the actual planning of usability testing activities came somehow late in the course of the project, which had started some time before the team began thinking about how to carry out usability exercises. Table 2 shows the phase review process, the stages through which a development project had to pass. The usability trials were planned during the design phase, to take place in parallel with the other design and implementation activities. Logically, it would appear that usability should have been evaluated during the previous stage of project definition, the phase in which the marketing plan, marketing requirement specification, product management plan, engineering plan, and test plan were being developed. As it was these were all developed, and had been agreed upon, *before* the usability evaluation exercise.

Furthermore, as a result of the firm's user-oriented product development strategy, a generic document was available on how to do usability testing, but in practice the engineers did not know what exactly to do in the specific case they faced. This was the first time they had done a usability exercise and many of the details had to be decided on an *ad hoc* basis as the went along. As Rob said, 'I don't know what they've actually planned to do.' Jack's comments show that certain decisions about the design of the product had already been

taken ('We have made our best guess' and 'We have set the number of buttons now') and that usability evaluation was to be a means of testing those decisions, with a view to making only a few changes where necessary and where it was still possible (for instance, 'The features associated with the buttons are completely flexible and movable'). It was not an open-ended exercise, where user reactions could modify any feature.

Ad hoc decision making and taking situated actions

The usability testing was an iterative process in which minor modifications would be made, the terminal retested and further modifications proposed. Despite the training and the generic guidelines, issues often came up which the engineers had not expected or thought about in advance, and they had to deal with them on an *ad hoc* basis, working out how to apply their training to the specific case of P96. For example, it became clear that different users have different 'mental models' of how the terminals will work, based on past experience, for example with other telephones. They could not assume that there was a 'correct' model: that one person's 'mental model' was better than another's. They had to find a model that people could relate to, whatever their background and experience, by measuring the design against 'essential' characteristics and criteria apparently external to the design, such as logic and consistency. The usability adviser demonstrated this to the rest of the engineers by setting them a programming task which some of them could not carry out, simply because they were expecting the procedure to be slightly different. This made the team aware of issues that might face 'real' users, and which they had not anticipated.

Jeff. Alan and I cooked up a couple of quick tasks, only very simple ones, but key ones internal to the actual functionality of the model that we were trying to demonstrate, and then got Colin and Pete over and sat them in front of it and said, 'Right, I want you to programme a number store on this phone,' and watched what they did.

Carole. So what happened?

Jeff. I tried to play a bit of the devil's advocate. ... I sat there and said, 'Right, what do I do next?' Because there was no immediate guidance.... I could have guessed which button to press, but I just played a bit dumb.... Well, he will tell you.... Carole was asking about the first semi-trials that we did, when I got you and Colin to try and use the Statement model....

Pete. Yes, you set a trap for us

Jeff. No, I didn't set a trap, Pete.

Pete. Well, he put me through hell!

Jeff. It depends on the background people come from, you see. When you say to somebody, 'Programme that key,' or 'Programme the speaker volume' – I think that was the first one we started from – I thought that was relatively easy and we'd get through that quite quickly. Pete from his background instantly went to the speaker key, saying 'Programme speaker key,' and expecting something to happen. And, of course, it's not done that way, it's been done through a top-level menu.

Pete. It didn't work, so I tried other things.... I went through three or four different models. I've got three or four models I carry in my head, on how I think appliances will work, based on my own previous experience of systems. So it's probably driven by my intuitive feel for this.

Jeff. At that particular point I was trying to prove that we weren't ready, that we needed to put some serious effort into getting this thing ... If it was going to be intuitive, then we had to put some serious effort in. There were a couple of key points I wanted to put across. One was, people didn't have the same model as to how to programme certain aspects.

Pete. They didn't all have the same mental model.... You can't prescribe the mental model people carry around in their heads, because it's the result of experience. You can't say what experiences people will have prior to coming across this particular instrument. So you have to make it *logical* and you have to make it relatively –

Jeff. *Consistent.*

Pete. Relatively *foolproof*, so that if people make assumptions, those assumptions don't carry them into areas which they're going to find difficult to recover from.

The experience of implementing a usability process meant incorporating a new set of design practices, with implications for project management, design schedules, the phase review process and design stages that would fit in with the existing organisational structures (the firm's specific combinations of project teams, functional departments and matrix management structure) and learning how to deal with the potentially disruptive effect of usability studies on the existing organisation of work. The team learned as much about how to carry out a usability test as they did about the users.

From user needs to the representation of stakeholders

Who are the users?

The Nimrod team did not carry out their usability trials in the way favoured by some of the firms mentioned above, that is, making observations of 'real' users in their own normal workplace settings. They used some expert tests carried out by their ergonomic consultants, and the usability tests they did themselves were carried out in-house using various people from within the firm to represent end users. Even if they had used members of the public, they would not have necessarily been representative of the range of end users likely to buy or use their product, but in any case they ruled out such a trial for various other reasons. One important reason concerned the commercial confidentiality issues that would be raised by showing their prototypes to outsiders.⁷ Another was that they had no direct contact with their own end users, because their immediate customers were distributors, who themselves sold Nimrod's products to end users.

We found that the 'Who is user?' issue was not a trivial one. As was the case with Nimrod (and the other firm we studied, not reported here, but named by us Hermes), the principal firm owning the intellectual property

associated with an innovation may have used external consultants to design the casing in which to place its particular combination of electronic components and software; and another set of consultants to advise on ergonomic matters. The product may be subcontracted for manufacture (possibly to more than one firm) and sold to a distributor who will then sell it on (either as an 'own brand' or under the first firm's brand name and logo) either to domestic consumers or to other businesses. Where the customer is another business, the *purchase decision* is likely to be made by people who are more expert in the technology of the supplier firm than the range of staff likely to find themselves *operating* the new product.

In addition to that complex supply chain in which value is added and a series of market transactions take place, within the innovating firm it is increasingly likely that cost centres and other forms of 'market' mechanism will have been introduced, so that one department may have to sell its services and other output, literally as well as figuratively, to another. Departments are now linked by market-type relations as well as by hierarchical management structures. This was also the case in Nimrod (and Hermes).

At the same time, there has been an increasing tendency towards partnerships between organisations, including between potentially competing firms, in the production of innovations. These alliances are sometimes quite long-term ones, based on trust. As a result the organisational structures within which innovation takes place ('alliance capitalism', in the words of Dunning, 1997), is not the more or less hierarchical arrangement of a conventional firm. Neither is the relationship between the partners a conventional market one, since it involves commitment over a period of time, and value is created by the partners and not just exchanged. There is now a substantial literature on this issue (see, for example, Coombs *et al.*, 1996, for a review), but for the purposes of our research there are two points to make. First, we have found that the job of the design team in a high-tech industry where firms collaborate is just as likely to be the design of the organisational arrangements for the development and delivery of new products and services as the design of the products and services themselves. As we have said elsewhere (Walsh, 1996), 'Design as an activity links many of the functions in the business enterprise and its environment and, conversely, building such links is an essential part of the design and innovation process.'

Second, as the above discussion has shown, the issue of who exactly is the 'user' is no longer straightforward. In the course of our research, we adopted the term 'stakeholder' – used within the industry – to signify all those who might, in some senses, be considered to be a customer of the new product development and design process, and the term 'end user' to signify someone at the end of this chain (or edge of this network) – a final consumer. In Nimrod's case the design engineers set up various tools and techniques to try and build up representations of otherwise inaccessible end users or customers: to access who the customers were, what their needs and wants might be, and

what their use of the product or service was likely to be, and then tried to build them into the design and development process.

What are the users' needs?

Concern with meeting user needs more effectively has been one of the responses of telecom equipment suppliers to changes in their competitive environment following deregulation and privatisation, and the technological changes associated with the convergence of telecommunications and computer technologies. As in the computer industry, this concern with users has taken the form of improving the usability of the products marketed. But concern with usability does not necessarily equate with taking user needs into account, since usability evaluation exercises may not entail any involvement or participation of 'real' users during the design process, and does not take into account needs not addressed by the design on trial. Indeed, firms are really concerned more with identifying (potential) market demand than user needs as such.

It is the competitive pressures in the industry, which have encouraged firms to adopt strategies based on continuous innovation in the provision of new products, and on making sure that these products meet user needs, which have been translated for most practical purposes into the adoption of usability testing during the new production development process. In this way the firm retains a considerable degree of control over the definition of user needs even when it is apparently making a big effort to taken them into account. We focused on the usability process, despite these criticisms, because it is the approach on which the firms concerned have also focused.

Usability testing in general, and the usability testing carried out by Nimrod, took a very particular form in which to pay attention to users' needs: on the whole, the usability trials acted as a confirmation and justification of decisions more or less firmly made, rather than as a more open-ended exercise. Some design choices had been left open and were able to be made in the light of the trials. Some unexpected findings had to be taken into account. Sometimes the trials resulted in information that could not be incorporated in the design of the model under development, but would have to be adopted in future.

Design in products and services

In the research programme as a whole we had initially decided to explore the way in which users' needs were taken into account in the design of *products*. However, we concluded during the course of our research, and as a result of our meetings with firms, that there is a rather blurred boundary between what constitutes a product and what a service is, especially in high-tech industries such as telecommunications. Some activities (such as design), defined in official statistics as 'manufacturing' if carried out in a manufacturing firm, because 'services' if carried out by a subcontractor or design

consultant. Gershuny and Miles (1985) have pointed out that various service needs have, over the years, increasingly been met by the purchase of goods rather than services (e.g. washing machines rather than laundries).

Providers of some services, especially in the finance sector, refer to their output as a 'product'. Manufacturers of products offer related services, especially where the product is a radical innovation, as an important strategy for market creation (as we have seen in the earlier discussion). Software is generally thought of as a product, but the physical product itself (floppy disc, CD-ROM) can equally be seen as the physical embodiment of the service provided by the programmer, which allows the user to perform certain tasks. Telecom service suppliers sell their 'own brand' telephones, fax machines, answering machines, and other equipment, which allow users to access their services. Indeed, they often offer packages which include services, infrastructure and equipment,⁸ and the consumer organisation we studied, when evaluating mobile phones, pays very little attention to the actual phone, and most to the financial 'deal' that comes with it and the geographical range of the network, on which the firms compete.

Telecom customers actually see and evaluate the product through which they access the service or final output of the whole infrastructure. Adding a further twist, as we have seen in the case of Nimrod and the P96, the design brief often requires the product itself to be 'transparent' and the system architecture 'invisible', meaning that the user should be aware only of the task undertaken (e.g. keeping in regular contact with staff overseas, the transfer of documents, data or molecular designs, or simultaneous work on a design by team members in different locations) and not the means by which it is done (the design of the equipment, or the service).

As a consequence of this blurring of boundaries, it was difficult to tell in advance whether the case study projects to which we were given access were going to concern the design of products or of services, or indeed a hybrid of the two. In this chapter we have focused on a product case study, but the project leader often referred to the product being designed as though it were a service: that is, it was seen as the means to an end, the end being the ability of the customer to access various telecommunications services and perform various tasks more easily than before.

Conclusion

The Nimrod case generated a great deal of information about usability procedures, what to take into account when designing them, how they fit in with the organisational structures and the order of work in a product development project, what questions to ask, how to make sense of what the users say, how to take account of observations of what they do, how to record such observations, the role of meetings, getting feedback from users and deciding how to take that feedback into account. It also provided a wealth of empirical material in which to base our understanding of the ways in which

engineer-designers organise and understand their own work and take 'situated actions',⁹ of the representation of users, negotiation in decision making and the achievement of closure, justification and transparency in decision making, the role of storytelling and scenarios in constructing shared understandings of the tasks at hand and in arguing a point of view, and the process of learning-by-doing and organisational learning.

Nimrod had firmly committed itself to a usability strategy, providing training for staff and a guide to usability testing, but our observations were of the first occasion on which the engineering team had tried to carry out a usability test on a real development project. Despite the training and the generic guidelines, many details of usability testing in their specific case had to be devised *ad hoc* by the project team, who had to deal with several unexpected issues.

The usability trials made the whole process more visible and accountable, allowing the consequences of design decisions to be traced, and providing information for the future about the kinds of decisions which should be left open at certain stages and the possible downstream consequences of taking others. The work of usability testing provided the means by which the engineers could learn not only about *the product* and its usability but also about *the process* of usability-oriented design. They learned by trial and error and through a process of learning by doing.

Focusing on the capture and incorporation of customers' or stakeholders' requirements means that organisations have to choose, select and introduce new design methods, tools and techniques, whose introduction involves a substantial shift in design practices and in the management of the design process. It is the *actual application* and *practice* of these new methods that is problematic for the organisation. We have identified some of the practical problems involved in utilising new design processes, and how they were solved (or caused the failure of a project). We hope by this means to contribute to the more efficient adoption by other firms of such new processes.

This emphasis differs from that in much of the management literature, which is often more concerned with devising or selecting new design processes to introduce, and/or with evaluating the efficacy of existing ones. Carrying out exercises to capture and integrate customer requirements involves a *learning process* that is essential to design effectiveness. We identified individuals' learning by doing and, even more important, organisational learning as an important part of innovative and design activity, particularly for firms in fast-moving technological areas.

Even firms which are committed to taking users into account, and which appear to have established a procedure for doing so, may discover that they have to go through a learning process in actually carrying out usability exercises. We found that new design methods to take customer requirements into account challenge designers' and managers' existing assumptions and practices, and involve negotiating between organisational, financial, technical and commercial constraints. We observed some of the knock-on effects

caused by changes in the design process and its management as a result of introducing new design methods to take users into account.

In summary we would say that the project team did not acquire an objective, best practice, universally applicable and codifiable form of knowledge by a process of transfer from an expert or written account: instead they learned tacit skills and how to take 'situated' actions, drawing on local resources and their own subjective insights. They had to feel their way through the process, working out what to do as they went along.

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Notes

- 1 However, it should be said that some design concerns cut across these different categories. The issue of designing for 'basic users' as against 'power users', that is, users who need step-by-step guidance compared with those with some experience who want to be able to take short cuts, is one of these.
- 2 In a development project the 'design authority' is a member of the team who is made responsible and accountable for such design matters as coherence and compatibility with previous company design, as well as with industry and worldwide technical standards etc. The design authority thus 'signs off' any design document.
- 3 In the phase review process established at Nimrod, and in most other firms in the industry, the objectives of each phase have to be shown to have been met, and a definite decision to proceed (or not) has to be taken, before moving on to the next phase.
- 4 The functional manager in charge of usability issues for that part of the company.
- 5 The *working* model (with the necessary electronic components and software) of the kind that is made immediately before going into production, and after all the design questions should have been answered and the usability issues addressed. This contrasts with the model described in the next note.
- 6 The *non-working* model (with neither electronic components nor software) can be connected to the computer so that users appear to be able to operate it, whereas it is actually the prototyping tool – that is, the computer software – that mimics the action of the telephone.
- 7 We visited a Nordic firm during the project, though not for an in-depth case study, and this firm did use members of the public for usability tests, but not when trying out a really radical innovation. Although the radical product might have needed a trial more than those with incremental changes, it was also thought to be most sensitive to intellectual property rights infringement on the part of competing firms.

- 8 One of the designs submitted to the Design Business Association to be considered for an award for executive design was a telephone sold by a telecom service supplier. In the supporting case for the award it was argued that the design of the telephone was so pleasant to use and such an improvement over its competitors that users spent more time on the phone and made more phone calls. The service supplier would clearly have had an interest in selling such a phone, not simply to provide a range of products to allow customers to access their services (or to make a profit on the phone), but to encourage an *increase* in the use of the telecom service.
- 9 Actions which have to be adapted to the unforeseeable contingencies of particular situations, a term used by Lucy Suchman (1987) in her work in the Intelligent Systems Laboratory at Xerox Palo Alto Research Center. Purposeful action, however carefully planned in advance, has to be adapted to accommodate circumstances which are constantly changing and can never be fully anticipated.

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12

Markets, supermarkets and the macro-social shaping of demand: an instituted economic process approach

Mark Harvey

It is not because an English washerwoman cannot sit down to breakfast without tea and sugar, that the world has been circumnavigated; but it is because the world has been circumnavigated that an English washerwoman requires tea and sugar for breakfast [4]. According to the power of exchanging are the desires of individuals and societies [3]. But every increase of desires, or wants, has a tendency to supply the means of gratification [2] ... In England, the greatest improvements have taken place continually, ever since colonisation has continually produced new desires among the English [1], and new markets wherein to purchase the objects of desire. (Edward Gibbon Wakefield)

A number of studies have taken a food commodity and analysed how it enters into consumption. One of the first and seminal ones, from which the above quotation was taken, was Mintz's study of sugar in *Sweetness and Power* (1986). More recently, Kurlansky (1999) has sketched a history of cod, and how it too entered into diets, notably through its complementarity with the slave trade. Zuckerman (1999) chose the potato as an instrument for asking a somewhat different question from these studies, namely, how the potato was adopted *differentially* by national cuisines *and* class diets from the time it first crossed the Atlantic. Pilcher (1998) has explored how a distinctively mestizo cuisine developed from a cultural and colonial conflict between indigenous maize culture and European wheat culture in Mexico. My own research has adopted the tomato as its favoured empirical probe to analyse the transformations of its manifold presences in European society and economy in the twentieth century.

There is one peculiarity that these studies share, despite the different questions asked by these different foods (assuming that a potato can ask a question), and the diverse questions in turn asked of them by their investigators, historians, anthropologists, culturalists, and political economists. They all are treating a food which, by virtue of a passage in either direction across the Atlantic, has entered into consumption and hence exogenously to established eating habits and norms. These foods, therefore, can be seen to represent 'maximum separation' between supply and demand. And yet, even with 'maximum

separation', we have the quotation with which this chapter opened from Wakefield which tussles in a richly but hopelessly contradictory manner with the question of what is the relationship between supply and demand for new products, and in the creation of new norms of consumption. Let us pause for a moment to explore his contradictory formulations.

The brief quotation can be seen to accommodate four propositions (numbered above in brackets):

- 1 Production creates new demand, new objects of desire.
- 2 Demand induces new production.
- 3 The (economic) power *relation* between producers and consumers, mediated by markets, creates new demand.
- 4 The poles of supply and demand have to be brought together, for possibly quite other reasons, for there to be either demand or supply.¹

The general argument underpinning this chapter will be that the first two, symmetrically opposite, propositions pose the kind of question which only leads to a chicken-and-egg impasse, namely, which comes first, supply or demand? Consequently, it becomes necessary to go beyond this question, and to take the relationship between supply and demand (3), and the conditions for that relationship (4), as primary, and hence to ask questions for analysis in these terms, rather than in terms that presuppose the radical separation of supply and demand, as if they constitute independent and self-subsistent primary variables.

The chapter will therefore develop along the following lines. In the introductory section, some key aspects of the analysis of demand for these now ordinary objects of desire, sugar and the potato, will be explored, with a portion of cod thrown in, not least to accompany the late arrival of the chipped potato. This will demonstrate the need for a 'long duration' approach to the establishment of norms, on the one hand, and for an analysis of the macro-social shaping of demand on the other. The introduction will then set out the conceptual approach to be developed in the rest of the chapter, taking the key Polanyan idea of 'instituted economic process' as a basis for looking at changes in major social configurations of food production–distribution–retail–consumption (PDRC; Polanyi, 1957). The main empirical 'meat' of this analysis of food constitutes the second section of this chapter, and, relying on much of the research related to the tomato, will look at three examples of how retail markets act as key loci for the articulation between production and consumption, and as such activity shape both demand and supply, rather than being a neutral space or black box in which 'hidden hands' operate. The three chosen examples, all primarily taken from the United Kingdom, are the changing roles of wholesale fruit and vegetable markets, the conflict between branded and own label foods, and the role of supermarkets in institutional aggregation and differentiation of demand. The chapter concludes with the underlying thesis that if the relationship between supply and demand, and conditions for that relationship, are primary, then the central object of analysis is how that

relationship is configured, and then, successively, reconfigured by transformations of capitalist economies.

One of the remarkable aspects of sugar, about which Wakefield almost certainly did not know, was that before arriving in the English cup of tea, it had almost, and over a much longer period, circumnavigated the globe. Domesticated in New Guinea in about 8000 BC, it had migrated westwards until it started its manufacturing history in India in about 300–400 BC. Major sugar fabrication was established in the Indus delta, but the decisive next westward move was brought about by the Arab conquest of the Mediterranean, bringing sugar into the heart of France by the eighth century AD: 'Sugar followed the Koran' (Mintz, 1986, p. 25).² The circumnavigation continued until it reached the Atlantic islands of Madeira under Portuguese rule, before being first taken to the Caribbean and Brazil in the early sixteenth century, then, taking its return trip across the Atlantic to Europe, to begin a revolution in human diet.

In very broad historical terms, there have been successive configurations of production, distribution and consumption of sugar. The Arabic, Mediterranean-based production regime supplied a luxury good at high cost to the aristocratic and royal European elites during the period 800 AD through to 1500. As a labour-intensive crop, from the earliest times it appears to have relied on slavery, which migrated westwards with sugar production to the European Atlantic islands, even though the source and control of slavery changed with this passage (Blackburn, 1997). During this period, Antwerp had become the central refining centre in Europe, from which it was subsequently redistributed. Sugar was consumed as a spice, medicine and preservative, as well as being utilised for conspicuous displays of wealth in decorative culinary constructions³ on royal tables. It was subject to sumptuary laws restricting its consumption to only the highest strata of society.

The next major reconfiguration arose with the Caribbean and Brazilian slave production regime, which brought down the price of sugar and massively increased its availability, starting with a plantation in Santo Domingo in 1516, to be followed by the rapidly expanding Brazilian plantations from 1526. By 1600, however, British and French colonial power had gained ascendance over the Portuguese, and through the next two centuries a mercantilist phase underpinned the production, circulation and consumption of sugar. Military power, and the restriction of national trade to national merchant ships, created a new articulation of sugar and power. Antwerp, sacked by Philip II in 1576, was replaced by English refineries as the dominant centres in Europe. A mercantilist perspective viewed the consumption of sugar and the market for sugar as 'natural' and 'inelastic', a mercantile and middle-class good which risked corrupting the discipline and morality of the rural and urban poor if it were to become too easily and cheaply available.

But the very expansion of production was soon transcending mercantilist limits.⁴ Mintz (1986, pp. 57–61) argued that slavery plantations of sugar in the Caribbean, truly agro-industrial production systems, were themselves

prototypical of the imminent emergence of industrial manufacturing processes within Europe, and Blackburn (1997) has demonstrated the key role of capital accumulated in plantation slavery as pump-priming that emergence. In terms of consumption, sugar became widely consumed by the middle of the eighteenth century by the very poorest in combination with tea. Ambulant charcoal boilers conveyed sweet tea to road builders and nascent manufacturing centres. As the eighteenth-century cleric David Davies noted:

We are so situated in our commercial and financial system, that tea brought from the eastern extremity of the world, and sugar brought from the West Indies and both loaded with the expense of freight and insurance ... compose a drink cheaper than beer ... Just coloured with a few leaves of the lowest price tea ... tea-drinking is not the cause, but the consequence of the distresses of the poor. After all it appears a very strange thing, that the common people of any European nation should be obliged to use, as part of their daily diet, two articles imported from the opposite sides of the earth. (Mintz, 1986, pp. 115–16)

The particular combination of tea with sugar in England was itself an effect of, first, the Chinese tea trade, and then, after the termination of the monopoly of the East India Company in the mid-nineteenth century, the rapid growth of plantation systems in India and then Sri Lanka during the course of the nineteenth century, replacing the older Chinese trade. The role of John Company, the East India Company, *in conjunction with* British Caribbean cane slave plantations, was thus critical in the formation of the distinctively 'British' cup of tea. For such geo-political reasons, coffee and sugar or chocolate and sugar predominated in other national diets.

The dietary 'revolution' resulting from the adoption of sweet tea and its replacement of small beer as a working day beverage arose from its role in gradually undermining a diet structure which had dominated most national cultures for centuries, with 'the meal' constituted by a complex carbohydrate (rice, wheat, sweet potato, sorghum, millet, etc.) and a high-flavour, often proteinous, accompaniment.⁵ Sugar became an important additional source of calories, and tea (along with other bitter drinks mentioned above) acted as a stimulant, so supplying cheaply a dietary supplement suited to the rigours and routines of the newly urbanised industrial working classes.

The next major reconfiguration of sugar, briefly intimated by Mintz but pursued further by Fine *et al.* (1996), followed the abolition of slavery and the mercantile regime of the East India Company. Rapidly during the nineteenth century the industrial agriculture of especially French sugar beet not only expanded yet further the sugar supply but freed it from the established trade routes that had accompanied Caribbean, Latin American and American slavery. Sugar expanded its consumption role from a sweetener of bitter stimulant beverages to become properly 'food', in the form of the new industrial production of jams (Tiptree, Crosse & Blackwell) and then as the nineteenth century drew to a close, the cakes and desserts that became part of a new routine of 'tea' and the 'three-course meal'. The different basis of production

was therefore associated with a different social order which in turn established a new social coding of the consumption of sugar.

These three major shifts in the social and economic positioning of sugar were analysed by Mintz in terms of the relationship between inner meaning and outer meaning (the latter being also described in terms of Wolf's notion of 'structural power'). Inner meaning refers to the way sugar became embedded in the everyday significations of food, and the way food habits reflect and distinguish social status, and indeed whether sugar appears as exotic luxury spice, as sweetener or as part of a new food routine. Outside or external meaning is invested in those institutions and powers, those geo-political structures, which set the limits and boundaries within which food is produced and consumed. The three configurations sketched above exemplify this kind of external armature around which new social orders are invested with new relationships between power and meaning.

It is clear that in many historical circumstances 'inner meanings', quite akin to a Bordieuvian concept of habitus, can seem to be self-sustaining and self-reproducing. People do things to acclaim themselves by also marking the difference between themselves and others. But, according to Mintz, that sweet tea became a common working-class drink in England can be understood only in the context of major shifts in outside meaning, in changes in structural power. Thus routines of class habit, in which now upper classes disparage the use of sugar in tea, can be seen in terms of inner meaning, on the basis of a semiotics of distinction (Bourdieu, 1986), and indeed these semiotics can be subject to reversals, with sugar passing from being high to low-status in a switch of field forces, as suggested later by Bourdieu (1993). But the coherent overall explanation of *both* the enduringness of habits and norms *and*, more transparently, major changes in them seems to require an interplay of inner and outer meanings, and shifts in 'structural power'. Otherwise, norms explain themselves as self-reproducing, and change is left to switches in polarity within the static dynamics of a force field.

Zuckerman's account of how the potato differentially entered into Irish, English, French and American cuisines poses similar questions to theories of consumption based on static, self-reproducing norms of distinction and contrast. For, although the potato was strongly socially coded, even widely vilified, as being a poor person's diet, unfit for properly human consumption, or as being responsible for the moral corruption of the poor by inducing laziness and overpopulation, these 'inner meanings' do little to account for why it entered into one social order more easily than another. Thus, to take but one contrast, in England the potato had not supplanted bread as the established staple until late in the eighteenth century. Indeed, like sugar, it was the sweet potato that had first appeared on Henry VIII's table, and it was then treated as an aristocratic luxury, much as sugar had been. In Hannah Glasse's *Art of Cookery Made Plain and Easy* (1796), six out of the eleven recipes using potato were still for potatoes now sweetened by sugar, to be consumed as a sweet dish. In Ireland the potato entered into agricultural

production and consumption much earlier, already forming a complement to oats as the complex carbohydrate from the middle of the seventeenth century. By the middle of the eighteenth it had become the main starch food, and by the early nineteenth century it was effectively established as a *mono-cuisine* and culture.

Thus the question is not so much why the potato was given such a low social coding in both countries as why it penetrated one class system earlier than another, and in a very different manner. There are many aspects of Zuckerman's account which relate to what Mintz calls 'outside meaning'. One can list five:

- 1 Irish potato crops were relatively protected from the 'curl' virus that afflicted other countries' crops by virtue of climate and soil conditions.
- 2 Oats, as the existing Irish staple crop, by contrast had low and unreliable yields, so more easily making way for another staple.
- 3 The poverty of Irish peasantry favoured a crop that required little farm equipment other than a shovel, and no horse-drawn ploughs.⁶
- 4 The fuel economy, reliant on peat, meant that bread baked in ovens compared unfavourably with potatoes that could be easily boiled in kitchens which also often lacked anything but the most basic equipment.
- 5 Agricultural cultivation was deeply affected by the distinctive landlordism arising from the proscription of Catholic ownership, and by extremely fragmented land holding resulting from customary laws and rules of allocation. One acre of potatoes, though, was sufficient to feed six people.

Thus, for Ireland, the potato became the sole food for 40 per cent of the population by 1808, and the more disease-resistant, better storing Irish Apple variety was being replaced, with ultimately devastating consequences, by the higher-yield 'lumper', more vulnerable to disease. As a consequence of all these structural peculiarities the potato in Ireland fed the *rural* poor. In England the potato became a significant element of working-class diet only as a consequence of urbanisation, when some of the same 'outside meanings' became constraints on diet for them too: a succession of failed grain harvests; low-cost cooking with minimum equipment and without ovens; cultivation of potatoes on small urban allotments.

A similar 'structural power' level of analysis that accounts for sugar in tea can also be given to the later appearance of fish with chips. In the 1830s there were already the ambulant-barrow 'Spud-u-like' equivalents of baked potatoes in working-class urban areas of England. Chips followed later⁷ and, as Kurlansky has shown, were joined by cod once steam-powered, iron-hulled British trawlers in new Icelandic fisheries were changing the crumbling geopolitics of the old sail-driven, triangular slave trade cod industry on the Grand Banks. Thus cheap cod met cheap chips.

In this summary of sugar and the potato, it can be seen that social orders of production and of consumption are connected in a global sense.

Later centuries saw the production of tropical commodities in the colonies tied ever more closely to British consumption – and to the production of British shops and factories. Production and consumption ... were not simply opposite sides to the same coin, but neatly interdigitated; it is difficult to imagine one without the other. (Mintz, 1986, p. 42)

On the one hand, it has been argued in Wakefield's terms that there is a shared underpinning of supply and demand and that the different modes of their connection are themselves subject to successive transformation. Tracing the history of sugar, it developed in spirals, with reconfigurations of previous configurations. There were no absolute beginnings, where supply stood disconnected from demand, so explanation is about reconfiguring previously established connections. On the other hand, with the potato, its entry disturbed previous connections within a complex of bio-climatic, cultivation, land-holding, household economy and previous carbohydrate food regimes. In turn, new spirals were triggered according to the specificity of the configuration in which it entered: in the Irish case, it became central to rural transformation and rapid rural population growth followed by famine, whereas in England it co-developed with urbanisation and industrialisation, which were also transforming in their own right the previous connectedness between agricultural production and food consumption.

In a general sense, therefore, it is possible to see the potato or sugar or cod as 'economically instituted' within the different modes of connection between supply and demand their different configurations described above. Instituted economic process is a synthetic concept which is neither strictly economic nor sociological. It avoids the language of the 'social shaping' of demand, where an economics of the means of exchange and resource allocation might be counterposed to a sociology of how and why those means of exchange are expended in different ways. Rather, by looking at all economic processes as instituted, the means and flows of exchange and the markets through which these occur are also treated as instituted processes which in turn have instituted connections with norms and habits of consumption. Mintz's term 'interdigitated' still carries with it some of the metaphor of two separate hands coming together without filling in the 'body' that connects them (if indeed they belong to the same body). The research on the tomato, from which the discussion below is derived, pursued the tomato closely through all its journey, so articulating the linkage between production and consumption by including distribution, intermediary and retail or end markets. As an analytical device, therefore, it becomes possible to analyse different PDRC configurations as the outcome of instituted economic processes. The following section will focus on the distribution–retail connection, therefore, but only in so far as it faces both ways: towards production in one direction, towards consumption in the other. In this schema, therefore, both supply and demand are variously instituted by organisations of retail and distribution. Critically, markets and distribution networks are therefore not seen simply as 'black boxes' through which products flow in one

direction and money in another. Rather they organise the ways in which these flows occur, and so create the channels and vehicles necessary for different forms of product and different modes of shopping and consumption. So, for example, the rise of powerful supermarkets is seen as ‘instituting’ demand rather than ‘shaping’ demand in particular ways, ways which may vary from country to country.

Instituting supply and demand: distribution and markets

In this section three issues are raised by empirical example in order to explore the ways in which supply and demand are reconfigured by the organisation of retail and distribution, in relation to food in general, but as revealed by the tomato in particular. The first involves the near disappearance of wholesale markets for fresh fruit and vegetables to retail markets, and the particular questions raised in terms of the range and quality of products that flow through them. The second deals with an equally significant reconfiguration of the retail–distribution–production configuration, reflected in the emergence of supermarket own-label products. The third raises the question of how the organisation of retail markets, and their transformation, alter the way demand is instituted as between end consumer and retailer.

Withering wholesale

Covent Garden market provides an excellent example of the evolution of markets as a process of reconfiguring demand–supply relations over the long duration (Braudel, 1982), although altogether exceptional for its dominant metropolitan position and heightened significance as an import market of global produce from almost its earliest days. In its first manifestation in the thirteenth century it appears to have been a market for selling the surplus from monastic gardens (hence Convent Garden; Webber, 1969). As London grew in population, market gardens developed on its fringes, dedicated to the production of food for the metropolis, and ‘London probably had the first true market gardeners – men who grew produce entirely for sale to the public’ (Webber, 1969, p. 26).

The term ‘market gardener’ itself indicates the lack of institutional differentiation between producer, distributor, trader and retailer, for the Gardeners’ Company, given a royal charter in 1606, covered 1,500 people who were all these functions rolled into one. The only exception was the trade in imported goods, luxury items such as peaches, grapes, apricots and melicootons (an early example of genetic modification). But the market for these was still a retail one, and throughout this period served the aristocratic houses that surrounded it.

The next major shift in market function occurred in the eighteenth century, when producers became separated from retailers for home-grown produce, and, along with this change, specialised distribution systems and waggons from the Lea valley developed to feed the market. A further

important reconfiguration evolved in the second half of the nineteenth century, when the retail function became institutionally differentiated from the wholesale function, and Covent Garden began to emerge as a dedicated wholesale market. Some of the new wholesalers developed out of previous producer-traders, whilst others were specialist commission salesmen operating on behalf of growers.

But perhaps one of the most astonishing aspects of this history relates to the institution of the market itself, as distinct from those who traded in it, and under its licence. Throughout these major changes in economic function the market itself was owned by the Bedford family, from the time of the dissolution of the monasteries through to the end of the First World War in 1918, when it was sold to the Beecham company. This high aristocratic ownership had obtained a royal charter in 1670 which gave the market rights of exclusive trading within central London, to grant trading licences within the market, and eventually also rights to levy tolls (1813). So the market itself had formal institutional characteristics alongside its 'instituted economic' functions. By the end of the nineteenth century, however, there were massive problems of congestion and economic irrationality with the overlapping and conflicting interests of other London markets. The unlikely combination of *Punch* and the Fabian Society (1897) waged vigorous campaigns against the scandal of 'Mud Salad Market', the latter arguing for the necessity of an integrated all-London Market Authority. This formal institutional instability and chaos was the subject of various government inquiries which culminated tardily in the Runciman committee of 1957, followed by the 'nationalisation' of the market by the Conservative government in 1961, establishing the present Covent Garden Authority. For many, including the ex-general manager of New Covent Garden, this was at best a partial solution to developing a coherent London-wide institutional framework for London's wholesale markets (1998 and interview). Vested interests, especially of the City, which had also historic rights of ownership to markets within its orbit, blocked radical change.

Runciman provides a convenient stopping point in this rapid history of successive reconfigurations, because he investigated and described an archetypal wholesale market, and rationalised the particular ways it articulated supply and demand. One of the (slightly puzzling)⁸ aspects of his characterisation, however, is that he describes an economic scenario where large multiple retailers are totally absent.

Contrasting vegetables and fruit with standard mass-produced goods which are of standard quality sold at standard prices 'whether they are bought in London or Lands End' (Runciman, 1957, p. 5), supply, demand, price and product have much higher *intrinsic* variability. Hence there is a need for market structures in which prices are established:

If ... a general price be established, distributors will be able to assess what their own selling price and that of their competitors must be ... Produce will

therefore be distributed more freely if a general price level is established ... The major markets for horticultural produce have developed naturally at places where imported and home-grown supplies can be assembled easily and then distributed to many outlets. These markets – the primary markets – having grown up at centres of communications serving large populations, are convenient buying points for local retailers and for secondary wholesalers. There is thus at the markets a concentration of buyers and sellers dealing in a wide range of commodities and conscious of movements in supply and demand. It is the interplay between them that enables a general market price to be established. (Runciman, 1957, p. 39)

Thus markets within which prices can be established require various instituted prerequisites, concentrations of population, networks of communication and formal market frameworks. In this arrangement, there are the primary wholesale markets, which will be here the focus of attention, and the secondary wholesalers which purchase from the primary markets⁹ and redistribute to smaller concentrations or outlying populations. Moreover, a few dominant wholesale markets (London, Birmingham, Manchester, Glasgow, Liverpool) are price setters for lesser primary wholesale markets (e.g. Coventry or Wolverhampton in relation to Birmingham).

A further key to the existence and economic function of wholesale markets in *concentrating and thereby channelling* supply and demand is the numerical ratio of each of the ‘classes’ of economic agent which we have seen to become historically instituted to perform distinct functions: growers, wholesalers and retailers (plus concentration of consumers). This is the ‘map’ Runciman provides with the numbers in each class (Figure 5).

The key ratio which brings about channelling and concentration is therefore 70,000 : 320 : 150,000, with wholesale markets acting as the pivotal market institution for establishing market prices between such otherwise diffused agents. There are three further important structural features of this configuration:

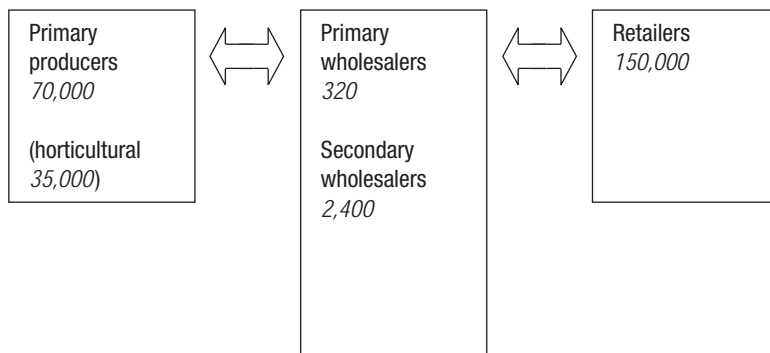


Figure 5 The Runciman ‘map’

- 1 Primary wholesalers trade on a commission basis, which varies between 7.5 per cent and 10 per cent of the sale price, so, in effect, acting on behalf of growers, constituting themselves as a middleman market. Commission fee pricing is a distinct price institution.
- 2 The small retail greengrocer is the dominant figure within the retail phase, thus greatly restricting the *possible* range of produce.
- 3 Wholesale markets are spot markets where the essential focus of trading and competition is on price and price alone.

For anyone who is unfamiliar with how such a market operates, it is important to exercise the imagination. Even today there is typically a central 'buyers' walk' in these markets, several hundred yards long, to accommodate up to 300 wholesale traders on either side, displaying their wares in open stacks for inspection. There are no prices visible anywhere. Buyers walk up and down and negotiate prices directly with traders. From interviews it appears clear that buyers have their regular traders and never test the whole market, and traders have their regular growers, so growers never test the whole market either. This regularity implies a level of trust relationships buttressed by the close existence of alternatives, in a form of 'latent' competition. For Runciman, therefore, given the variability of seasonal demand and supply, the dominant wholesale markets operate as the essential price stabilising institutions within the configuration mapped above.

Taking these structural features together, wholesale markets of this kind 'institute' and articulate demand and supply in a very particular way. As spot markets focusing on price, the imperative is to sell and clear the market. The boast is often made that they can sell *anything*, *any* quality. The idea of the *market* establishing either market quality standards, or grading of quality, almost subverts the function of such a market. Even Runciman's description is very much in terms of an assessment of the effectiveness of markets as pricing institutions.

They put salesmen too much on a pedestal. They would say, 'I've got the best salesman in the market.' That's what achieved the success or failure of his business. They really glorify this salesmanship. It's largely price salesmanship. It is not salesmanship on the basis of really selling in a constructive way ... It's all short-termism. (Allen, interview)¹⁰

The way produce passes from grower through wholesale market to retailer thus leads a passive, take-it-or-leave-it kind of trading, in which each successive exchange is quite discrete.

Growers grew what they grew best, and brought it to market, and accepted they would get what the market would bear. Buyers would come into the market and see what there was and what they could buy. Nobody was doing any consumer research. It was a very different world from the one we live in now. I suppose this was the *raison d'être* for the wholesale market. It is probably why they don't fill a major bill in the modern world. (Allen, interview)

It is this 'serial' supply-demand configuration which has been blown apart by the growth of major supermarkets, their establishment of their own retail distribution and logistical systems, and their decision to purchase centrally and directly from largely their own dedicated growers. This was a process which began in the 1970s but was fully established by the middle of the 1980s (Wrigley and Lowe, 1996). In terms of Runciman's critical ratios, the number of growers has been reduced considerably as supermarkets concentrated their supply base at one end and, at the other, the number of retailers for 85 per cent or more of the market has reduced from 150,000 to twelve, or, to take the strategically dominant retailers, in effect, to three to five major supermarket chains (Tesco, Sainsbury, Asda, Somerfield, Safeway).

The tomato is exemplary of the changes that have taken place. By and large, the supermarkets have taken the top of the market, leaving the wholesale markets to clear the rest.¹¹ The range of produce (colour, shape, flavour, variety) and quality specifications has developed and consigned the tasteless 'commodity tomato' to the economy bottom of the range. From the mid-1970s key growers were developing an entirely new innovatory emphasis on these aspects of produce in long term, if informal, partnerships directly with the major retailers.

When we were in the Lea valley we were supplying Tesco. We were the first mainland supplier to be supplying Tesco We've nailed our flag to Tesco's over the years. They have been a very good customer to us ever since 1983 We had to do something different from just supplying wholesale markets. Even in those days their performance was appalling. It used to depress me thoroughly, seeing all the care and attention we paid into growing this crop and getting it into the market in good quality, and than a guy at a whim just got whatever he could for the product. (Parker, interview)¹²

For tomatoes imported from the Canaries, likewise, there are now dedicated supply chains from the packing stations, which filter the different grades of tomato into the hierarchy of supermarket product ranges. Tesco has its own temperature-controlled containers ensuring integrity of the atmosphere from the grower to the supermarket shelf. Replacing the 'serial' configuration of grower-wholesaler-retailer, therefore, there is now a continuous feedback loop between the different product niches on the supermarket shelves, with wide price and product variation, and the grower supply base. In this process, which has taken some twenty years to develop, it is clear that there is still differentiation in economic function: producers produce new products; retailers create new distribution systems and re-construct selling space and shopping routines; and consumers purchase new products and consume in new ways. But it makes little sense to point to one location or flow direction in this new configuration and say 'That is where it all started' or that demand pulled or supply pushed. The starting point was the previous configuration, and the process was one of reconfiguration embracing all phases. It is a process of institution, de- and re-institution.

Own labels and brands: a clash of configuration

In this empirical example, which will be dealt with more briefly and schematically, two major reconfigurations will be described concerning processed food, the one involving the emergence of branded food goods, the other a rival challenging for shelf space, the supermarket own-label products. Once more, the tomato can be taken as paradigmatic: Heinz tomato ketchup and Campbell's tomato soup pioneered the former; the proliferation of tomato in the chill food global cuisine (pizzas, sauces, soups, curries, etc.) typifies the latter.

Jeffreys's (1954) classic work on the evolution of multiple retail chains from the end of the nineteenth century demonstrated that this revolution in retailing was intimately linked with increasing urbanisation, the concentration of mass populations dependent entirely on purchased food, and to new infrastructures of transport, both intra-urban and national. The *scale* of markets and the nature of food demand underwent a profound transformation. It was in this context that multiple retail chains, increasingly national in scope, grew on both sides of the Atlantic. As the US business historian of Campbell's expressed it in terms sounding uncannily modern, 'The buying power of these chains and their concomitant ability to sell food at a discount were so enormous that they threatened to put the smaller mom-and-pop corner stores out of business' (Collins, 1994, p. 86).

This transformation in the scale of retailing also involved a fundamental change in its function, in particular as the retail 'craft', which often entailed lengthy apprenticeship, involved a phase in production of final finishing and packaging of goods within the retail establishment. Increasingly, mass-produced goods, themselves quite revolutionary at the time, and the first examples of 'convenience' food which were finished, standardised goods, appeared. Campbell's and Heinz were both established in 1867, and by the early twentieth century had become some of the largest-scale industrial production systems, as much as the leading edge of new flow systems of production as Ford.

These new branded manufacturers established a quite new 'supply-demand' configuration with consumers and retailers. The standardised product was decked out in stylised brand images which in turn were the subject of mass advertising, again conceivable only in urban concentrated populations. Under the previous configuration, and indeed Campbell's and Heinz's in their early days, manufacturers employed large teams of salesmen, who sallied forth to all the individual, independent retail outlets, to 'create' the demand for their products by 'selling' them *to retailers*. Advertising of branded images changed all that. Heinz tomato ketchup was the first giant neon sign, six storeys high, appearing in New York in 1906 (Alberts, 1973). Dorrance, the general manager of Campbell's during this key period, also pioneered this new style of advertising, the Campbell's advertising budget growing from \$20,000 in 1899 to \$1 million in 1920, when it amounted to 5 per cent of total turnover. It eliminated the need for manufacturers to sell the product to the retailer, by going over the head of the retailer to the

consumer, and getting the consumer to demand the product of the retailer. Dorrance put it thus:

When you have the consumer sold, you have finished the worst part of the campaign. If the consumer makes the demand, the dealer will stock, and if the dealer stocks, the jobber is bound to get the business, and if he lists it for the dealer, we have to make the soup. It is perfectly simple and eliminates a complexity of selling models. (Collins, 1994, pp. 97–8)

The configuration for branded goods can be represented schematically in Figure 6. In this configuration, typically the branded food product is aimed at the largest market possible, the standardised product for the generic consumer, to ‘anybody out there’. A further critical aspect is that the manufacturer ‘owns’ and sells the product, and the configuration is product-oriented.

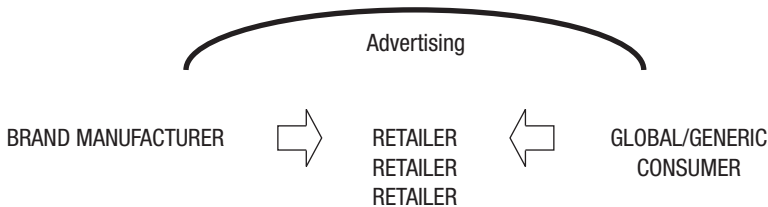


Figure 6 The branded goods configuration

In the United Kingdom above all, where the power relations between supermarkets and manufacturers have most decisively shifted in favour of the former,¹³ this configuration has come under fundamental attack by an entirely new one. Own-label products in many areas have squeezed out branded goods from the supermarket shelves, and, more significantly in areas like chilled ready-made meals, have created a new market where branded goods are virtually absent.

In this configuration, a small number of dominant supermarkets are supplied by an equally small number of dedicated own-label manufacturers, each of which will typically have several units of production each exclusively trading with one or other of the supermarkets. There is a complex matrix between these retailers and manufacturers where some manufacturers supply all the lasagne to five out of six of the top retailers, for example, but where, also, each retailer requires exclusivity for its particular style and variety of product from the manufacturers on the other. One firm may supply all Tesco’s middle-range pizzas and another all its top of the range, and, hypothetically, vice versa for Sainsbury.

The critical difference for own-label production is that it has guaranteed access to market, to supermarket shelf space. This entails a complete break with the ‘instituted’ nature of demand for branded goods described above. Own-label manufacturers do not ‘own’ their products, and engage in no advertising. In contrast, supermarkets ‘capture’ demand by their overall

ranges of products and services, the key being to attract the consumer into the particular supermarket (including by the use of advertising), whereafter s/he can buy from that supermarket's range of own-label. Location and catchment areas become critical in securing a sufficient demand base for a given superstore. This configuration can be represented in Figure 7.

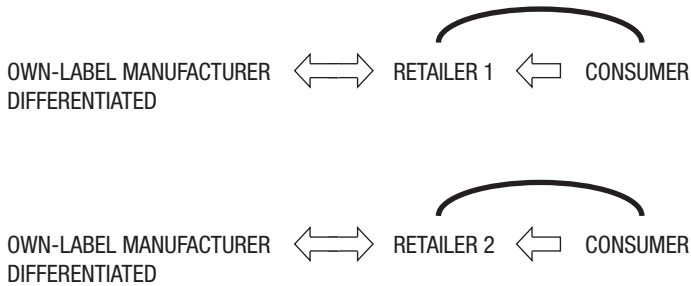


Figure 7 The own-label configuration

In this configuration, it is not so much particular products that are the focus of demand as the capacity of supermarkets to deliver a range of products and services, ranges differentiated by both price and variety, to target and embrace the diversity of socio-economic characteristics of the consumer. The supermarket is a one-stop shop in which the aim is to maximise the range of satisfied demand rather than sell any particular product, or discrete portfolio of products. By a combination of locational advantage, promotional activity and 'loyalty' schemes, supermarkets aim to secure a stable or expanding consumer base within their respective catchment areas.

For the own-label manufacturer, and the innovation process involved, the difference of producing under this configuration could not be more marked. With guaranteed access to market, a secure space on the supermarket shelf, a single own-label manufacturer will typically produce 1,200 new products a year, compared with the four or five introduced, advertised and marketed by the major brand-label manufacturers. The branded manufacturers have to create demand from the consumer to the retailer via advertising, and so costs are high, risks to market access great, and hence launch times from concept to final production relatively slow, usually not less than two years. In contrast, own-label manufacturers work with television chefs, pick up on the latest developments occurring in restaurants across the world, and are able to follow, as well as create, fashion rapidly, with lead times from concept to superstore shelf of as little as four weeks.

These two configurations of supply and demand as 'instituted economic process' may be radical alternatives, but at present neither has achieved total dominance at the expense of the other, let alone exclusivity. As suggested, much depends on the power relations between manufacturers and retailers in different national markets. It is far from clear how far mergers and

acquisitions between retailers at the transnational level will further affect this clash of configurations. But, in dealing with these major different modes of configuring supply–demand relations, it seems more accurate to talk of clashes or conflicts between them rather than ‘normalised’ competition within an established configuration.

Supermarkets and the aggregation and differentiation of demand

It was argued above that the articulation of the supply–demand relation for branded manufacturers is focused around the product, and for own-label manufacturers and supermarkets around the store. For branded manufacturers, the very first ‘ash and trash’ market survey of consumption patterns in 1911 claimed to have found tins of Campbell’s soup in every trashcan of every socio-economic class; the boast was that it was a ‘classless’ product (Collins, 1994). To put it another way, this form of product articulates consumer demand in a particular way.

For supermarkets, however – and here the supply–demand relation between supermarkets and consumers is being pinpointed – the key aspect is the relation between the superstore and the socio-economic characteristics of its catchment area. Prior to supermarkets reaching market dominance, which aggregated demand within given catchment areas, small retail outlets might still accommodate to the particular socio-economic characteristics of the residential areas they inhabited. Once supermarkets achieved dominance, however, out-of-town stores or large inner-city stores aggregate the full socio-economic range of demand over their respective catchment areas. Each of these catchment areas is first analysed in terms of its consumption potentials in order to tailor product range with socio-economic characteristics. Table 3 is one of the instruments commonly used by supermarkets for categorising demand, noteworthy for its hierarchy of consumption potential rather than stratification by occupation and employment. Elements of lifestyle, ethnic origin, family and life cycle are built in to focus on consumption stratification, from the thriving down to the euphemistically classified ‘striving’.

Whether in pizzas, fresh tomatoes or ready-made chill convenience foods, each product is stratified, from ‘economy’, through middle-range own-label plus branded goods to upper-range own-label, and then top-range niche branded goods.

There are these three tiers within the [own-label] pizza range. ... They offer differing purchasing opportunities for the shopper, really. You have got to satisfy all the different social groups that go into the supermarkets. That’s what the supermarkets are focused on. (McLoughlin, interview)¹⁴

Each store carries the balance between product categories to suit its catchment area characteristics, the blend of the thriving, expanding, settling and aspiring. Loyalty card and Eftpos data further embed the stores into the consumption patterns as stores become established. Once having achieved a level of dominance, therefore, supermarkets bring different socio-economic

Table 3 Supermarket consumption class society

Class category	Stratifications	1997 population %
Thriving	1 Wealthy achievers	20.37
	2 Affluent greys	
	3 Prosperous pensioners	
Expanding	4 Affluent executive, family	10.89
	5 Well-off workers, family	
Rising	6 Affluent urbanites	8.31
	7 Prosperous professionals	
	8 Middle executives	
Settling	9 Comfortable middle-aged, home-owning	24.50
	10 Skilled workers, home-owning	
Aspiring	11 New home owners, settled	13.88
	12 White-collar + upper multi-ethnic areas	
Striving	13 Older people	21.37
	14 Council estate, with income	
	15 Council estate, without some income	
	16 Council estate, with little income	
	17 People in multi-ethnic, low-income areas	

Source CACI Acorn Profile, Institute of Grocery Distribution, 1997.

groups together all under one roof, aggregate demand over wider areas and hence, through the medium of product differentiation and product range, *organise and articulate* demand differentials. Own-label manufacturing then itself becomes a co-ordinated process of creating product differentiation for different price levels. In this way, supermarkets combine mass-market standardised goods with both discount and tiers of higher-value ranges.

It may be tempting to see the way supermarkets articulate the supply and demand relation in the retail–consumer phase as being somehow ‘better adapted’ or, through the development of informatics, more finely adjusted to some hypothetical ‘consumer demand’. But that is not what is being argued. Moreover, the macro-economic context in the United Kingdom in which supermarkets came to dominance was certainly one of increasing income inequalities during the Thatcher era (Rowntree, 1995; Goodman and Webb, 1994). This may indeed be significant for the potential span of product and price differentiation. But, again, it makes as little sense to argue that product hierarchies *merely* reflect income inequalities as it does to argue that product hierarchies unilaterally impose themselves on consumers’ income expenditure, so *ipso facto* creating social orders of consumption. Indeed, here *nothing* has been said directly about the sociology of consumption of food (e.g. Warde, 1997; Mennel, 1985; Mennel *et al.*, 1992) as a phase beyond the purchase of commodities in supermarkets. Rather, *in this retailer–consumer phase* of the articulation of supply and demand, supermarkets distinctively aggregate consumers in a new way and present a distinctively organised and differentiated

new array of products to them. It is in this sense that the retailer–consumer supply–demand relation is a historically reconfigured and newly ‘instituted’ one in the United Kingdom today.

Conclusion: demand as instituted economic process

This chapter opened by considering how major geo-political configurations underpinning the British cup of sweetened tea, or the national adoption of the potato, were effects of a connection between product and consumption in a general manner, and in the broad sweep of things. This left rather a large gap between production and consumption. The chapter then considered examples of some major historical shifts in the articulation of two other ‘phases’¹⁵ – the producer–retailer and the retailer–consumer relations. These can be seen to have ‘fleshed out’ the concept of a PRDC configuration, as an instituted economic process.

A common thread running through the three empirical examples provided above is how supermarkets, as end markets, face both ways: upstream to producers and manufacturers, downstream to consumers. The retail market can be seen to be the point of articulation between different phases in a circuit of spiral of supply and demand and, as such, different retail organisations, historically and comparatively, entail differently structured relations upstream and downstream. By focusing on this aspect, an attempt has been made to go beyond the rather global accounts of the relationship between supply and demand, by showing that each successive phase (whether reading from primary supply through to final demand, or from final demand through to primary supply) is subject to a distinct process of institution.

Furthermore, once retailing firms had emerged as a distinct class of firms with a specific economic function, new and asymmetrical *relations* between primary suppliers and retail, manufacturers and retail, and retail and consumers became ‘instituted’. So, in speaking of demand (or supply) as instituted by particular configurations of economic agents of different functions, *both* the nature of the classes of firms *and* the form of relations between them are together seen as being instituted. There are no ‘uninstituted’ gaps in between the different economic agents which might constitute the basis of an independence of agents on a supply side from agents on a demand side existing outside a particular instituted relationship. Indeed, that is the first main conclusion argued from this material.

Secondly, the starting point for any particular configuration of supply and demand is the preceding configuration of supply and demand. The rise to dominance of large superstores and the near elimination of small retail outlets except as residual markets, for example, can be seen more easily as a process of reconfiguration of a previous retailing mode, developing out of multiple chain retailing present from the beginning of the twentieth century, than as a response to some primary, radically novel consumer demand for superstores which arose *ex nihilo* in the 1970s.

It has been suggested, although far from demonstrated, that the *horizontal* concentration of power by two or three major players within a nationally integrated food retail market in the United Kingdom decisively changed the *vertical* power relations, both ‘upstream’ towards producers and ‘downstream’ towards consumers. The aim of this chapter has been primarily to suggest how an ‘instituted economic process’ approach opens up the possibility of analysing macro-structural aspects of the supply–demand relationship in a new and fruitful way. Beyond the scope of this chapter, it could certainly be argued that shifts in power relations, and the emergence of new agents, are critical in processes of deinstitutionalisation and reinstitutionalisation. That would require full historical analysis of why, for example, multiple retail chains, urbanisation, the integration of national final markets, occurred early and in a more pronounced way in the United Kingdom than elsewhere, so eventually forming the background to the current, and almost unique, domination of UK food retailers within their particular domain.

But it has been shown, I hope, that the appearance of new ranges of fresh tomatoes (multi-coloured, flavoured, shaped, etc.) or a new social hierarchy of pizzas, together with a new organisation of the superstore and shoppers within them, are the joint effect of newly instituted supply–demand relations, a result of major historical restructuring.

Acknowledgements

The research was funded through the ESRC Centre for Research in Innovation and Competition at the Universities of Manchester and UMIST, and undertaken together with my colleagues Huw Beynon and Steve Quilley.

Notes

- 1 It is granted that the last two propositions may somewhat stretch the meaning intended by Wakefield’s rather delphic sentences.
- 2 ‘Many significant crops – rice, sorghum, hard wheat, cotton, eggplant, citrus fruits, plantains, mangoes and sugar cane – were diffused by the spread of Islam’ (Mintz, 1986, p. 25).
- 3 These were called ‘subtleties’ in medieval culinary descriptions, and by Hannah Glasse (1796) up to the end of the eighteenth century. Wedding cakes and Easter bunnies are the pale residual reflections of that medieval tradition.
- 4 *Per capita* consumption of sugar in England grew from 4 lb in 1700–9 to 18 lb in 1800–9.
- 5 ‘Most great (and many minor) sedentary civilisations have been built on the cultivation of a particular complex carbohydrate, such as maize or potatoes or rice or millet. In these starch-based societies ... people are nourished by their bodily conversion of the complex carbohydrates ... into body sugars This fitting together of core complex carbohydrate and flavour-fringe supplement is a fundamental feature of the human diet’ (Mintz, 1986, p. 9).

- 6 Part of the moral opprobrium of the potato was related to the supposedly limited agricultural work involved in its cultivation, hence the term 'lazy beds' on which they were grown. The poor were deemed to feed themselves better whilst becoming lazier. It is hard to think this reflects the view of anyone who had dug potatoes in heavy soil.
- 7 In England they arrived first in the 1870s, not in London but in Lancashire. Fish and chips arrived soon after, so that by 1888 there were 10,000–12,000 shops, and in Oldham and Leeds by 1905 there was one shop for every 400 inhabitants, or 350 and 1,075 shops respectively (Walton, 1992).
- 8 See below. It may be that Runciman assumes that each branch of the then existing multiple retailers operated as separate purchasers of the produce they sold.
- 9 Secondary wholesalers operate entirely differently from primary ones, the former purchasing products at cost on their own account; the latter, as we shall see, purchasing from growers, and selling on fixed commission.
- 10 Colin Allen was Planning Officer from 1963 to 1967, and then General Manager of New Covent Garden Market from 1967 to 1989.
- 11 Where wholesale markets have retained trade in quality produce, it is to supply the growing catering sector, not retail greengrocers. But concentration in the catering industry is leading to direct purchasing from suppliers similar to that of the supermarkets.
- 12 Alan Parker is now a major UK grower on the Isle of Wight and President of the Tomato Growers' Association.
- 13 It is significant that major global manufacturers such as Campbell's Soup are constrained now to produce own-label products for the supermarkets in the United Kingdom.
- 14 Jan McLoughlin, General Manager, the Pizza Factory. The three tiers described refer to own-label pizzas, and the Pizza Factory produced only the middle range, exclusively for Tesco (interview, March 2000).
- 15 'Phases' should not be interpreted temporally, but rather as distinct instituted economic processes within an overall configuration.

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